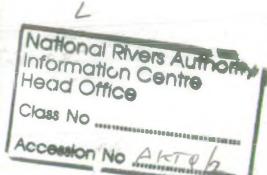


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FISHERIES STATISTICS 1990



Salmonid and Freshwater Fisheries Statistics for England and Wales

(Declared catches of salmon and migratory trout, by rod and by commercial instrument and inclusive of the available catch data for eels and freshwater fish).



NATIONAL RIVERS AUTHORITY

SALMONID AND FRESHWATER FISHERIES STATISTICS FOR ENGLAND AND WALES, 1990

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This report has been compiled by the Ministry of Agriculture, Fisheries and Food, Directorate of Fisheries Research, Lowestoft under contract to the NRA. Data for 1983-1988 have been published in the MAFF Fisheries Research Data Report Series.

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Fisheries aims

• To maintain, improve and develop fisheries.

Fisheries objectives

- To monitor the fishery status of rivers and inland, estuary and where appropriate, coastal waters
- To regulate, protect and conserve salmon, trout, freshwater, cel and coastal fisheries (where appropriate) through the enforcement of fisheries legislation
- To formulate policies to maintain, improve and develop fisheries and restore and rehabilitate damaged fisheries
- To ensure proper consideration of fisheries issues through Regional Fisheries Advisory Committees
- To provide a fisheries service which is based on a sound charging system and which is sensitive to the needs of the public.

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1. INTRODUCTION

This report is the second compilation of salmon and migratory trout catch statistics for England and Wales published by the National Rivers Authority (NRA). Before 1989, these statistics were published by the MAFF Directorate of Fisheries Research in their Data Report Series.

The 1990 data have been presented in a broadly similar format to those of 1989. However, two further NRA regions, four in all, provided effort data for rod fisheries in 1990.

It is important to remember that the catch data recorded in this document represent declared catches only and as such will not be an entirely accurate record of the total numbers of fish landed. Furthermore, the relationship between catch and stock size is difficult to establish regardless of the accuracy of the catch data. Great care must, therefore, be taken in using these figures to derive anything beyond a measure of catch.

2. NATIONAL SCALE READING PROGRAMME

The results from the national scale reading programme appear in Table 13. As in 1988 and 1989, scale samples were collected from a range of fisheries by both NRA personnel and fishermen and were then forwarded to MAFF. Most of the scale reading was undertaken by a single reader, Mr W D Riley, to ensure continuity both between and within years, and according to agreed ICES guidelines (Shearer, 1989). Data for the Severn-Trent region were supplied by the NRA. In 1990, scale samples were available from six NRA regions, although for two regions the numbers were considered too small to provide a reliable division of the catch into salmon and grilse. As in 1989, the Northumbria scale sample data were extrapolated to Yorkshire.

The methods employed for estimating the relative proportions of salmon and grilse in the regional catches were as used in 1987 (Russell and Buckley, 1989). The specific method of estimation is indicated for each NRA region in Table 13.

3. REVIEW OF CATCHES IN 1990

Catch statistics vary in accuracy from year to year, and catches themselves fluctuate because of a wide variety of influencing factors. All available information regarding these factors should be considered to avoid undue significance being attributed to changes in catch which may occur in any one year. Those factors likely to have affected catches during 1990 (together with the summarised data presented in Tables 17-20) have been used to provide the following review of the 1990 catch data in relation to those of recent years (1985-89).

3.1 Overview

As in 1989, the principal influence on catches of both salmon and sea trout in all areas during 1990 was the climate. Following the hot, dry summer of 1989, precipitation remained fairly low in many regions over the subsequent winter months and was in turn followed by another prolonged period of unusually hot weather and low rainfall over the summer of 1990. Resulting river flows were exceptionally low for much of the fishing season and catches were depressed in many regions, particularly for sea trout. However, despite the generally adverse conditions, above average catches were still recorded in some fisheries.

Another factor which probably adversely affected catches of salmon in 1990 was the apparent poor survival at sea of the 1989 smolt year class. Evidence for this is provided by the particularly poor catches of European one-sea-winter salmon in the West Greenland fishery (Table 15) and grilse in many home water fisheries around the north-east Atlantic (Table 16) in 1990 (Anon, 1991). Further evidence of this problem has come from the poor catches in 1991 of two-sea-winter salmon, which are derived from the same smolt year class.

It is not clear whether this problem has resulted from some short-term natural perturbation or is indicative of some longer term trend. Provisional reports for 1991 suggest that catches of both salmon and grilse have been low and thus post-smolt survival of the 1990 year-class may also have been poor. Close scrutiny of future catch and stock assessment data will need to be maintained to monitor this situation.

Concerns have also been expressed about the apparent decline in sea trout stocks in some areas. While the decreases in catches observed in some parts of Ireland have been severe, those in England and Wales have generally been less marked, and it is therefore more difficult to separate the possible effects of changes in stocks from factors such as weather conditions which may affect fisheries.

The declared salmon net catch in England and Wales in 1990 was slightly higher than in 1989, but marginally below the average for the previous five years. However, while catches in the south and south-west were well below the 5-year average, and the lowest recorded catches for the period, those in many other regions were close to the average, while catches in the Yorkshire and Severn-Trent areas were well above average. By contrast, the declared sea trout net catch was 39% less than in 1989 and, at 23% below the 5-year average, was the lowest recorded for the period. Only in one area, Wessex, did sea trout net catches excede the 5-year average.

The declared rod catch of salmon was very similar to that in 1989, and was 31% lower than the 5-year average. Only in the north of England did catches hold up fairly well, with catches in the North West region being 20% above the 5-year mean and those in Northumbria only slightly below it. In most other areas the catches in 1990 were the lowest recorded for the period. For sea trout, declared catches were 26% lower overall than in 1989 and 57% lower than the 5-year average. Catches in many regions were the lowest recorded for the period. Low flows persisted for much of the year in many regions and conditions for both upstream movement of fish and angling were generally unfavourable. Salmon rod licence sales were very similar to 1989, about 7% lower than 1988, although as in 1989 fishing effort was undoubtedly also reduced in response to the prevailing conditions. Mortalities of adult salmon and sea trout were reported again in some areas, although the problems were not as severe as in 1989. As previously, the coincidence of high temperatures and low flows and the resultant depression of oxygen levels were responsible for these problems.

In some areas, river flows improved late in the season and reasonable densities of spawning fish were reported. However, as in 1989, it is likely that the abnormally low flows impaired salmon movements and delayed upstream migration to the extent that spawning times were delayed or that spawning occurred lower down catchments than normal. It is not known to what extent this may impact upon recruitment, but it is hoped that juvenile sampling programmes will indicate the extent of any such problems.

The proportions of grilse in the various regional net catches were lower than in 1989, lending support to the possibility of relatively poor marine survival of the 1989 smolt year class.

Estimates ranged from 39% for the Severn-Trent region to 73% for Yorkshire. For rods, the 1990 figures were also generally lower than 1989 and exhibited greater variation; with grilse estimated to comprise 79% of the rod catch in Yorkshire but no grilse apparently being taken by rods on the River Severn.

3.2 Northumbria

The salmon net catch in the Northumbria fishery was 23% higher than in 1989 and was very close to the 5-year average. The sea trout catch, however, was markedly reduced on the record catch of 1989 and was 14% below the average of the past five years. No changes in netting practices were reported and, as in 1988 and 1989, netsmen spent an average of about 54 days netting. Similarly, there was little overall change in the fishing effort in the northern and southern areas of the Northumbria region, although in the northern area there was a decrease in T-netting effort from 13.3 to 10.1 days per licence and a corresponding increase in drift netting effort from 39.8 to 42.1 days per licence. This slight change probably reflects local weather conditions and the relative abundance of salmon and sea trout, the latter being more vulnerable to capture by T-net than drift net.

The salmon catch per unit effort (CPUE) for drift nets in 1990 was higher than that recorded in 1989, by 15% in the northern area and 40% in the southern area. By contrast, the CPUE for salmon caught by T-nets was about 12% lower in 1990 than in 1989. The overall CPUE for sea trout in 1990 was 41% lower than in the exceptionally good year of 1989. The fall in CPUE was more pronounced in the northern area, with CPUE down by 43% for T-nets and 49% for drift nets. In the southern area the reduction in CPUE was only 24%.

Analysis of the scale samples suggests that grilse comprised 65% of the net catch in 1990, a very slight reduction on 1988 and 1989 (67% and 68% respectively).

Declared rod catches of both salmon and sea trout were both a little below the 5-year average. The catch of salmon was 18% higher than in 1989, while that for sea trout was 6% lower. Catches of both species remained well within the range of catches reported over the past 5 years. Water quality problems exacerbated by high temperatures again resulted in the deaths of a number of adult fish in some of the region's estuaries. In 1990, the problem was principally in the River Wear, with the installation of oxygen injection equipment in the mid-estuary alleviating the worst effects in the tidal Tyne.

3.3 Yorkshire

The net catch of salmon in the Yorkshire coastal fishery increased by 35% compared with that in 1989 to a level some 19% above the 5-year average. By contrast, the sea trout net catch fell by 30% on 1989 (26% below the 5-year average) and was the lowest recorded catch during the period. The number of net licences issued in 1990 fell by one, with a reduction from 23 to 22 drift nets, while, as in 1989, netsmen spent an average of 48 days fishing. The overall CPUE for salmon was higher in 1990 than 1989, although while the drift net CPUE rose by almost 60%, that for 'T or J' nets fell by over 40% to a level similar to that in 1988. The CPUE for sea trout in 1990 was about 30% lower than that in 1989. However, while the CPUE for drift nets fell by only around 1%, that for 'T or J' nets fell by almost 40%.

Grilse were estimated to have comprised 73% of the fish landed in this fishery, compared to 81% in 1989, and, given the increase in the total catch in 1990, suggests a rise in the multi-sea-winter salmon component of the catch.

Rod catches of both salmon and sea trout in Yorkshire were better than in 1989, although both remained well below the 5-year average (77% and 20% respectively). Rainfall in the region was reported to have been better in 1990 than 1989, although flows remained below average. Some juvenile fish mortalities were noted during the year when heavy rain following the long dry spell caused acid flushes in the river Esk. Concern was also expressed at the presence of increased numbers of cormorants on the river, particularly during the period of the smolt run. The CPUE of salmon by rod in 1990 was estimated at 0.02 fish per licence day, the same as in 1989; that for sea trout was estimated at 0.18, a small increase on 1989. Rod licence sales were over 30% higher in 1990 than 1989.

3.4 Anglian

Declared catches of sea trout in the East Anglian coastal fishery in 1990 were 39% lower than in 1989. Catch returns were not required before 1989. The fishery exploits very few salmon; only 9 were reported in 1990. There are no rod fisheries for migratory salmonids within the region.

3.5 Thames

As in 1989, the Thames experienced low flows throughout the summer and this, together with high temperatures in the lower river and estuary, meant that conditions were once again largely unsuitable for the passage of salmon into the river. Nine salmon were caught by rod during 1990, 1 more than in 1989.

3.6 Southern

Declared net catches of both salmon and sea trout were substantially lower than in 1989, itself a poor year. Both were less than 20% of the average catch for the past five years and the lowest recorded catches for the period. The seine net operated on the river Itchen at Woodmill Pool was fished more frequently in 1990 than 1989, but the majority of fish were released alive as part of a radio tracking investigation. If one includes these tagged fish, the CPUE for the Woodmill net in 1990 was 8.56 salmon and 5.11 sea trout per day. CPUE data were not available for the public water seine nets operated in Southampton Water and the Solent.

Rod catches of salmon and sea trout in the Southern region were depressed by the prevailing drought which produced conditions which were unsuitable for both salmon movements and angling. The catch of salmon was 44% lower than in 1989 and exactly half that of the 5-year average. Sea trout catches were also particularly poor, although as discussed in earlier reports the problems of compiling accurate data for this species in this region preclude more detailed analysis. Counter data for the two principal migratory salmonid rivers in this region, the Test and Itchen, confirm that numbers of returning adult salmonids were lower in 1990 than 1989. Estimates of the size of the total returning stock suggest that the number of salmon returning in 1990 was less than half that in 1989. This decline is giving cause for concern.

3.7 Wessex

The net catch of salmon in the Wessex region was well below that recorded in 1989 (down 33%). At only 400 fish, it was 46% below the 5-year average and the lowest recorded catch for the period. By contrast, the sea trout catch was 33% higher than in 1989 and 20% above the 5-year average. The reasons for this are unclear. The Wessex region was unique in 1990 in having a net catch of sea trout better than in 1989 and above the 5-year average.

The salmon scale sample collected for the Wessex region was considered to be too small to allow any meaningful estimate of the relative proportions of salmon and grilse in the regional catch. However, the reported weight splits for 1989 and 1990 indicate a decline, for both nets and rods, in the proportion of fish below 8 lbs (3.63 kg) caught in 1990. This is probably indicative of a decline in the abundance of grilse.

Rod catches of both salmon and sea trout were very poor in 1990 as a consequence of the extremely low flows. The salmon catch was 50% below, and the sea trout catch 92% below, the 5-year average. The latter figure being perhaps surprisingly low, given the above average catch of sea trout by the Mudeford nets. The catches of both species were the lowest recorded over the period. Salmon rod licence sales fell by almost 18% from 1989, and rod effort was probably further reduced by the unfavourable angling conditions.

3.8 South West

The net catches of both salmon and sea trout fell markedly below those in 1989 (46% and 42% lower respectively). Both catches were at least 50% below the 5-year average and were the lowest recorded catches for the period. However, fishing effort in 1990, as determined by the number of licensees fishing, was slightly reduced compared with 1989 and substantially lower than the other years in the period. Drift netsmen on the river Camel continued to be compensated by the NRA for a three year cessation of netting (1989-91), as part of a salmon rehabilitation scheme on that river following a major pollution incident in 1988. Similarly, the Taw/Torridge rehabilitation scheme continued and, in 1990, all netsmen were compensated not to fish (a few of the fishermen had continued to operate for all or part of the season in 1989). For those fisheries in the South-West region unaffected by effort changes, catches were still much lower in 1990 than 1989, by around 40% for salmon and 28% for sea trout. Other factors, such as poor runs of fish, the dry weather and adverse fishing conditions are therefore more likely to account for the fall in net catches. CPUE data are not available for the South-West region.

Rod catches in the South West were also extremely low in 1990. The salmon catch fell by 8% on the poor catch of 1989 to 47% below the 5-year average, and the sea trout catch by 29% on that in 1989 to 60% below the 5-year average. As with the net catches, both rod catch figures were the lowest recorded for the period. The low flow conditions prevailed for most parts of the region for much of the season and the migration of fish into rivers was greatly impaired. Salmon rod licence sales were almost identical to those in 1989, however, angling effort will undoubtedly have been reduced as a result of the poor fishing conditions.

3.9 Severn-Trent

The catch of salmon by nets and fixed engines in the river Severn was very slightly higher than that in 1989, and was 33% higher than the average catch for the past five years, as well as being

the best reported catch for the period. The number of seine nets increased from 6 to 9 and the number of lave nets (full- and half-season nets combined) from 52 to 64. However, only 16 ranks of fixed engines were licenced in 1990, four fewer than 1989, resulting in the total number of putchers used falling from 5085 to 4849. The division of the catch between the various methods in 1990 differed from that in 1989, with the catch per licence falling for both the lave and seine nets (by over 50% for the latter), while the catch per licence for the fixed engines increased by around 40%. It is possible that the relative success of the different fishing methods was related to river flow and water quality, as the lave and seine nets operate further up the estuary where water quality conditions were most adversely affected. As in 1989, the incidence of coloured salmon with scale erosion in the fishery suggested that fish were being delayed in the lower estuary for long periods. Grilse comprised an estimated 39% of the fish caught in the fishery in 1990, compared with 51% in 1989. As the catch in 1990 was greater than that in 1989, this suggests that the multi-sea-winter component of the run increased in 1990.

In contrast to the commercial catch, the declared rod catch on the Severn was particularly poor in 1990. The catch was 46% lower than the poor catch of 1989 and was 67% below the 5-year average. The scale reading analysis suggested that very few, if any, grilse were taken by rod in the river Severn in 1990. The long dry summer resulted in little movement of fish throughout the fishing season, and the annual count at the Shrewsbury fish counter was the lowest ever recorded. In 1989, exceptional runs of fish had been recorded in October and November after the end of the fishing season. However, despite similar increases in flow in October 1990 only relatively modest runs of fish were recorded this year. Despite this, the evidence from redd counting suggested that the 1990 spawning season was slightly better than average and considerably better than anticipated from the poor recorded runs and angler's catches. However, in common with 1989, it was noticeable that the majority of salmon spawning took place in the main rivers rather than the tributaries.

The coincidence of spring tides, low flows and high water temperatures in 1990 again produced critical conditions in parts of the lower river downstream of Gloucester. Some fish mortalities were recorded (64), but the problem was not as severe as in 1989 when 278 dead salmon had been observed. However, good numbers of smolts were reported leaving the river in May.

Salmon rod licence sales for the river Severn in 1990 were 5% lower than 1989, although, as in other areas, angling effort will also have been adversely affected by the prevailing weather and river flow conditions.

3.10 Welsh

The net catches of both salmon and sea trout in Wales were lower in 1990 than 1989 (by 13% and 44% respectively). However, while the salmon catch remained fairly close to the 5-year average, that for sea trout was 36% below the 5-year average and the worst recorded catch for the period. Two more netting licences were issued in 1990 than 1989 and some change in distribution also occurred, with increases in the number of coracle and wade nets but reductions in the number of seine and drift nets. The overall impact of these changes on fishing effort is not known, but is not thought to be significant. The overall CPUE for the Welsh region in 1990 was lower for both salmon (0.78 fish per licence-day) and sea trout (0.64 fish per licence-day) than in 1989 (0.90 and 1.14 fish per licence-day respectively), the decrease being substantially greater for sea trout. The CPUE for salmon ranged from 0 to 3.65 fish per licence-day, the highest figure being for the Dwyfawr seine nets. For most fisheries in the region, however, the CPUE was well below 1 salmon per licence-day, as in 1989. For sea trout, CPUE ranged from 0 to 2.92

fish per licence-day, the latter figure for the SW coastal seine nets. Grilse were estimated to have comprised 49% of the salmon net catch in the region in 1990, a reduction on that estimated for 1989 (67%).

Rod catches of both salmon and sea trout in 1990 were lower than in 1989, although only marginally for salmon. Catches of both species were well below the 5-year mean (43% for salmon, and 59% for sea trout) and were the lowest recorded catches over the period. As elsewhere, the low flow conditions were unsuitable both for upstream migration of fish and angling. Rod licence sales for 1990 were very similar to those in 1989, which had been 8% lower than the preceding year.

CPUE data for rod fisheries in Wales were available for the first time in 1990. For salmon, these ranged from 0 to 0.13 fish per rod-day and for sea trout from 0 to 0.2 fish per rod-day; the highest figure in both cases being recorded on the river Taff. The overall CPUE for the Welsh region was 0.02 salmon and 0.05 sea trout per rod-day.

3.11 North West

The net catch of salmon fell by 24% compared with the good catch of 1989, but remained marginally above the 5-year average and well within the range for the period. By contrast, the sea trout catch was 43% below that in 1989, 47% below the 5-year average and, by some way, the worst catch recorded in the period. Little change occurred in the number of fishing licences issued, although one fewer fixed engine (crib) licence was issued for the river Eden. CPUE data showed that, for salmon, licensees caught between 0.05 and 2.44 fish per licence-tide, with the highest figures (2.44 and 2.14) relating, as in 1989, to the drift nets in the Lune estuary and on the Cumbrian coast respectively. For sea trout, the CPUE ranged from 0.01 to 0.49, the latter figure for the Lune haaf nets. Overall, the CPUE figures for the region were 0.63 fish per licence-tide for salmon and 0.37 fish per licence-tide for sea trout, these figures being about 23% and 43% lower, respectively, than those in 1989.

The rod catch of salmon in the North West region was 24% higher than that in 1989 and, uniquely in 1990, was the only area in which the catch was above the average of the past 5 years. The sea trout catch, however, in common with most other areas, was well below the catch of 1989 and, at 45% below the 5-year average, was the lowest catch in the period. As elsewhere, the dry weather and prolonged low flows delayed the movement of fish into freshwater and presented unfavourable conditions for angling. Conditions improved later in the season and, as in 1989, most salmon were caught from August onwards. Sales of salmon rod licences rose by around 6% on 1989, while those for sea trout fell by a similar proportion.

The catch per rod-day for salmon ranged between 0 and 0.3 fish per rod-day, the highest figure being recorded on the river Derwent. For sea trout, the CPUE ranged between 0.02 and 0.14 fish per rod-day, the latter figure for the Cumbrian Esk. For both species, the regional CPUE figures were lower in 1990 than in 1989, by 23% for salmon and 54% for sea trout.

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National Rivers Authority annual statistics collection procedures for 1990 - commercial data. Table 1

NRA '	*Return	Return	Return	Separate	Separate	Catcl	h data require	ed from license	ees	Catch	Effort
Region	form supplied	prepaid	required	reporting of salmon and grilse	reporting by weight groups (not S/G)	Daily record of individual fish	Daily aggre- gates	Weekly aggre- gates	Monthly aggre- gates	reported separately for each method of capture	data collected
Northumbria	Yes	Yes	Monthly	Yes (± 7lbs)	No	-	Yes	•	-	Yes	Yes
Yorkshire	Yes	No	15 Nov	Yes (± 7lbs)	No		Yes		<u>-</u>	Yes	Yes
Anglian,	Yes	No	Monthly	No	Yes	Yes(a)	Yes	•	- 4	No	No
Thames				No co	mmercial fish	eries for salme	on or migrato	ry trout			
Southern	No (b)	No	30 Nov	No	Yes(c)	-	-	•	Yes	Yes	Yes (d)
Wessex	Yes	No	15 Nov	Yes (± 8lbs)	No	-	-	Yes	<u>-</u>	Yes	No
South West	Yes	Yes	Monthly	No	No	Yes	-	-	-	Yes	No
Severn-Trent	Yes	No	31 Oct	No	Yes (c)	-	Yes	-	-	Yes	No
Welsh	Yes	Yes	Monthly	No	Yes (e)		Yes	-	-	Yes	Yes
North West	Yes	Yes	Monthly	No	No	Yes	-	_	•	Yes	Yes

- (a) Salmon only.

- (b) Only 6 commercial licensees. Data collected by letter.
 (c) Numbers of fish recorded for 3 weight categories, <7, 7-15, >15lbs.
 (d) Effort data in 1990 collected only for the R.Itchen.
 (e) Numbers of fish recorded in 1lb weight groups up to 20lbs. Large fish entered individually.

Table 2 National Rivers Authority annual statistics collection procedures for 1990 - rod data.

NRA	One form	Return	Return	Return	Number			Catch	data required	from licensees		
Region	for salmon and sea trout	form part of licence	pre- paid	beriuper	of reminders issued	Daily record of nos. caught	Individual weights of fish	Exact date of capture	River or place of capture	Method of capture (e.g. bait)	Effort data (e.g. days fished)	Separate reporting of salmon and grilse
Northumbria	Yes	Yes	Yes	30 Nov	0	No (monthly totals)	Yes	No (monthly totals)	Yes	No	No	No
Yorkshire	Yes	Yes(a)	No	15 Nov	2	No (monthly totals)	Yes	No (monthly totals)	Yes	No	Yes(b)	Yes (± 7lbs)
Anglian		***************************************			No ro	d fisheries for	salmon or migr	atory trout				
Thames		egligible catche return forms us		30 Nov	0	Yes	Yes	Yes	Yes	No	No	No
Southern	No (c)	No (d)	Yes	30 Nov	0		No Monthly totals all details for se		Yes	No	No	No
Wessex	No (c)	Yes	No	15 Nov	2	No	No Monthly totals	No	Yes	No	No	Yes (± 8lbs)
South West	Yes	Yes (e)	Yes	14 days after expiry of licence	0	Yes	Yes	Yes	Yes	No	No	No
Severn-Trent	Yes	No	Yes	31 Oct	1 or 2	Yes	Yes	Yes	Yes	No	No	No
Welsh	Yes	Yes	Yes	7 days after expiry of licence	1 or 2	Yes ·	Yes	Yes	Yes	Yes	Yes	No
North West	Yes	Yes	No	30 Nov	0 or 1 (f)	Yes	Yes	Yes	Yes	No	Yes	No

- (a) River Esk (Special licence) has separate return form supplied with licence. Otherwise, return form part of licence.
- (b) Effort data required for River Esk.
- (c) Sea trout can be fished for under either salmon or trout licences.
- (d) Salmon data collected by individual letters not return forms.
- (e) Licence stuck onto return card.
- (f) Only partial record maintained of licensees, reminders issued where possible.

Table 3 Number and value of commercial fishing licences issued - 1990 season.

NRA		and Migrator		Number				
Region	Fishing Method	- Number - (a)-	- Duty -	Endorsees	Value (£)	_ Method	Number - (a)	- Value
Northumbria	Coastal (N) drift or T nets	75	600.00	194	45038.80	Fyke nets	77	338.80
	Coastal (S) drift nets	46	550.00	110	25322.00	·		
	Total	121		304	70360.80			
Yorkshire	Coastal drift nets	22	535.00	51	11780.20	Fyke nets	(150)	645.00
	Coastal T or J nets	37	405.00	72	14999.40	Criggs (in strings)	(20)	86.00
						(Max. 10 pots per s	tring)	
	Total	59		123	26779.60	Total (16 Licensees	(170)	731.00
Anglian	Coastal nets (various)	160	15.00	280	2456.00	Nets/Traps (Reg)	16	240.00
						Nets/Traps (Div)	819	6140.00
						Total	835	6380.00
Thames	Nil			•		Fyke nets	131	1310.00
Thaires	144					Traps	6	12.00
						Pair trawls	1	100.00
						Total	138	1422.00
Southern	Seine nets	4	1.00	0	4.00	Traps	75	0
•••	Seine net (c)	1	120.00	ŏ	120.00		. •	·
	Seine net (Sea trout) (d)	1	1.00	0	1.00			
	Total	6		0	125.00		_	
Wessex	Seine nets	7	127.90	14	898.10	Fyke nets	58	694.60
	Dip nets	13	41.20	12	538.00	Fixed nets	12	1035.60
	Putcher ranks	2	44.00	0	247.20	Elver nets	213	6134.00
	300 Putchers (units of 50)	(6)	41.20					
	Total	22		26	1683.30	Total	283	7864.20
South West	Seine nets (single river) (e)	14	95.00	_	1.0	Fyke nets	29	0
	Seine nets (single river)	74	95.00	364	7102.80	Elver fyke nets	9	0
	Seine nets (double river) Fixed Engine (Weir) Avon	1	151.00 151.00	7 0	152.40 151.00			
	Fixed Engine (Trap) Lyn	i	151.00	5	152.00			
	Drift nets (Camel) (f)	7	•	ï	-			
	Total	98		376	7558.20			
Severn-Trent	Lave nets (half season)	35	21.00	0	735.00	Elver dip nets	563	11260.00
(g)	Lave nets (full season)	29	42.00	ō	1218.00	Elver dip nets		
	Seine nets	9	100.00	45	909.00	(Concessionary)	56	280.00
	Fixed Engine ranks comprising:	16		0	2734.00	Gloucester eel nets Putcheons	. 9 8	58.50 51.00
	4849 Putchers (units of 50)	(100)	25.00			(Up to 20 putcheons	-	
	570m of leaders:					Fyke nets (>4m)	· 5	32.50
	Leaders <90m	(3)	33.00			Fyke nets (2-4m)	97	436.30
	additional 20m lengths Stop net (boat)	(15) 1	9.00 60.00	0	60.00	Fyke nets (<2m) (up to 5 <2m nets p	27 er licence)	94.50
	Olop Hel (Local)		00.00	·	00.00	Weir trap	1	17.50
						Night (or bank) line	1	2.00
	Total	90		45	5656.00	Total	767	12232.30
Welsh	Compass nets	6	40.00	6	241.20	Elver dip nets	291	2474.00
	Coracle nets	21	Var	49	5308.80	Baited traps (20 per		108.00
	Wade nets	22	Var	56	335.20	Fyke nets	14	308.00
	Seine nets Drift nets (incl. sling nets)	67 12	Var 605.00	203 19	12503.60 7263.80			
	Trammel nets	4	355.00	2	1420.40	i •		
	Lave nets	9	15.00	Ō	135.00			
	Putcher rank	1		_	1584.00			
	1800 Putchers (units of 50) Fish trap-basket	(36)	44.00 44.00	0 5	45.00		,	
	Total	143	₩.00	340	28837.00	Total	317	2890.00
								_
North West	Haaf nets (Solway)	165	43.00	0	7095.00	Fyke nets (288)	17	288.00
	Haaf net (Ellen) Cribs (Eden)	1 2	43.00 202.00	0	43.00 404.00	Dip nets (37) Baskets (100)	37 4	37.00 44.00
	Fishing Baulk (Esk)	1	225.00	4	225.80	Deserved (100)	7	₩.00
	Drift nets (Cumbria Coastal)	4	217.00	11	870.20			
	Drift nets (Ribble)	6	139.00	18	836.60			
	Haaf nets (Lune) Drift nets (Lune)	26 10	89.00 230.00	0 23	2314.00 2304.60			
	Seine net (Lune)	10	199.00	23 5	200.00			
	Seine nets (Duddon)	3	190.00	13	572.60			
	* Lave nets (Kent)	8	104.00	0	832.00			
	Lave nets (Leven)	6	86.00	0	516.00			
	Total	233		74	16213.80	Total	58	369.00

(a) Numbers represent the number of licensees, except for data in parentheses which represent numbers of licensed components on which duty is paid.
(b) Value includes endorsee fees (© £0.20 each).
(c) This net operates under rights of ancient privilege and is charged according to the 5 year average catch.
(d) Net operates under rights of ancient privilege in the river Beaulieu.
(e) Taw and Torridge rehabilitation scheme in operation. Licensees paid not to fish in 1990.
(f) No drift nets operating during Camel rehabilitation scheme 1989-1991.
(g) Salmon licence details are for R.Sevem only. Eel licences apply to both Severn and Trent catchments. Key:

Table 4 Type, individual duty charged and number of rod licences issued - 1990 season.

NRA Region/ Species	Season	Duty (£)	Con. Season	Duty (£)	Short Term	No. Days (a)	Duty (£)	Con. Short Term	Duty (£)	Day	Duty (£)	Con. Day	Duty (£)	Other	Duty (£)
Northumbria													19		
Salmon+M.Trout Salmon+M.Trout	1794	45.00	599	22.50	598	14	14.25			364	6.50	5.0	14		
Trout FW Fish	7309 3466	11.00 4.20	4043 2559	5.50 2.10	996	14	4.20	-	-	2172	1.00	:	-	:	-
Yorkshire			1 —									t^-			
Salmon+M.Trout Trout+FW Fish Trout+FW Fish	52 68750 -	47.20 5.90	31 26400	23.60 2.95	50 7500		19.20 2.40	2000	9.60 1.20	86 -	9.60	20	4.80	1 88	1265 (b 0.85 (c
Anglian			1												
All species All species	123205	7.50	41819	2.50	76400 -	7	1.50		-	 -	-	:	-	270 5	0.70 (c Var (b
Thames												\top		†	
All Species All Species	100296	7.50	81670	2.00 (d)	28501 -	15	2.00		-		-	:	-	79 26	Var (d Var (l
Southern						(f)				<u> </u>		\top			
Salmon	14	35.00			5	14	12.00			2	6.00	1.5		10	Var (
M.Trout+Trout+FW All species	57703 -	6.00	-	1 1	24747	28	3.00	-	-	-		:		60 40197	Var (1.50 (
Wessex												1			
Salmon+M.Trout	251	32.20	162	16.10	85	7	5.20	12	2.60			-	-	9	Var (
Salmon+M.Trout (h) M.Trout+Trout	75 5550		18		4517	7	2.40	282	1.20	-	-	-	-	١ .:	
M.Trout+Trout (h)	1886	10.90	1645 336	5.00 5.90	451/		2.40	202	1.20	:	•	:		13	Var (
FW Fish	7845	7.70	4247	3.85	12411	7	1.90	2185	0.95		-		•	5	Var (
FW Fish (h)	11220	8.60	2277	4.75		•			•	•		-	•	-	-
South West															
Saimon+M.Trout	1877	30.40	806	15.20	749	7	15.20	245	7.60	2397	3.90	290	2.00	39	Var (
Trout	1915	7.60	1433	3.80	1969				•	2319	1.70	683	0.90	1 :	-
FW Fish	4812	2.30	1896	1.20	6248	7	0.90		•	·				8	Var (
Severn-Trent								_							
Salmon (i)	977		599		87		13.50		-	68	7.00	-		-	-
Trout+FW Fish	191339	5.00	55747	2.00	29049	28	2.00		-		•	_	-	2	Var (
Trout+FW Fish Trout+FW Fish		•] :	-		· -	•		-		•		-	6391 736	1.00 (
Weish	 - -	_	 	•	-	-		 -		-		┼		-	
Salmon+M.Trout	9562	33.00	2270	21.00	1914	1.4	15.00			2851	6.00			5007	1.00
Trout	15424		L.	6.00	20930			111		2031	0.00	_	*	5897	1.00 (
FW Fish	7567			4.00			•		-	-	•	-	-	3786	1.00 (
North West			<u> </u>		Ī			1							_
Salmon	2107	34.00	755	17.00	1931	7	8.50		-	١.] .		2890	26.00 (
				-				.	-		-	1 -		1	13.00
Salmon	-	-								ı		1			Man
Salmon								Ι.	•	1 .	-	-	•	5	var
Salmon M.Trout		14.00	352 5120		503	7		:	-	-	•	-	-	-	-
Salmon	1330 26067		352 5120		503 10880	7								1	Var (Var (Var (

- (a) Also applies to concessionary short term licences.
- (b) General licence. Various duties apply.
- (c) Block licences for 1 day and covering many anglers. Duty is per angler. A minimum total fee may apply.
- (d) Concessionary season includes OAP/disabled, junior and second rod.
- (e) Temporary one site licence. Duty is per angler.
- (f) Licence category covers short term + junior season licences.
- (g) Second rod.
- (h) Licences include a second rod for an additional fee of £0.90.
- (i) Salmon licences for R.Severn only. Trout & FW Fish licences permit salmon fishing in R.Trent.
- (i) Special junior licence (under 10 years old).
- (k) Part season licences, valid from 1st June.
- (f) Concessionary part season licences, valid from 1st June.

Table 5 Number and value of rod licences issued - 1990 season.

	Sa	almon (a)	Migrator	y Trout (b)	Tro	ıt (b)	Freshv	vater Fish
NRA Region	Number	Value (£)	Number	Value (£)	Number	Value (2)	Number	Value (2)
- Northumbria -	3355	12 12 12	:3	105096	14520	108991	6025	19931
Yorkshire	250			- 5173	104739 —			506866
Anglian	241699						·	1149493
Thames	210572	·····						978504
Southern	31	6862	122707			-		- 489395
Wessex	612	22616	(c)	(c)	14229	115874	40190	208718
South West	6403	·····		107776	8319	32236	12964	19089
Severn-Trent	1731			- 40780	283264			1134239
Welsh	22503			→ 406397	44496	229528	14490	61736
North West	8398	184393	2185	21140	42074	188360	46526	197080

Table 6 Number of licences issued and percentage return rate for rod fisheries - 1990 season.

NRA Region/ Species	Season	% Return	Con. Season	% Return	Short Term	% Return	Con. Short Term	% Return	Day	% Return	Con. Day	% Return	Other	% Return
Northumbria Salmon+M.Trout	1794	38	599	38	598	18		•	364	12				ī
March alatin						- 1			į.					
Yorkshire Salmon+M.Trout	52	96	31	97	50	94	11	82	86	95	20	95		
Southern (a)									1					
Salmon	14	100			5	100 (b)	-		2	100	_		10	100(c)
Wessex (a)											A			
Salmon				-									9	100(c)
Salmon	4	-	-	12.7			-		-		-		603	75(d)
South West			1										1	
Salmon+M.Trout	1877	45	806	58	749	42	245	55	2397	32	290	33	39	NA(c)
Severn-Trent			1											
Salmon					-		-	-	.			- 10	1731	65(d)
Welsh						-								
Salmon+M.Trout	8562	58	3279	69	4765	57 (e)	-			1.4	-		5897	NA(f)
North West					1									
Salmon+M.Trout					-		_		l.		_		10583	27(d)

Key: (a) In the Southern and Wessex areas migratory trout are fished for under both salmon and trout licences, and so return rates for migratory trout cannot be calculated, but will be lower than those for salmon.

(b) Includes short term and junior season licences.

(c) General licences.

(d) Applies to all ficence categories, no further breakdown available.

(e) includes short term, concessionary short term and day licences.

(f) Special junior ficence (return not required).

NA Not applicable.

Denotes estimate.

Note: Percentage return rate is calculated from: (number licence returns received/number licences sold) x100

Table 7 Annual commercial close seasons and weekly close times for salmon and migratory trout - 1990 season.

				Salmon			ory trout different)
		Clos	se Season		ly Close me	Close	Season
NRA Region	Area/Method	From	То	From	То	From	То
Northumbria		1.9	25.3 (a)	1800 Fri	0600 Mon		
Yorkshire	Drift net T or J net	1.9	31.1 * (a) (a)	1800 Fri 2000 Fri	0600 Mon 0600 Mon	1.9	28/29.2
Anglian		1.10	31.3	0600 Sun	2400 Mon	-	
Thames			No co	mmercial netting			
Southern		1.8	14.2	0600 Sat	0600 Mon		
Wessex	Somerset	31.8	15.2	0600 Sat	0600 Mon		
	Avon+Stour	1.8	31.1 *	0600 Sat	0600 Man (b)	1.8	14.4
	Frome (part only)	1.10 *		0600 Sat	0600 Mon (b)	1.8	31.9
	Other	1.8	31.3 *	0600 Sat	0600 Mon (b)	1.8	14.4
South West	Avon	16.9	14.4	0600 Sat	0600 Man		
	Axe	20.8	31.3	1800 Fri	0600 Mon		
	Carnel	1.9	1.3	0600 Sat	0600 Mon		
	Dart	17.8	14.3	0600 Sat	0600 Mon		
	Exe Upper reach	17.8	15.4	0600 Sat	0600 Mon		
	Lower reach	17.8	13.2	0600 Sat	0600 Mon		
	Fowey	1.9	1.3	0600 Sat	0600 Mon		
	Tamar District	1.9	1.3	0600 Fri	0600 Mon (c)		
	Taw+Torridge R. Lyn	1.9	31.3	0600 Sat	0600 Mon		
	District Teign	1.9 1.9	31.3 14.3	0600 Fri 0600 Sat	0600 Man 0600 Man		
Severn-Trent	Nets	1.9 *	1.2 *	1200 Sat	0600 Mon	9.8	5.:
	Putts+Putchers (d)	16.8	15.4	•	-		
Welsh	Clwyd	1.9	14.3	2400 Thur	2400 Sun		
	Dee	1.9	28/29.2	2400 Thur	2400 Sun		
	Tywi+Taf	1.9	28/29.2	0600 Sat	1200 Mon		
	Usk	1.9	1.3	0600 Sat	0600 Mon		
	Wye Nets	1.9	31.1	0600 Sat	0600 Mon		
	Fixed Engines (c		31.1				
	Other Nets	1.9	31.3	0600 Sat	0600 Mon (e)		
	Fixed Engines (c	16.8	15.4	•	•		
North West	Solway Firth	10.9	24.2 (f)	0600 Sat	2400 Sun		
14	Eden	1.9	31.3 (1)	0600 Sat	0600 Mon	12.21	
	Eilen	1.9	31.3	0600 Thur	0600 Mon		
	Other	1.9	31.3	0600 Sat	0600 Mon		

Көу:

- (a) From 1987 season, nightly close time (2000-0400) has also applied.
- (b) Additional weekly close time between 2100-0500 Wed, Thur, and Fri applies.
- (c) Weeldy close times vary: 1.3-31.5 0600 Fri to 0600 Mon, 1.6-31.8 0600 Sat to 0600 Mon.
- (d) No weekly close time for Fixed Engines.
- (e) With the exception of weekly close times for Teifi, Nevern, E.and W.Cleddau which are as for Tywi +Taf.
- (f) Close seasons changed by new byelaws which came into effect on 29 March 1988.
- Migratory trout close seasons are as for those of salmon except where indicated by an asterisk. Variations are given
 in the right-hand column. Weekly close times are the same for both species.

Notes:

Close seasons and weekly close times are subject to local variations; the exact dates are determined by byelaws so that an individual river's spawning time can be taken into account.

Some waters may not be open for the full duration of the season.

Table 8 Annual rod close seasons for salmon and migratory trout - 1990 season.

		Sa	!mon	Migrati	ory trout
		Close	Season	Close	Season
NRA Region	Area	From	То	From	То
Northumbria		1.11	31.1	1.11	2.4
Yorkshire		1.11	5.4	1.11	5.4
Anglian		29.9	28/29.2	29.9	28/29.2
Thames		1.10	31.3	1.10	31.3
Southern		3.10	16.1	1.11	31.4
Wessex	Frome (part only)+Piddle Other	1.10 1.10	28/29.2 31.1	1.11	14.4 14.4
South West	Avon District Axe Camel Dart Exe Fowey Tamar+Plym R. Plym R. Yealm District Taw+Torridge R. Lyn District Teign	1.12 1.11 1.11 16.12 1.10 1.10 16.12 16.12 16.12 15.10 1.11 1.10	14.4 (a) 14.3 14.3 31.3 31.1 (a) 13.2 31.3 31.3 31.3 (a) 28/29.2 31.1 28/29.2 31.1 (a)	1.10 1.10 1.11 1.10 1.10 1.10 1.10 1.10	14.4 (a 14.3 14.3 31.3 14.2 31.3 2.3 2.3 2.3 14.3 14.3
Welsh	Dee+Usk Wye Upper reach+Tributaries Lower reach Other	18.10 26.10 18.10 18.10	25.1 25.1 25.1 19.3	18.10 18.10 18.10 18.10	19.3 19.3 19.3 19.3
North West	Eden Other (b)	15.10 1.11	14.1 31.1	-16.10 - 16.10	30.4 30.4

(a) Experimental change in season.

(b) Migratory trout close season differs for rivers Annas, Bleng, Esk, Mite, Irt, Calder and Ehen for which 1.11 to 30.4 applies.

Notes:

Close seasons and weekly close times are subject to local variations; the exact dates are determined by byelaws so that an individual river's spawning time can taken into consideration.

Some waters may not be open for the full duration of the season.

Table 9 Monthly reported salmon and grilse catches by commercial instruments - 1990 season.

NRA Region	River/ Fishery	Fishing Mathod	No. Lics	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Un- Known	Total Number	Total Weight (Kg)	Av. day/ lic.	Catoh/ Lic. day
Northumbria	Coastal (N)	Drift nets	75 (a)		74	511	2044	2417	10240	7822		0	23108	93250	42.1	7.32
Ĭ	_	Tinets	75 (a)	-	3	32	487	395	1156	479		ŏ	2552	10427	10.1	3.38
	Coastal (S)	Drift nets	46	7	0	62	686	926	7492	8222		0	17388	63497	56.0	6.74
	Whole area	Total	121		77	605	_3217	3738	18888	16523		0	43048	167174	53.6	6.64
Yorkshire (Constal	Drift nets	22	0	0	0	48	249	3499	3927	-	0	7723	26389	51.3	6.54
1.	Whale area	T or J nets	37	0	0	0	12	72	458	217	•	0	759	2495	46.0	0.45
	Whole area	Total	59	0	0	0	80	321	3967	4144		0	8482	28884	48.1	2.94
	Coastal	Nets	160 (b)	1.7		0	2	4_	1	0	2	0	9	19	<u>L</u>	
	Itchen	Seine net (private)	1 1	0	0	0	1	19	21			0	41	124 (c)	9.0	8.56
	Hants area	Soine nets Total	5	0	0	0	0	2	0		-	0	2	3	i	
	Whole area		6	0	0	0	1	21	21	-	-	0	43	127		
	Avon + Stour Poole Harbour	Seine nets Seine net	6	0	0	1 0	11 6	87 32	1 69 23	0		0	268 61	1170 (c)	ĺ	
	Parrett	Dip nets	13	ō	Ó	ŏ	15	11	8	1		ŏ	36	234 (c) 165	ı	
		Putcher ranks	2	0	0	0	8	17	8	5		0	36	168	l	
		River total	15	0	0	0	23	28	14	6		0	71	333	i	
	Whole area	Total	22	0		1	40	147	206	6	0	0	48	1737		
	Exe	Seine nets	19	0	1	20	106	198	401	109		0	836	2391		
	Telgn Dart	Seine nets Seine nets	10 18	-	0 2	13 63	156 256	286 190	337 317	254 257		0	1046 1086	3429	ĺ	
	Avon	Fixed Engine	1 (4)	,	-	w	٠.0	100	917	w		U	1,400	3869	l	
1	Tavy	Seine nets	4	-	1	5	27	78	161	101		0	373	1237	1	
	Temer Tmax(Temer	Seine nets	14	-	11	20	103	251	712	556		0	1653	4855	1	
	Tavy/Tamar Lynher	Seine net Seine nets	1 (e) 5	1.5	0	3	31	40	81	103		0	256	806	l	
	Fowey	Seine nets	4	2.1	1	5 6	19	35	57	42		0	160	539	1	
	Lyn	Fixed Engine	1	1.0		Õ	1	70	5	6	•	Ď	82	289	ĺ	
	Whole area	Total	77	0	16	130	699	1148	2071	1428		0	5492	17415	ĺ	
Severn-Trent	Severn	Seine nots	9	0	0	٥	48	76	73	122		0	319	1215		
		Lave nots	64 (1)	3	15	30	132	174	262	264	•	0	880	3709	i	
	Whole area	Fixed Engines Total	16 89	3	15	117	1021	1143	660	257	•	0	3198	14763	i	
						147	1201	1393	995	643			4397	19687	<u> </u>	
-	Wye Usk	Lave nots Drift nots	9 8	0	0 6	0 89	10 551	7 383	5 397	9 401		0	31 1827	139 9927	97.1	0.00
	-	Putcher rank	1	ŏ	ŏ	5	90	106	93	32		ŏ	326	1816	115.0	2.33 2.83
		River total	9	0	6	94	641	489	490	433		ŏ	2153	11743		2.40
1	Tywi	Seine nets	9	0	0	2	11	28	30	47		0	118	497	64.7	0.20
		Coracie nets River total	10 19	0	0	0 2	10 21	21 49	12 42	1 48		0	44 162	199 696	49.0	0.09 0.15
	Taf	Wade net	ĭ	ŏ	ŏ	ō	ò	~~~~	ō	~		ő	102	0	32.0	0.15
		Coracle net	1	0	3	2	3	1	0	Ó	*	0	9	33	37.0	0.24
	S.W.Coastal	River total Wade nets	2 21	0	3	2	3 13	1	0	0	-	0	9	33		0.13
	S.W.Coastai	Seine nets	4	١٥	Ö	4	0	29 2	0	ū	-	0	46 8	167 34	4,0 6.0	0.53 0.21
		Fishery total	25	ō	ō	6	13	31	1	ō	-	ō	51	201	1	0.46
	E+W.Cloddau	Compass nets	6	0	0	0	0	2	2	4	1,4	0	8	21	18.6	0.07
	Nevem Teifi	Seine net Seine nets	1 5	0	0	0	0 41	0 64	0 41	1 43	-	0	1 193	5 791	16.0 60.4	0.06 0.64
Ì	•	Coracle nots	10	ŏ	ŏ	7	19	57	36	48	-	ŏ	186	562	53.8	0.31
		River total	15	0	0	11	60	121	76	91	-	0	359	1353		0.43
l	Dyfi Dysynni	Seine nets	6	0	0	0	2	22	14	30	-	0	68	291	45.8	0.24
i	Mawddach	Seine nets Seine nets	3	0	0	0	0	4 8	5	14 3		0	22 20	63 69	21.5 27.0	0.51 0.25
l	Glaslyn	Soine net	2	0	O	0	3	10	6	ő		ŏ	19	77	56.0	0.16
l	Dwytawr Seinet	Soine nets	2	0	0	0	9	50	41	47		0	147	769	20.0	3.65
ł	Seiont N.Anglesey	Seine nets Seine nets	3	0	0	0	0	14 0	26 0	117 0	-	0	157 0	514 0	48.7 2.0	1.08
ì	Ogwen	Seine nets	2	ŏ	ŏ	ŏ	ŏ	21	57	93	-	ö	171	806	48.0	0 1.78
	Conwy	Basket trap	1	Ó	0	Ō	0	0	6	0		ŏ	6	16		
		Seine nets	5	0	0	0	0	8	33	46		0	66	383	35.6	0.48
l	Chryd	River total Drift nets	6 4	0	0	0	0	8 16	39 22	45 24		0	92 63	399 206	29.8	0.50
ļ	Dee	Trammel nets	4	ŏ	ŏ	ŏ	ò	22	98	115	4	0	235	1302	29.8 34.8	0.53 1.65
1		Seine nets	22	0	5	19	40	105	214	226	-	ō	609	2277	54.0	0.51
	148. 4	River total	26	0	5	19	40	127	312	341	-	0	844	3579	ĺ	23.0
	Whole area	Total	143	0	14	134	807	980	1142	1300		0	4377	20964	38.7	0.79
North West (g)	Ribble	Drift nets	6	-	-	0	9	33	114	83	-	0	239	1212	70.8	0.56
l.	Lune	Haaf nets Drift nets	26 10		•	0	43 2	106 67	267 449	764 887	-	0	1180 1405	4597 4920	61.2	0.74
1		Seine net	1		:	Ö	4	9	14	987 70	-	Ö	1405 97	49/2U 381	57.7 99.0	2.44 0.98
		River total	37	141	-	Ō	49	182	730	1721	-	Ō	2682	9698	61.3	1.18
	Kent Leven	Lave nots	8	-	•	1	11	23	87	75	•	0	197	850	19.4	1.27
[. (PASE)	Lave nots	6 3			0	0	3	37 9	13 31		0	53 40	156 124	14.5 (N	0.51
	Duddon	L Seine nets			-		-			5		ŏ	7	12		0.06
		Seine nets Area Totai	2 (0			0	٥	0	1	3	_			12 1	58.0	
	Duddon S&W Cumbria Coastal	Area Total Drift nets	2 (D 4			0	0	0	80	399	-	ò	479	1895	56.0	2.14
	Duddon S&W Cumbria	Area Total Drift nets Hazi nets	2 (1) 4 1665		Ÿ	_					-				56.0 33.6	
	Duddon S&W Cumbria Coastal	Area Total Drift nets Hazi nets Cribs	2 (0 4 185 2	15	•	Ō	0	0	80	399	198	0	479	1896	56.0 33.6 9.0	2.14
	Duddon S&W Cumbria Coastal	Area Total Drift nets Hazi nets	2 (1) 4 1665	18	2 2	_					128 128				56.0 33.6	

Notes:

A dash is used to denote months that fall entirely within the annual close season. Percentage return rates for all commercial fisheries can be regarded as 100% unless otherwise specified by a footnote.

⁽a) Northern area licences are for both drift and T nots. Not all licensees use T nots.
(b) 97.5% return.
(c) Some fish (20 on the fichen, 46 on the Avon and 9 on the Frome) were also caught and released as part of tracking programmes; these fish have been excluded from the declared catch data, but have been included (where appropriate) for the purpose of calculating catch per licence-day.
(d) Licence purphased by NRA South West region but was not used.
(a) Catches included under Tavy and Tamar as appropriate.
(f) Figures for half- and full-season lave nets combined.
(g) Effort data for the NRA North West region are measured as catch per licence-tide not catch per licence-day.
(h) No effort data recorded.
(g) Area includes R.Esk fishing beafit, R.Elien heaf net and 2 coops on the R.Denwent, although the latter (privileged fixed engines) are not fished at the present time.

Table 10 Monthly reported migratory trout catches by commercial instruments - 1990 season.

	, -		· ·													
NRA Region	River/ Fishery	Fishing Method	No. Lice	Feb	Maz	Apr	May	Jun	Jul	Aug	Sep	Un- _known	Total - Number	Total Weight	Av day/	Catchy Lic.
		<u> </u>				-	-				_			(kg)	∐c.	day
1 - d - d - d -	Countri OD	Drift neta	75 (s)			27	500	1649	1840	1004		9	5032	14565	42.1	1.50
Northumbria	Coestal (N)	Tineta	75 (a)	-	2	37 49	1040	2854	3046	1620	-	ŏ	8609	15324	10.1	11.40
	Coastal (S)	Drift nets	46	-	ŏ	15	846	4571	5600	3887	•	-	14919		56.0	
											-	0		35193		5.79
	Whole area	Total	121	-	2	101	2386	9074	10496	6511		0	28560	65082	53.6	4.40
Yorkshire	Coestai	Drift nets	22	-	0	0	139	1671	2220	1843	-	0	5873	12591	51.3	4.97
		T or J nets	37		0	18	725	2909	4494	1838	4	ō	9984	20112	46.0	5.86
	Whole area	Total	56		0	18	864	4580	6714	3681		0	15857	32703	48.1	5.50
	***************************************					_							1,043,		L	
Angilan	Coastal	Various nets	160 (b)		-	26	159	387	385	627	729	0	2313	4176	i	
•	<u> </u>	0-1		_		_				- 7	_			445		
Southern	Itchen	Seine net (private)	1	0	0	0	3	23 0	20		-	0	46	115	9.0	5.11
	Hants area	Seine nets	5	-								0	•	4		
	Whole area	Total	6	0	0	0	3	23	24	1.5		0	50	- 119		
Wessex	Avon + Stour	Seine nets	6			0	2	251	208		-	0	461	1201		
	Poole Harbour	Seine net	1 1	-		0	0	16	4	0		o i	20	56		
	Parrett	Dip nets	13	0	0	0	0	0	0	1		0	1	4		
		Putchers	2	0	0	0	1	1	0	0	-	0	2	6		
		River total	15	0	0	0	1	1	0	1	-	0	3	10		
	Whole area	Total	22	٥	0	0	3	268	212	1	_	0	484	1266		
		 	-	_				_				-				
South West	Exe	Seine nets	19	0	0	0	2	3	_1	0	-	0	. 6	10		
	Teign	Seine nets	10		0	39	380	427	83	. 7	•	0	936	1366		
	Dari	Soine nets	18	-	0	32	312	160	65	10	-	٥	579	905	ŀ	
	Avon	Fixed Engine	1 (c)			_				_		ایا			l	
	Tavy	Seino nets	1 .5 1	-	0	5	39	80	10	0	-	0	134	245	l	
	Temer	Seine nets	14		0	8	51	79	23	1	-	٥	162	284	ì	
	Tavy/Tamar	Seine net	[[(6)		^		40	40		_		_		4 4 8	!	
ĺ	Lynher	Seino nets	5		0	3	18	42	3	0		0	96	112	l	
	Fowey	Seine nota	†		0	5	48	86 22	16	1	-	0	156	210	ĺ	
	Lyn	Fixed Engine	1 1]	_	0	2	23	6	1	-	٥	32	72	1	
	Whole area	Total	77	٥	Q	92	852	900	207	20	-	0	2071	3204		
Welsh	Usk	Drift nets	8	0	0	5	24	27	16	18		0	90	292	97.1	0.11
		Putcher rank	1	0	0	0	1	0	0	0	_	0	1	3	115.0	0.01
	i	River total	9	0	0	5	25	27	16	18	-	0	91	295		0.10
	Tywi	Seine nets	9	٥	0	32	188	323	128	14	-	0	685	1566	64.7	1.17
		Coracle nets	10	٥	10	83	337	372	63	2	-	Ó	867	2186	49.0	1.76
	I	River total	19	0	10	115	525	696	191	16		0	1552	3752	1	1.44
	Tad	Wado net	1	0	0	0	Q.	0	0	0		0	0	0	32.0	0
		Coracle net	1 1	0	4	8	24	20	0	Ó		0	56	132	37.0	1.51
		River total	2	0	4	8	24	20	0	0	-	0	56	132		0.81
	S.W.Coastal	Wade nets	21	0	0	2	29	32	18	4		0	86	156	4.0	1.00
		Seine nets	4	0	0	43	2	26	1	0		0	72	196	6.0	2.92
		Fishery total	25	0	0	45	31	58	19	4	-	0	157	352	ŀ	1.42
	E+W.Cloddau	Compass nets	6	٥	O	0	0	0	2	0	-	0	2	2	18.6	0.02
	Nevem	Seine net	1 1	0	0	0	0	0	4	0	-	0	4	7	16.0	0.25
	Teifi	Seine nets	5	0	0	5	44	58	21	6	-	0	134	303	60.4	0.43
	l	Coracle nots	10	0	0	21	87	135	127	73		٥	443	948	53.8	1.22
		River total	15	D	0	26	131	193	148	79		0	577	1251		88.0
	Dyfi	Seine nets	6	0	0	3	84	316	42	8	-	0	453	1370	45.8	1.56
	Dysynni	Seino nets	2	0	0	0	0	39	37	17	-	0	93	321	21.5	2.05
	Mawddach	Seine nets	3	0	0	0	0	2	3	0	-	0	5	12	27.0	0.06
· ·	Glastyn	Seine nets	2	0	0	0	13	43	14	0	-	0	70	170	56.0	0.62
	Dwytawr	Seino nets	2	0	0	0	0	37	6	0		0	43	121	20.0	1.08
	Seiont	Seine nets	3	0	0	0	2	31	- 11	41		0	85	181	48.7	0.56
	N.Anglesey	Seine nets	1 1	0	0	0	0	0	2	0	-	0	2	2	2.0	1.00
	Ogwon	Seino nets	2	0	0	0	0	34	18	15	-	0	67	171	48.0	0.70
l	Сопму	Fish Trap	!	0	0	0	0	0	0	0	-	0	0	0	١	
J		Seine nota	5	0	0	0	0	10	11	9	*	0	30	68	35.6	0.17
i	l	River Total	6	0	0	0	0	10	11	9		0	30	68		_
]	Clwyd	Drift nets	1 4 1	0	0	0	6	129	103	23	-	0	261	626	29.8	2.13
	Doe	Trammel nots	4	0	0	0	0	6	3	0		0	9	18	34.8	90.0
		Seine nets	22	0	0	0	2	10	17	2		0	31	83	54.0	0.03
	l	River total	26	0	D	0	2	16	20	2	٠	0	40	61		0.03
	Whole area	Total	134	0	14	202	843	1650	647	232		0	3588	8914	38.7	0.64
North West (e)	Ribble	Orlft nots	6	_				0	12	14		0	26	86	70.8	0.06
	Lune	Haaf nets	laš l	_		ŏ	103	508	140	27		ŏ	778	1306	61.2	0.49
1	1	Drift nots	10			ő	8	124	67	11		ŏ	210	528	57.7	0.36
		Seine net	1 1			ŏ	ĭ	13	9	ä		ŏ	23	40	99.0	0.23
	1	River total	37			Ö	112	645	216	38		ŏ	1011	1872	61.3	0.45
	Kent	Lave nets	%			ŏ	0	1	6	3		ă	1011	24	19.4	0.06
	Levon	Lave nets	6			ŏ	ŏ	3	10	0		o	13	26	14.5	0.15
j	Duddon	Seine nets	3	_		ŏ	ŏ	ő	2	1		Ö	3	5	m	3.13
4	S&W Cumbria	Area Total	ان 2	_		0	Ö	2	5	6		٥	13	42	58.0	0.11
	Coastal	Drift nets	1 4 9			ŏ	Ö	ő	2	Ö	_	Ö	12	4	56.0	0.11
l		Haaf nots	165			U	U	U	٤	U	•	•	! '	•	33.6	0.01
		FIRMU HULS											1		9.0	
l	Eden + Esk	Cribe													J.U	
l	CORN + ESK	Cribs Rher Total	167			12	445	1451	240	41	•	^	2100	2724		0.20
		River Total	167	4	0	13	442	1451	246	41	0	0	2193	2720	33.3	0.39
ne#C	Whole area			9.	0	13 13	442 554	1451 2102	246 499	41 103	0	0	21 9 3 3271	2720 4779		0.39 0.37

Key: (a) Northern area licences are for both drift and T nets. Not all licensees use T nets. (b) 97.5% return.

⁽c) Licence purchesed by NRA South West region but was not used.
(d) Catches included under Tavy and Tamar as appropriate.
(e) Effort data for the NRA North West region are measured as catch per licence-tide not catch per licence-day.
(f) No effort data recorded.
(g) Aroa includes R.Esk fishing baulk, R.Elen haaf not and 2 coops on the R.Derwent, although the latter (privileged fixed engines) are not fished at the present time. A desh is used to denote months that fall entirely within the annual close season.

Percentage return rates for all commercial fisheries can be regarded as 100% unless otherwise specified by a footnote. Migratory trout are not caught on the Wye or Severn and these licences are not included.

Table 11 Monthly reported rod catches of salmon and grilse by principal rivers - 1990 season.

NRA Region	River	Jan	Feb	Mer	Apr	May	Jun	Jul	Aug	Sep	Qdt	Nov	Dec	Un- Known	Total Number	Total Weight (kg)	Cutor Lio. day
iorthumbria.	Aln		3	0	1	1	C	_	0	1	1			0	7	31	╅
	Coquet Tyrio	- 0	11 7	21 52	27 88	27 84	11 59	17 77	13 68	27 232	72 407			3	229	793	
	Wear		í	0	2		5	4	7	18	68	-		54 0	1109 105	5645 399	i
	Tees	- 2	0	ō	2	ō	Ö	Ó	Ò	Ö	ī			ŏ	3	16	
	Total	_	22	73	120	92	75	98	86	278	549	15		57	1452	6884	
Yorkshire	Esk		-		0	0	2	_ 0	1	2	9	-	-	0	14	47	0.03
Thames	Thames		-		0	2	0	1	3	3		-	•	0	9	29	
Southern	Test Itchen	0	0	1	7	33	66	78	50	51	6			0	292	1123	
	Total	0	0	3 4	4 11	26 59	49 115	56 134	40 90	15 66	0 6	-		0	193 485	761 1884	
Wessex	Avon		1	18	29	46	94	59	15	33		-		0	295	1446	
	Stour	· O	0	0	0	0	1	1	0	0		-		0	2	6	
	Piddle Frome	- 5		6	0 8	2 31	9 79	45	0 16	1 22	•			0	13 207	77	
	Total		1	24	37	79	183	106	31	56			-	0	517	985 2509	
South West	Exe		4	16	5	2	42	75	38	139		-	-	0	321	904	
	Teign		1	3	13	16	13	12	9	16		-		0	83	310	1
	Dart Avon	10-0	3	3	7 0	1	12 3	23 0	6 1	12 1	9	17		0	67	250	
	Plym			-	0	ŏ	ŏ	ŏ	ö	ò	2	13	4	Ö	31 19	103 78	
	Tavy			0	0	Ō	4	2	4	5	11	-	-	0	26	92	l
	Tamar Lynher	-	-	1 2	22 4	23 4	49 5	61 3	18 0	52 3	80 11	٠		1	307	1015	I
	Fowey			-	ō	ī	3	7	5	9	14	81	33	0	32 153	93 530	
	Camol	-	-	-	0	1	8	15	9	30	48	115	72	Ō	298	1059	1
	Taw Torridge			23 6	26 14	12 0	7 5	19 9	8 0	25 6		•	*	0	120	444	1
	Lyn	3	0	9	3	5	66	77	15	9	27	-		ŏ	40 211	143 663	1
	Others	-	0	0	0	0	1	0	0	2	6	0	0	ō	9	21	1
	Total		8	63	94	65	218	303	113	309	208	226	109	1	1717	5705	
Severn-Trent	Severn	115	6	76	86	80	54	36	11	9	-			0	357	1781	0.02
Wetsh	Wye (a) Usk	8	4	132 18	357 21	288 34	314 26	328 16	22 9	88 44	224 92	-		0 2	1757 266	8535 985	0.04
	Taff	-	•	0	0	2	3	18	6	10	33	-	-	ō	72	178	0.13
	Ogmore Atan		-	0	0	0	1	4	3	0	5	-		6	19	49	0.01
	Neeth	1.9		ŏ	0	2	0 2	0	1	0 7	0			7	25	2 79	0.00
	TENO	-		0	0	ī	7	14	12	15	34		-	2	85	287	0.02
	Loughor	٠ .	-	0	0	0	3	2	1	3	0		•	0	9	26	0.01
	Gwendraeth Tywl	:		0 7	0 5	0 7	1 18	0 73	1 24	0 67	0 252		- 10	0 18	2 471	4 1825	0.00
	Ted		-	4	3	t	7	6	4	1	9			ō	35	117	0.01
	E+W.Cleddau Nevem	-		1	2	1	1	1	3	3	5	-	-	0	17	61	0.01
	Telf	- 1		0 5	16	2 12	1 23	7 53	6 33	5 137	238 238	100		0 19	536	90 2290	0.01
	Aeron	-		ŏ	0	1	ō	õ	ō	1	Õ			ő	2	4	0.00
	Ystwyth		-	0	0	0	Ō	0	0	9	15	-		0	24	75	0.03
	Rheidol Dyfl		-	0	0 3	1	5 12	6 33	6 40	20 95	9 114	-	13	3	48 301	159 1032	0.03
	Dysynni	-	-	ŏ	ō	i	1	3	1	7	6	_	. 3	1	20	61	0.01
	Artro	-	•	0	0	0	1	1	1	2	_1	٠		1	7	16	0.02
	Mawddach Dwyryd	1 :		1	0	5 0	26 n	56 3	61 9	82 12	50 11			23	304	1125	0.00
	Glastyn			ő	9	18	8	5	13	15	5			0	73	114 250	0.02
	Dwytawr		-	0	0	0	2	6	10	22	27			0	67	236	0.02
	Llyfni Gwyrfai			0	0	0	0	1	5 0	5 4	1	-	_	0	12 8	38 28	0.00
	Selont			0	0	0	0	2	6	31	42	-	-	3	84	300	0.03
	Ogwen			0	0	0	2	3	19	24	37	-	-	2	87	267	0.05
	Conwy	0.0		1 2	8 8	6 13	29 7	44 11	65 12	137 20	139 30	-	-	1 0	428 100	1531 312	0.07
	Dee	ō	6	26	38	46	38	34	24	78	128	-		9	103 427	312 1863	0.03
	Others	0	0	1	1	0	1	2	1	5	7		٠	4	22	84	
Alamb Mt	Total	- 0	13	196	469	442	539	734	399	949	1523			104	5370	22014	0.02
North West	Ribble Wyre		1	4	4	7	4	26 0	න 0	79 1	148			0	298 2	1123 4	0.04 0.00
	Luine		0	2	3	6	23	67	44	369	684			٥	1198	4842	0.11
	Kent		2	3	3	11	17	46	36	74	115		•	0	307	959	0.09
	Leven Duddon		D 0	0	0	0	1	13 2	6 1	36 18	56 18	-	-	0	1111	367 115	0.08 80.0
	Esk	:	Ö	Ö	ö	ö	ò	2	3	4	12	:	•	Ö	21	1 15 54	0.08
	lrt .		0	Ŏ	Ŏ	Ó	Ō	1	2	16	19	-		0	38	115	0.04
	Ehen Derwent		0	0	0	2	1 7	6 29	6 67	17 385	68 390	-	-	0	100	313	0.06
	Ellen	7.3	ŏ	Ö	ő	٥	ó	0	0	385 3	390 25		-	0	880 28	3342 78	0.30
	Eden	12	19	73	60	56	70	74	162	589	424		-	0	1538	6556	0.10
	Esk(Border)	-	0	1	2	1	4	13	28	171	133		-	0	353	1510	0.23
			^	^	^	•		^		•	40						
	Others Total	12	0 22	0 83	0 74	0 82	1 129	0 279	0 380	5 1767	10 2100	4	•	0	16 4928	46 19424	0.04

Key: Notes: (a) Data from fishery owner's returns, not individual catch returns, although effort data have been derive

A dash is used to denote months that fall entirely within the annual close season.

Principal rivers' include all rivers supporting commercial fisheries or with mean annual rod catches in excess of 30 salmon or 100 sea trous, plus some smaller rivers selected by RWAs. Catches from tributaries and from milnor rivers with a shared estuary are included under the appropriate main river. The catch from remaining rivers in each region is aggregated and recorded under 'others'.

Table 12 Monthly reported rod catches of migratory trout by principal rivers - 1990 season.

NRA Rogion	River	Jan -	Feb	,Mar,	_Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	— Un ↑ Known	Number	Total Weight (kg)	Catch Lic. day
Northumbria	Aln	-	-	31	1	1	5	6	4	19	44			10	87	144	
	Coquet				6	10	9	29 38	10	34	187	-	-	14 53	299	577	Í
i	Tyne Wear		- 0		1	5 2	8 10	22	62 47	211 90	356 237			53 10	737 419	1303 676	l
ì	Tees		-	-	i	ō	ő	70	Ö	õ	Ö			ő	1 7/1	1	1
_	Total				13	18	29	95	123	354	824			87_	1543	2701	
Yorkshire	Esk	-			0	0	8	9	2	10	133	1		0	162	276	0.18
Southern (a)	Test Itchen	-	4	-		0	4	- 13 3	8	4 10	5 5	٠	-	0	34 24	68 18	1
4	Beautieu			1		(4)	3	12	13	9	5			ŏ	2	91	ŀ
	Total			-		1	5	16	12	_14	10			0	100	177	 -
Messex	Avon Piddle				0	5	- 11	_ 👸	- 9	_ 12 ·	- 12 ·	1.0	1.5	_0 0	57 8	99 9	1
	Frome	()(2)			0	1	6	4	2	9	7		-	0	29	56	
	Others	-			0	1	0	1	3	0	2	7		0	7	7	
South West	Total				<u>1</u>	7	2	13	10	<u>25</u>	10		-	0	101	171 42	├
SOUTH WEST	Axe Otter				ŏ	ò	Ó	8	16	11 12	10			Ö	46	36	
	Exe			0	0	1	0	7	a	3	-		-	0	11	5	1
	Telgn		-	1	3	42	56	79	80	32	22	-	-	0	325	283	
ſ	Dart Avon			0	8	19 2	41 12	80 32	78 17	76 10	-	-		0	282 73	259 60	1
J	Erme		-	0	ŏ	ő	2	5	2	3	-			ŏ	9	9	1
l	Yealm			0	O	0	0	7	12	ò				0	19	24	1
l	Plym	-	-	0	0	20	20	38	15	13				0	106	102	1
	Tavy Tamar	10.4		0	0	0	1 0 10	18 74	45 26	31				0	104 137	85 103	1
Į.	Tamar Lymhor		1	0	1	5 12	22	60	26 28	22 7	-			5	137	101	
ľ	Loos				ó	0	5	7	16	2				ő	30	21	1
Į.	Fowey			-	0	8	35	104	59	23				Ö	229	165	1
	Carnel				0	1	51	300	176	62	-		11.0	8	598	341	!
	Taw	7		1	4	2	38	77	27	26	-		-	0	175	153	1
	Torridge Lyn	- 5		0	0	4	14 24	62 47	35 23	18 13		-		1 6 0	146	97 1 3 9	1
	Others			ŏ	Ö	ō	Õ	2	10	õ			-	ő	12	4	
1	Total			2	16	117	342	999	685	364	42	1,2		29	2596	2029	1
Wolsh	Wyo	7)		3	3	5	5	5	0	3	4		(*)	1	29	23	0.00
J	Usk Teff	1	-	0	1	5 2	12 2	12 5	8 8	17 10	7 53		1	0	64 86	45 95	0.02
l	Ogmore	-	-	1	9	16	28	88	70	96	62	-	1.2	53	393	468	0.11
	Afan	-	4	3	5	3	8	29	37	36	32			2	155	123	0.10
	Neath			0	4	3	11	33	19	.25	19	100		72	196	189	0.08
Į.	Tawe Loughor			0	0 3	13 11	35 23	84 28	141 34	100 43	63 14		-	14	450 156	472 182	0.11
ľ	Gwendraeth			ő	ŏ	3	17	16	7	Ě	6			12	l es	39	0.08
Į.	Tyred	231	4	3	24	117	290	706	451	314	239	-		99	2243	2910	0.08
į.	Tel .			0	1	9	22	25	22	19	8			2	108	93	0.04
	E+W.Cleddau	-		0	1	2	57	172	75	36	22	-		1	385	230	0.12
	Nevem Teži	-		3	0	1 12	19 70	87 230	86 174	47 170	22 126			13 24	275 813	166 615	0.11
Į.	Aeron	100		ŏ	2	2	23	67	40	37	19			0	190	116	0.15
ľ	Ystwyth		4.	ŏ	Ď	ō	3	7	17	22	5		8.	Ĭ	56	57	0.06
	Rheidol	-		D	Đ	0	12	32	36	47	9		-	40	178	153	0.10
l	Dyfi		-	0	1	8	106	251	215	147	94			69	891	1140	0.15
	Dysynni		*	3	2	21	28	33	53	92	18			26	276	240	0.10
Į.	Mawcolach Artro	10		0	0	ō	.s.	126 12	164 19	93 8	20 3	- 3		78 0	527 48	534 40	0.09
F	Dwyryd			ŏ	ŏ	ŏ	5	19	36	65	4	_		9	138	89	0.09
1	Glastyn		1	5	168	84	63	57	78	70	16			3	544	391	0.14
	Dwyfawr			0	0	D	68	100	160	181	41			142	692	482	0.19
l	Liyini Canatal		-	0	0	0	2	0	9	22 2	3			21	57	49	0.09
l l	Gwyrtai Seiont			0	0	0	0	1 10	18	33	2 7			0 48	5 117	5 98	0.05
j	Ogwen			ŏ	Ď	ŏ	ò	Ö	13	20	10			16	59	30 43	0.04
I	Conwy	-		ō	1	1	13	37	64	92	23			45	276	307	0.10
]	Clwyd			0	6	9	36	62	118	96	41			0	368	279	80.0
	Dec			1	2	3	4	17	14	22	19			2	84	75	0.02
	Others Total		-	0 23	0 244	1 335	16 1024	14 2365	14 2200	18 1960	34 1045			39 834	136	129 9877	0.05
North West	Ribbie	200			-		34	113	109	109	21		-	0	391	411	0.05
	Wyre			-	•	1	1	3	3	1	4		~	0	13	8	0.03
l	Luno Kent	:	-	-	45	22	135 16	233 46	169 60	260 110	126 17			0	946 253	965 204	90.09 90.0
1	Loven					7	9	20	13	41	11	-		ŏ	101	90	0.07
l	Duddon			1.		ó	5	2	3	9	ï			ŏ	20	ão	0.04
I	Esk			4		0	Ó	ā	21	12	6		-	ō	39	43	0.14
I	<u>lit</u>		-		-	0	0	1	2	20	_14		4 :	_0	= 37 -	30-	0.04
l	Ehen .	-			1.0	1	_ 10	17	- 9	-12	- 9		11	0	58	56	0.04
i	Derwent					0	20	15	22 0	26	6			0	89	88	0.03
!	Ellen Eden				•	0 26	92 0	0 72	71	0 104	2 10			0	375	3 369	0.02
	Esk(Border)					2	50	78	7	30	1			ŏ	166	143	0.03
						ō	~~i	ō	i	~~	ż			ŏ	10	10	0.03
I	Others																
	Others Total		14		2.1	68	373	598	490	740	230	- 2	-	٥	2499	2430	0.05

(a) Migratory trout catch return rates are very variable. Data are unreliable.

A dash is used to denote months that fall entirely within the annual close season.

"Principal rivers' include all rivers supporting commercial fisheries or with mean annual red catches in excess of 30 salmon or 100 sea trout, plus some smaller rivers selected by RWAs. Catches from tributaries and from minor rivers with a shared estuary are included under the appropriate main river. The catch from remaining rivers in each region is aggregated and recorded under others'.

Table 13 Estimated proportions of salmon and grilse in commercial and rod catches by region - 1990 season.

	L		Co	mmercial C	atch				Rod Catc	1	
NRA Region		No. Grilse	% by No. (% by wt)	No. Salmon	% by No. (% by wt)	Total	No. Grilse	% by No. (% by wt)	No. Salmon	% by No. (% by wt)	Tota
Northumbria	(a)	27997	65 (58)	15051	35 (42)	43048	581	40 (33)	871	60 (67)	1452
Yorkshire	(a)	6205	73 (67)	2277	27 (33)	8482	11	79 (73)	3	21 (27)	14
Southern	(c)										
Wessex	(c)									Ì	
South West	(c)										
Severn-Trent	(d)	1728	39 (25)	2669	61 (75)	4397	0	O (0)	357	100 (100)	357
Welsh	(a)	2130	49 (34)	2247	51 (66)	4377	2305	43 (29)	3065	57 (71)	537
North West	(b,a)	3575	64 (45)	2004	36 (55)	5579	3431	7 0 (51)	1497	30 (49)	492

Full details of the methods of calculating age composition were given in the 1987 catch statistics report (Russell, I.C. and Buckley A., 1989.)

(a) Catch data stratified. Age composition estimated from age/weight key.

(b) Catch data not stratified. Age composition derived from the mean weights of salmon and grilse in scale samples.

(c) Insufficient scale sampling undertaken in these regions to enable reliable estimation of relative proportions of salmon and grilse.

(d) Data provided by NRA Severn-Trent region and relate to R.Severn only.

Note:

Data have not been included for the Anglian and Thames regions where catches are low.

Table 14 Catches of eels and freshwater fish taken in inland waters for human consumption - 1990 season. (As compiled for EIFAC).

ŀ	N	ominal com	nercial cato (a)	ch (tonnes)				Nominal	rod cetch ((b)	tonnes)		
NRA Region	Éel	Elvers	Char	Shad	Pike	Brown Trout	Rainbow Trout	Eel	Shad	Pike	Grayling	Zander
Northumbria			- 1		riện	11.60	32.20		-	-	•	•
Yorkshire	1.12	_	•	•					7	-	-	
Anglian	10.00	•	•	•	1.00	20.00	100.00	•	•	•	•	•
Thames	3.05	-		•					•		•	
Southern		6		•	19	20.00	150.00	•	-		•	-
Wessex	20.00	0.11		•	100	1			-	•	•	
South West	3.03	0.12			1.4			•		-	-	0.0
Severn-Trent	8.00	20.00		1.00		40.00	200.00	2.00	0.10	0.10		0.10
Weish	0.36	0.65			141			4	14.1			-
North West	3.18	0.02	2.72			-	•	•		•		
Total	48.74	20.90	2.72	1.00	1.00	91.60	482.20	2.00	0.10	0.10	0.00	0.10

Key:

(a) The sel catch data are based on incomplete returns received by 5 NRA Regions (Yorkshire, Thames, South West, Welsh, and North West) and estimates for the other areas. Commercial catches of all other species have been estimated.

(b) Nominal rod catches have been derived from estimates or catch returns, which in some cases may be incomplete. The regional data for brown and rainbow trout include statistics from put-and-take fisheries which will be more accurate.

Notes:

The absence of data in any category is not indicative of a zero catch.

The above data are collated annually for inclusion in the European Inland Fisheries Advisory Commission National report of member countries (EIFAC, in press) and represent the best available data for England and Wales. However it is stressed that there are few statutary requirements for the collection of catch data for these species and extreme caution should be exercised in their use.

Table 15 Nominal catches of salmon in high-seas interception fisheries (tonnes round fresh weight), 1979-1990.

Year	Northern Norwegian Sea long-line fishery (north of Lat 67 deg N)				e Are e fish				We	st Greenla net fishe		
	Catch (a)		Catch	(b)	1	Quota			Catch	- 44	Quota	:
÷ .												
1979	118		181						1395		1190	
1990	156		703						1194		1190	
1981	213		1125			(725)	(c)		1264		1265	
1982	622		680			(825)	(c)		1077		1253	
1983	404	į	740			(825)	(c)		310		1190	
1984	29		700			(625)	(c)		297		670	
1985	0		566			(550)	(c)	İ	864	(d)	852	
1986	0		530			(550)	(c)		960	(d)	909	
_ 1987	0	-	576)			1-1	966		936	
1968	0		243)	1790	(e)		893		840	(h)
1989	0	į	364)				337		840	(h)
1990	0		312	(f)		550	(g)		227	(1)	840	(h)

- (a) Catches in the N.Norwegian Sea fishery were made predominantly by Danish vessels, however Faroese vessels contributed substantially (259 tonnes) to the catch in 1982.
- (b) Catches in the Farces fishery are made by Farcese vessels, however a relatively small contribution was also made by Oanish vessels in the period 1978-84. A small part of the catch in 1981 was made in the N.Norwegian Sea.
- (c) Quota applies to fishing season (autumn-spring) beginning in the year stated. Catch is for calendar year.
- (d) An additional 6-19 tonnes were also caught on the E.Greenland coast.
- (e) NASCO quota for the period 1987-89. Catch in any year not to exceed 626.5 tonnes.
- (f) Provisional figures.
- (g) NASCO quota is for a maximum total catch of 1100 tonnes for the period 1990-91. Catch in any year not to exceed 632.5 tonnes.
- (h) NASCO quota is for a maximum total catch of 2,520 tonnes for the period 1988-90 with annual opening date of 1 August. Catch in any year not to exceed 924 tonnes + adjustment for later opening date.

Note:

All data converted from gutted weights using appropriate factors.

Acknowledgement:

The data presented in this table were extracted from reports of the ICES Working Group on North Atlantic Salmon (see for example, Anon.,1991), and are cited by kind permission of ICES.

Table 16 Nominal catches of salmon and grilse in home-water fisheries (tonnes round fresh weight), 1979-1990.

Year	France	Scotland	ireland (a)	Northern Ireland (a,b)	Norway	Sweden (West coast)	Finland	USSR	Iceland	Canada (c)	USA	England and Wales (d)	Total
1979	10	1076	1097	99	1831	12	26	455	225	1287	2.5	261	6382
1980	30	1134	947	122	1830	17	34	664	249	2680	5.5	360	8073
1981	20	1233	685	101	1656	26	44	463	163	2437	6.0	493	7327
1982	20	1092	993	132	1348	25	54	364	147	1798	6.4	286	6265
1983	16	1221	1656	187	1550	28	57	507	198	1424	1.3	429	7274
1984	25	1013	829	78	1623	40	44	593	159	1112	2.2	345	5863
1985	22	913	1595	98	1561	45	49	669	217	1133	2.1	361	6655
1986	28	1271	1730	109	1598	54	38	608	310	1559	1.9	430	7737
1987	27	922	1239	56	1385	47	49	564	222	1784	1.2	302	6598
1988	32	882	1874	114	1076	40	34	419	396	1311	0.9	395	6673
1989	14	895	1079	142	905	29	52	359	278	1139	1.7	296	5190
1990(e)	15	624	442	94	908	33	58	316	421	870	2.4	338	4122

Key

- (a) Catch on River Foyle ellocated 50% Ireland and 50% N.Ireland.
- (b) Not including angling catch (mainly grilse).
- (c) Includes estimates of local sales and by-catch.
- (d) Figures for England and Wales for 1979-82 must be considered as provisional pending the publication by MAFF of validated historic catch data.
- (e) Provisional figures, with the exception of those for England & Wales and Scotland (Scottish Office.,1891.).

Acknowledgement:

The data presented in this table were extracted from the 1991 report of the ICES Working Group on North Atlantic Salmon (Anon., 1991), and are cited by kind permission of ICES.

ERRATUM: USSR CATCH DATA HAVE RECENTLY BEEN AMMENDED, DATA INCLUDED IN REPORTS PRIOR TO 1989 WERE INCORRECT.

Table 17 Summary of regional salmon and grilse commercial catches, 1985-90.

				Numbers o	f fish				ыро
NRA Region	1985	1986	1987	1988	1989	5-Year Mean (1985-89)	1990	'90 on '89	'90 on 5-yr meai
Northumbria	46652	53898	33064	44679	35169	42692	43048	+23	+1
Yorkshire	10704	9527	3079	6170	6284	7153	8482	+35	+19
Anglian	-	-	-	-	4	4	9	+125	•
Southern	251	461	505	477	83	355	43	-48	-88
Weasex	629	1046	702	736	593	741	400	-33	-46
South West	9247	10502	13828	11063	10091	10946	5492	-46	-50
Severn-Trent	2423	3300	2963	3511	4364	3312	4397	+1	+33
Welsh	3465	5031	4535	5010	5058	4620	4377	-13	-5
North West	2559	6682	5052	5671	7294	5452	5579	-24	+2
Tota)	75930	90447	63728	77317	68940	75272	71827	+4	-5

Table 18 Summary of regional migratory trout commercial catches, 1985-90.

				Numbers o	fish			% C	hange
NRA Region	1985	1986	1987	1988	1989	5-Year Mean (1985-89)	1990	'90 on '89	ʻ90 on 5-yr msan
Northumbria	29619	24610	30345	32711	48626	33182	28560	-41	-14
Yorkshire	21160	23107	18994	21574	22743	21516	15857	-30	-26
Anglian		•	-	-	3815	3815	2313	-39	•
Southern	496	163	327	232	170	278	50	-71	-82
Wessex	384	359	410	505	365	406	484	+33	+20
South West	4907	3482	8570	4364	3591	4983	2071	-42	-58
Welsh	5097	5098	4878	6542	6400	5603	3588	-44	-36
North West	6467	5633	6032	7207	5 737	6215	3271	-43	-47
Total	68130	62452	69556	73135	91447	72944	56194	-39	-23

Table 19 Summary of regional salmon and grilse rod catches, 1985-90.

				Numbers of	fish			% CI	hange
NRA Region	1985	1986	1987	1988	1989	5-Year Mean (1985-89)	1990	'90 on	'90 on 5-yr meai
Northumbria	1100	1116	2269	2152	1184	1564	1452	+18	<u>-</u> -7 .
Yorkshire -	104	. 65	70	49	11	60	14	+27	-77
Thames	11	9	5	12	8	9	9	+13	0
Southern	905	1191	840	1052	862	970	485	-44	-50
Wessex	916	1452	924	1146	697	1027	517	-26	-50
South West	3173	3763	2691	4579	1868	3215	1717	-8	-47
Severn-Trent	1256	1254	929	1362	658	1092	357	-46	-67
Welsh	8876	8498	8202	15989	5454	9404	5370	-2	-43
North West	3260	2999	3781	6505	3986	4106	4928	+24	+20
Total	19601	20347	19711	32846	14728	21447	14849	+1	-31

Table 20 Summary of regional migratory trout rod catches, 1985-90.

				Numbers o	f fish			% CI	hange
NRA Region	1985	1986	1987	1988	1989	5-Year Mean (1985-89)	1990	190 on 189	'90 on 5-yr mear
Northumbria	675	1256	2237	2778	1640	1717	1543	-6	-10
Yorkshire	209	130	299	279	97	203	162	+67	-20
Thames	4	2	4	0	5	3	o		-
Southern (a)	124	2517	56	1073	437	841	100	-77	-88
Wessex	1668	2274	1447	837	402	1326	101	-75	-92
South West	4838	5656	10898	7755	3645	6558	2596	-29	-60
Welsh	20868	21308	35727	30681	13203	24357	10030 -	-24	
North West	3993	3739	5195	6215	3481	4525	2499	-28	-45
Total	32375	36882	55863	49618	22910	39530	17031	-26	-57

(ey: (a) Migratory trout returns are unreliable in the NRA Southern region. In addition data for 1986 and 1988 are believed to include significant numbers of under-sized fish which were returned to the water.

Table 21 Salmon stocking - numbers of eggs, fry, parr and smolts released - 1990 season.

Region	River	Tributary	Ova	Fry	Fry	Рап	Parr	Smo
Northumbria	Coquet	Mala 5	1.4	-	-	4	14000	1.5
	Tyne	Main R.	- 6	-	-	100000	5000	
		N.Tyne S.Tyne	-	-		30000	20000	
		Rede	-		15	30000	-	1.3
	Wear		-		-		10000	
	Tees				•		11500	
	Total		-		-	160000	60500	
	Value (£)		100		-	19200	18150	
Yorkshire	Esk	Ť.	14				10900	
	Wharle	Barden Beck	1.2			3000		
		Hambleton Beck	12	-		3000		•
		Kex Beck				3000		
		Fir Beck	-	-	17	3000	7	
		Dibb	•	-		3000		•
1	Total	ļ	-		-	15000	10900	
	(2) eulsV		-		-	(a)	1800	- 1
Thames	Thames	Main R.			•	•	1350 10625	37782
		Wey (sth) Wey (nth)	- 2			•	4108	
		Pang			94.9		8417	
		Loddon				•	10200	
}		Lyde				-	600	
		Kennet	2			-	33270	
		Lambourne				•	8000	4
		Enborne	•	•	-	-	15080	
	Total	ľ	-	100	•	•	91650	37782
	Value (£)			•	116	-	18330	45338
Southern	Test		(a) -	1,4.1	(4)	•	-	19500
1	Itchen			(3)		6000	-	-
1	Total					6000	-	19500
	(£) eulsV		2		-	2000		19500
South West	Axe	Yarty & Kit Brook		-	-	U+0	3000	-
	Plym	Sheepstor Brook	-	-	-	5000	4	
	Tamar	Main river	-	-	10000	-		
		Wolf	-	-	28300	1.0	1500	
	Ottery	i	•	•	4000	F-0	1.	
1	Total		-		42300	5000	4500	-
	Value (£)			160	4200	1500	2000	
Severn-Trent	Sevom	Camlad	-		17500	-		
		Rea			17500		•	
		Corve	-	-	10000		*	
		Mule Liansillin Brook	•		5000 5000	33	-	- 5
1		Pentretelin Brook			5000	1.5	ā.	
		Ропу			2500		5.0	
		Roden			2500	-	2	
	Total		-	•	65000			-
	(2) eulsV				7800			
Welsh	Wyo			36500		-	-	
1	Usk	1		- 4	16000	4	*	5000
	Rhymney	1			•		***	4944
	Taff		•		•	4.5		11212
	Afan Taun		•		•		-	2500
	Tawe E.Cleddau		•		•	•	-	6029 46 16
ļ.	Chyd				12500	-	-	4010
	Сопму				93000	-	-	
	Dee			-	50000		-	2690
	Dysynni		-	4	•	•	-	8960
	Ogmore		-	1.0			19991	7677
	Rheidol	 	-	45000	-		-	-
	Mawddach		•		•	32061	9253	10266
1	Seiont		•	27000	- 61			•
1	Total			108500	171500	32061	29244	63884
	Value (£)		-	12054	34300	9618	20471	63884
North West	Ribble	Main R.		- 1	102300	40604		
		Hodder			61287	36309	-	•
	Wyne	M. I	-	- 4	11541	6000	-	-
	Lune	Main R.	-		570741	10700	-	-
		Hindburn Wenning	<u></u>		42229 26247		-	•
		Greta	10	- 4	153731		-	
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