

INTERCEPTORY EXPLOITATION OF SALMON

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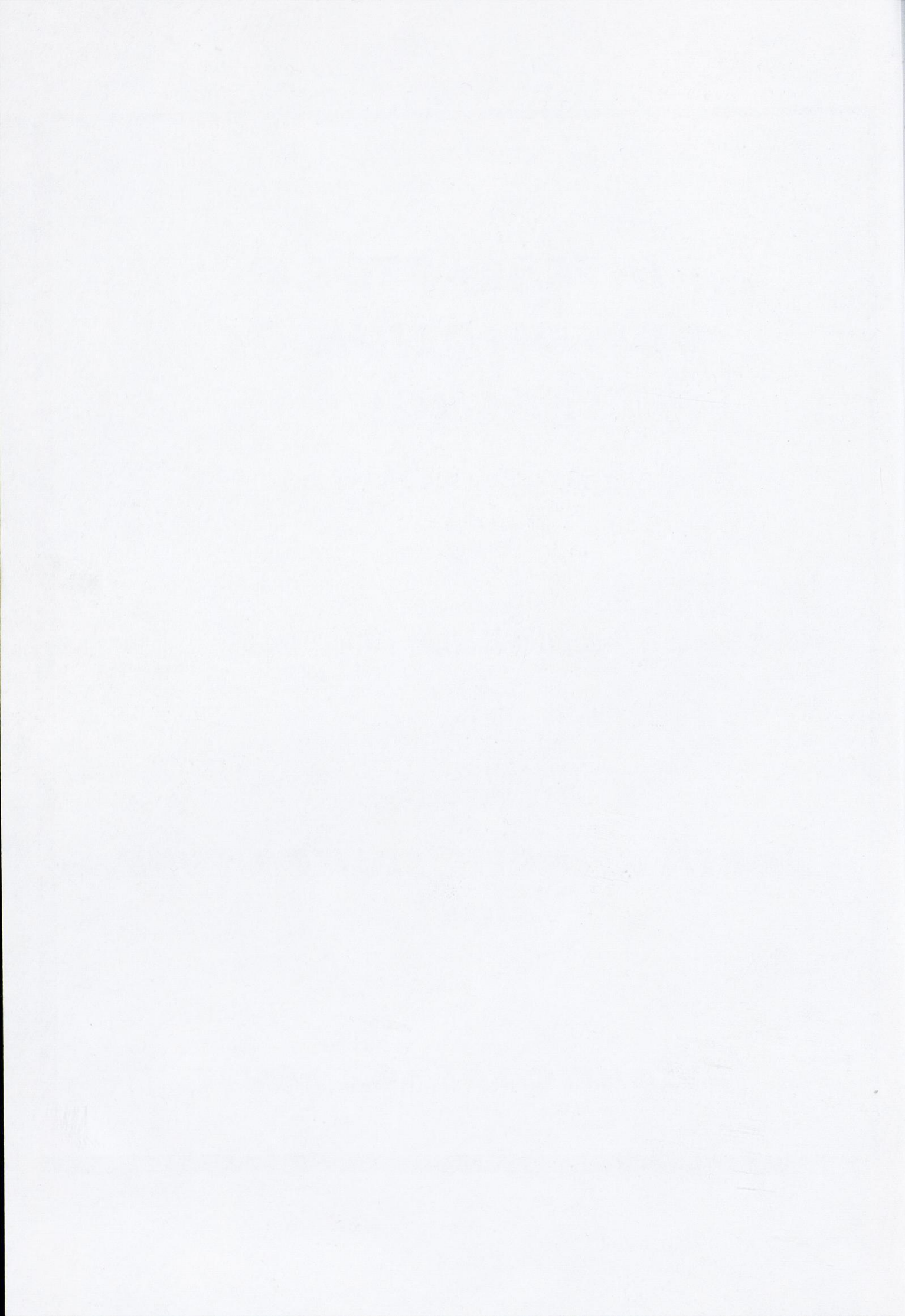
A joint Review Paper

by

**NORTH ATLANTIC SALMON FUND
(UK)**

&

ATLANTIC SALMON TRUST



NORTH ATLANTIC SALMON FUND (UK) & ATLANTIC SALMON TRUST

INTERCEPTORY EXPLOITATION OF SALMON

EXECUTIVE SUMMARY

INTRODUCTION

The paper accompanying this Summary has been jointly written and endorsed by:

- ♦ The Atlantic Salmon Trust
- ♦ The North Atlantic Salmon Fund (UK)

The Aim of the paper is:

- ♦ To set out the case for the complete cessation of interceptory exploitation of wild salmon, with a view to making recommendations for UK action.

Interceptory Fisheries may be defined as those that catch fish at any point outside the river of origin.

SUMMARY OF DISCUSSION

Salmon Management and Protection of Stocks. It is widely agreed and extensively documented that the exploitation of the wild salmon outside its river of origin represents bad management practice. This view is further reinforced by:

- ♦ The dramatic decline of wild salmon stocks over the last 25 years, a decline that is unlikely to be halted without determined action:
- ♦ The vulnerability of the salmon to exploitation at sea, due to its habit of swimming and feeding close to the surface.

Economic Factors. It is well documented that the exploitation of salmon by rods makes a far greater contribution to the economy than does exploitation by nets, both in terms of employment and local revenues. Low stocks and low prices due to competition from farmed salmon have substantially reduced the economic viability of net fisheries as well as the contribution they are able to make to local economies.

Conservation Effort. A very substantial proportion of the cost and effort of habitat improvement, conservation and stock enhancement, especially in Scotland, is contributed by rod fisheries.

SECTION 1

RECOMMENDATIONS

Explanatory Statement.

In the proposals which follow, the arrangements suggested in England and Wales are quite separate from those in Scotland, where both legislation and administration are different.

The compensation and timescale proposed are greater in Scotland because the net proprietors there have an heritable right. In England the net proprietors have a licence of limited time scale and the income generated is very modest.

1. England and Wales

- a. From the end of 2002 exploitation of salmon outside estuaries should become illegal. This could be achieved either under existing or new legislation.
- b. Interceptory Net Licence Holders should be compensated with a single payment of £15.00 per fish based on a five year average up to and including 1998, provided as follows:-
 - ◆ 50% Government
 - ◆ 25% catchments deemed to benefit.
 - ◆ 25% public appeal
- c. Government should encourage voluntary agreements whereby net proprietors are compensated for surrendering licences earlier by contributing its share of the potential liability under the above.
- d. A working committee with appropriate representatives should be set up to monitor progress and allocate share of cost to catchments benefiting and look at alternative employment strategies for interceptory net licence holders affected.
- e. **Funding.** The total payable in 3 years would be: estimated 5 year average to 1998 say $40,000 \times £15.00 = £600k$ of which £300k would come from Government, £150k from benefiting catchments and £150k from public appeal.
- f. **Notes**
 - ◆ In practice the total is likely to be less as some licences would lapse before then for one reason or another.
 - ◆ Benefiting catchments may agree to pay a little more for an earlier cessation but the Government's contribution would be fixed.

2. Scotland

- a. All net fisheries outside estuary limits operated or genuinely let over any two years in the period 1993-1996, inclusive, should be registered, and only those that are so registered should be permitted to continue operating. The number of traps fished at a bag net or at a stake net station or the number of crews working a net

and coble station outside estuary limits, should not be greater than those qualifying for registration. (Report of Scottish Salmon Strategy Task Force page 58 recommendation 26).

b. From the end of 2004 (i.e. in 5 years) any remaining coastal net fisheries outside estuaries should be compulsorily purchased. New legislation by the Scottish Parliament will be required to terminate the rights of fishing for salmon outside estuaries.

c. Net Proprietors should be compensated at a rate of £25 per fish based on a 5 year average up to and including 1998, provided as follows:-

- ◆ 50% Government
- ◆ 25% Catchments deemed to benefit
- ◆ 25% Public appeal

d. Government should encourage voluntary agreements whereby netting stations are purchased by contributing its share of the potential liability under c. above towards funding such purchases.

e. A working committee with appropriate representatives should be set up to monitor progress and allocate share of cost to catchments benefiting and look at alternative employment strategies for net proprietors affected

f. **Funding.** The total payable in 5 years would be: Estimated 5 year average to 1998: say 50,000 x £25 = £1.25m of which about £600k would come from Government, about £300k from benefiting catchments and about £300k from a public appeal.

g. **Notes**

- ◆ Benefiting catchments may agree to pay a little more for an earlier cessation but the Government's share would be fixed.

3. Northern Ireland

a. Until more accurate and substantiated statistics are available for catches and more knowledge is acquired as to how change could be effected, there are no specific recommendations for Northern Ireland. However, the catches by the drift nets are substantial and the argument for discontinuing them on management grounds is as strong here as elsewhere in the UK.

4. Outside UK

- a. NASF (UK) should continue support of Orri Vigfusson's efforts.
- b. UK Government should work with other Governments to end interceptory exploitation.
- c. NASCO should be invited to endorse this paper.

SECTION 2

INTRODUCTION

1. This review has been approved by the following organisations:-

- ◆ North Atlantic Salmon Fund (UK) Ltd
- ◆ Atlantic Salmon Trust

2. The review is primarily concerned with salmon, including grilse. The case against interceptory exploitation of sea trout is also very compelling, but to deal with both issues would considerably complicate this review. Salmon stock levels are generally (with the important exception of the West coast of Scotland) at a more critical level than those of sea trout and the implications for fragile local rural economies are greater.

3. A cessation to interceptory exploitation of salmon would mean such exploitation of sea trout would, in most situations, also cease.

4. The financial and economic data in Section 4 deals with all commercial exploitation (both interceptory and non interceptory), since no separate figures are available in respect of the interceptory element.

5. Although many individuals and organisations argue that all commercial exploitation should cease on both conservation and economic grounds, this review does not attempt to address that question and is solely concerned with the interceptory element of commercial exploitation.

6. Most of what is contained in this review has already been said again and again but largely ignored. By concentrating solely on the issue of interceptory exploitation, it is hoped to have more impact on decision makers.

ABBREVIATIONS.

AGAINST	Action Group against Interceptory Netting for Salmon & Sea Trout
ASCT(S)	Atlantic Salmon Conservation Trust (Scotland)
ASF	Atlantic Salmon Federation
AST	Atlantic Salmon Trust
CEMARE	Centre for Marine Resource Management (Portsmouth)
EA	Environment Agency
EU	European Union
ICES	The International Council for the Exploration of the Sea
MAFF	Ministry of Agriculture, Fisheries and Food
NASCO	North Atlantic Salmon Conservation Organisation
NECSF	North East Coast Salmon Fishery
NASF	North Atlantic Salmon Fund
NWA	Northumberland Water Authority (regional predecessor to EA)
SOAEFD	Scottish Office Agriculture, Environment & Fisheries Department
WCFT	West Coast Fishery Trusts
WGFT	West Galloway Fishery Trust

SECTION 3

THE ARGUMENT AGAINST INTERCEPTORY EXPLOITATION

1. Interceptory fisheries (i.e. those that intercept salmon at a point other than at their river of origin) are contrary to the principles of sound salmon management because *".....there is no precise way of regulating the exploitation of stocks destined for each country, let alone each river, which should be the desired goal. Only by conducting all harvesting in the rivers or near the mouths, can selective escapement be regulated to achieve maximum runs."* ("Problems and Solutions in the Management of open Sea Fisheries for Atlantic Salmon" by Dr. D. H. Mills.)

2. This principle was confirmed by Lord Hunter in his committee's report on Scottish Salmon Stocks and Trout Fisheries (1965) *"All exploitation of salmon should take place within, and upstream of each river's estuary...."*

3. It was repeated again in the MAFF review of Inland and Coastal Fisheries in England and Wales, (July 1981 Para 11). *"The fishing for salmon at sea outside estuaries, as opposed to shore based netting should be banned"*.

4. The 1991 review under section 36 of the Salmon Act 1986 said : *".....management of a mixed stock fishery requires extensive monitoring of, and a means of controlling, the levels of exploitation of individual stock components. This is very difficult to achieve and may not always be practical."*

5. The NRA (now Environment Agency) policy is that the exploitation of salmon should take place, as far as possible, where the stock of salmon is from a single river. In fisheries which are shown to exploit predominantly mixed stocks, fishing will be phased out over an appropriate timescale. *A Strategy for the Management of Salmon in England and Wales. National Rivers Authority 1996.*

6. In 1996 the Technical working group on the NECSF reported: *".....there is good evidence that the rivers on the east coast of England and Scotland each support a number of more or less discrete 'populations'. Differential exploitation of stocks or populations might result in uneven egg deposition and sub-optimal recruitment of juveniles to certain areas. Similar problems may arise for distinct components of a population, such as sea-age groups."*

7. "There is greater opportunity for selective exploitation of an individual management unit (stock or population) as salmon get closer to their home river and the risk of any unit being over exploited in a mixed fishery increases as the size of the unit decreases."

8. In 1997 the Scottish Salmon Strategy Task Force stated in the second of its three key recommendations:

".....a progressive reduction in exploitation of salmon in the sea. Salmon fisheries should be confined, so far as practicable, to rivers and estuaries, where management policies which fully recognise the biological characteristics of different salmon populations can more easily be developed. The transition to such management will not be easy, but we are convinced that it will have benefits for the long-term sustainability of the resource."

9. In 1998 the International Salmon Accord developed by the AST and ASF said:
"Permanently close mixed-population fisheries in territorial waters with fair compensation. Negotiate permanent closure of the commercial salmon fisheries of Greenland and Faroe Islands through compensation, or the development of alternative fisheries."
10. There are many other reports and statements which support the argument against interceptory exploitation. Together they make a compelling case for applying sound management principles at all times. The current fragility of stocks further reinforces the position.
11. In practice, the UK cannot expect much leverage or credibility in calling for a cessation to the Faroes, Greenland and the Irish fisheries, when they condone and manage the same practice on such a substantial scale off their own shores.

SECTION 4

BACKGROUND

1. General Decline

- a. The total catch of Atlantic salmon has fallen from about 4 million in 1975 to about 800,000 in 1996.
- b. In England and Wales catches declined from:
 - ◆ 83,665 in 1995,
 - ◆ 50,464 in 1996
 - ◆ 45,190 in 1997.
- c. The total catch for Scotland has fallen from an average of about 500,000 salmon in the 1960's/70's to a current five year average of about 150,000 in 1977 and only 87,000 in 1997. Part of this reduction is due to a decrease in net fishing effort but no one doubts there has also been a large reduction in salmon stocks.
- d. The decline in wild salmon stocks has been confirmed by ICES. The member governments of NASCO (where the UK is represented by the EU) agreed at the 1998 meeting in Edinburgh to adopt a precautionary approach to salmon management.
- e. The salmon is particularly open to exploitation at sea because it swims close to the surface and usually follows the same route to its river of origin.
- f. In addition, the environment of the rivers in which the salmon spawn has been adversely affected in a number of ways. Acid rain has rendered some waters incapable of supporting salmon and other waters less able to support them. Agriculture and forestry have reduced the quality of juvenile habitat. Industrial and domestic water requirements advance relentlessly, and large scale forest planting in the head waters adversely affects water flow levels and can increase

acidification. Pollution incidents are still frequent and the effects of chemicals used in agriculture continue to cause concern, (in particular sheep dips).

g. Salmon farming poses a threat to wild stock, particularly through escapees, in relation to the purity of genetic types and also brings the risk of disease and parasitic infections.

h. Last but by no means least, the abundance of salmon and the timing of runs appear to be affected by long term cyclical factors about which we have little knowledge and over which we have virtually no control. For example, ocean temperatures, currents and availability of food. On the North Esk the average survival rate of smolts to return to the coast of Scotland has declined from 28% in 1971-85 to 15% in 1987-94. In the Western Arm Brook, Canada, the survival rate has declined from 14% in 1971-85 to 6.8% in 1986-95.

j. The adverse factors affecting salmonid populations are well documented. (See the report of the Scottish Salmon Strategy Task Force pp10-16 and the International Salmon Accord. Both set out proposals for dealing with these influences.)

2. Recent Changes

a. The last major review by Government was published in 1992 under section 39 of the Salmon Act 1986, in relation to the net fisheries on the East Coast of Great Britain. A decision was taken to phase out the North East Coast Fishery gradually by not renewing licences as their holders left the fishery. It was estimated that this process would take 25 years.

b. Since then much has happened in relation to the management of salmon. The EA is progressively reducing licence numbers in other mixed stock fisheries off the English and Welsh coasts:

i. A more professional approach on a catchment basis has been developed. In Scotland most major rivers (Dee, Spey, Tay, Tweed etc.), have management plans and employ biologists to monitor progress and advise on action. Smaller catchments have pooled resources to set up fishery improvement trusts and employ biologists (WCFT and WGFT). In England the EA has made much progress in developing catchment management plans for the most important rivers (Eden, Tyne, Wye etc.). Also an increasing number of catchments in England are setting up fishery improvement trusts (e.g. West Coast Rivers, Eden, Cumbria, Lune, Wye etc.).

ii. But these management initiatives will be seriously undermined by the continuation of interceptory exploitation.

iii. The main benefit achieved, apart from the employment of professional expertise and collection of vital data, has been a very substantial investment in increasing and improving habitat, which has been damaged by many factors, in particular agriculture and forestry.

- iv. Maintaining good quality spawning and juvenile habitats is clearly fundamental to maintaining stocks at healthy levels. It is a long term process, very expensive and can only be sustained if the benefit of the investment accrues to the catchment.
 - v. NASCO has helped to regulate the Greenland and Faroe fisheries by setting quotas taking account of the recommendations of ICES. The quotas for Greenland have been reduced from 850t in 1986 to approximately 20t for "internal consumption only" in 1998 and for the Faroes from 600t in 1986 to 330t in 1998.
 - vi. NASF has further reduced the effect of these fisheries by purchasing these quotas and has drawn international attention to the case against Interceptory Exploitation.
 - vii. In 1997 the Scottish Salmon Strategy Task force put together comprehensive recommendations for salmon management in Scotland into the next millennium. In 1998 the International Salmon Accord set out the basic principles for the improvement of salmonid management. Both recommend as very high priorities the cessation of exploitation outside rivers of origin.
 - viii. There have been several economic reviews which have led to an increasing realisation of the higher relative contribution of rod fishing, which, particularly in Scotland, makes a unique contribution to fragile rural economies.
 - ix. Several economic factors (in particular low stocks and low prices due to competition from farmed salmon) have made the net fisheries at best marginally viable and unable to contribute to local economies and management conservation as they have in the past.
 - x. Substantial investment has been made to purchase commercial netting stations. ASCT(S) has invested about £2m in purchasing outright commercial netting stations which caught about 100,000 salmon each year. Other rivers, notably the Tay, have taken similar action in their own right.
 - xi Action has been taken both by the EA and the Irish Government to delay the opening of the drift net season in order to protect stocks of early running fish.
 - xii. Most important of all, salmon abundance in many rivers has continued to decline. In response to this a number of major rivers have taken steps to reduce exploitation, (e.g. the Aberdeenshire Dee, Tweed and Wye.). In 1998 the EA estimated that the numbers of salmon entering 65% of the rivers in England and Wales were at or below the minimum number required to stock the river systems adequately and began the process of introducing bylaws to reduce exploitation of early running fish.
- c. All the above developments reflect a significant amount of change and demand an early review of interceptory exploitation resulting in speedy and decisive action. This should be based on the UK as a whole (taking account of the separate administrations and legislation that apply to England, Wales and Scotland.)

Migrating salmon do not respect national boundaries. For example, it has been estimated that 80% of the catch of the NECSF were of Scottish origin and returning to Scotland, and 15% of the salmon returning to Wales were caught in the Irish Drift Net Fishery.

3. Economic Factors

a. CONTRIBUTION TO LOCAL ECONOMY

- i. It is well documented that the exploitation of salmon by rods makes a far greater contribution to the economy than does exploitation by nets.
- ii. In 1997 The Scottish Salmon Strategy Task Force estimated, on the basis of McKay Consultants 1988 Report, salmon anglers' annual expenditure to be £70m. This figure is supported by the survey on the Tweed (which accounts for 16% of rod caught salmon in Scotland) by Touche Deloitte in 1996, which shows that salmon fishing contributes £12.5m to the Scottish Borders economy.
- iii. The contribution to the local economy by nets is much less. CEMARE estimated the gross revenue from net catches of salmon (and sea trout) in Scotland to be only £2.7m.
- iv. All the evidence (and common sense) point to the rod fisheries making a much greater contribution than the net fisheries. This is an inevitable consequence of the slab value of the net caught salmon being £10-£20 and a rod caught salmon being worth more than 10 times that to the local economy, in the form of rent, licence fees, hotels, food, petrol etc. The income from netting, which employs very few people, depends on the salmon being killed, whereas rod fishing includes the option to release the fish.
- v. But the difficult questions to answer are the extent of the economic loss which would result from the closure of the net fisheries and the economic benefit which would result from the consequent improvement in rod fisheries. "AGAINST" (p14) calculates that the closure of the NECSF would create more jobs, primarily in Scotland, than would be lost in the North East of England.
- vi. Similarly, Chapter 17 of the Irish Study, "Recreational Fisheries, Social Economic and Management Aspects," calculates that the cessation of the Irish Drift Net Fishery would result in the total income of a typical medium sized rod fishery rising from £291k to between £373k and £668k and employment levels rising from 12 to between 16 and 29. Taking the lower end of this scale it is anticipated that an improvement of the order of 25% to 50% might be achieved over the whole Irish rod fishery.
- vii. Not only would this benefit accrue in rural areas with fragile economies, it would also help to sustain current economic and job contributions, which now are at considerable risk due to scarcity of salmon, since the revenue from salmon angling is critical for many hotels and businesses.
- viii. The figures quoted from these surveys are not all calculated from identical bases, but the overall picture is clear.

b. CONTRIBUTION TO JOBS

i. The survey on the Tweed by Touche Deloitte estimated that the rod fishery supported more than 500 jobs. On this basis total employment in Scotland supported by rod fishing for salmon is likely to be around 3,000. "AGAINST" (p15) calculated such jobs to be about 5,000.

ii. Data on jobs supported by fishing in England and Wales are limited. On a pro rata basis to Scotland, (based on number of salmon caught), jobs supported would be about 1,000.

c. CONTRIBUTION TO MANAGEMENT

i. The question of the contribution to conservation and management is clearly fundamental. In Scotland rod fisheries now contribute more than 90% of the cost of bailiffing, fishery improvement and general stock enhancement. Netting interests, which account for about 60% of the total catch, contribute less than 10% of the total. (This has not always been the position and is a consequence of the economic situation affecting net fisheries).

ii. In England and Wales the costs to the Environment Agency in managing the net fisheries considerably exceed the revenue generated by netting licences.

d. CONTRIBUTION TO GOVERNMENT FUNDS

i. The 1997 "Review of Countryside Sports, their Economic, Social and Conservation Significance" by Cobham Resource Consultants, (Section 11), estimates the total UK revenue from VAT, Income Tax, NHI contributions and licence fees in respect of country sports to be £655m. 60% of this total is estimated to be associated with all forms of angling.

ii. It is likely that any investment by Government in ending interceptory exploitation would be very quickly self funded on this basis.

e. CONTRIBUTION AS A SOURCE OF FOOD

i. The total UK commercial wild salmon catch at 215 tonnes is unimportant and insignificant as a source of food compared to the total of farmed salmon production at 99,197 tonnes.

SECTION 5

THE FISHERIES

1. England and Wales

a. GENERAL

- i. In England and Wales, there is a public right of fishing for salmon and sea trout in estuaries and in the sea except at a few places, including some in Northumberland, where a private right was granted by the Crown before 1215 (Magna Carta). Exercise of the public right has, however, been limited by regulations.
- ii. MAFF influences the management and regulation of salmon fisheries by promoting primary legislation, introducing Orders under existing legislation and by confirming or modifying Orders or Bylaws proposed by the EA. MAFF also has powers of direction over the activities of the EA with respect to the management of salmon and freshwater fisheries. (Salmon Net Review)
- iii. Interceptory fisheries are described above as those that intercept salmon at a point other than their river of origin. In England, some of the interceptory fisheries, especially the NECSF take salmon that are *en route* to rivers in Scotland, which is a different legal jurisdiction with a distinct and separate fisheries administration. The local English authority, the EA is statutorily unable to take account of adverse effects on fisheries and fishery management in Scotland. It may therefore be necessary for the central authority, the Fisheries Minister, to take the initiative and make appropriate regulations. He has powers to do this under the Sea Fish (Conservation) Act 1967 independently of the powers to make regulations under the Salmon and Freshwater Fisheries Act 1975. (See Lord Belstead: Hansard (Lords) 13 Feb 86, col. 385).

b. CATCHES

- i. The total declared catch of salmon in England and Wales over the last five years was:-

YEAR	NECSF	OTHER NETS	RODS	TOTAL	NECSF AS % OF TOTAL
1993	41800	14366	14059	70225	59
1994	46554	19903	24891	91348	51
1995	53210	14449	16606	84265	63
1996	18581	14099	17444	50124	37
1997	21922	9537	13047	44506	49
5 YR AVGE	36413	14471	17209	68093	53.5

- ii. It is estimated that the total mortality resulting from the NECSF is significantly greater than declared catches. It has been suggested that this could be as much as 30% for under declaration, 20% taken by seals from the

nets, and 25% subsequent mortality due to net damage (see "AGAINST 1989" p11 and NWA "Sea Net Investigation" 1974 pp1+2).

c. NECSF

- i. The position is dominated by the NECSF which in most years accounts for 60% of the total of all fish caught.
- ii. Prior to 1959 drift net fishing was carried out with hemp nets which were fished only at night or in heavy weather, and were inefficient and difficult to work. In that year a change was made to nylon nets which had the effect of doubling the catch. From 1969 monofilament was replaced by multi-monofilament, which further increased the catches of migratory fish by drift net fishermen. It was the direct cause of the dramatic increase in the average number of licences from 93 to 156 and the average number of declared fish per licence, from 120 to 336. This transformed the nature and extent of the fishery.
- iii. In addition to being extremely efficient, monofilament nets also damage many salmon even if they escape, and sea birds. Sea birds, porpoises and seals may also become enmeshed. The nets are cheap, often abandoned, and, being non-biodegradable, will continue to cause damage to fish and mammals for long periods after abandonment.
- iv. Since the phasing out proposals in the 1991 review, the total number of drift and T net licences has decreased as follows:

	DRIFT NETS		'T/J' NETS	
	NORTHUMBRIA	YORKSHIRE	NORTHUMBRIA	YORKSHIRE
1992	121	21		31
1993	107(36*)	17	2	25
1994	99(31*)	15	1	23
1995	89(31*)	10	2	21
1996	79(29*)	10	3	17
1997	72(27*)	9	3	13
1998	66(26*)	9	2	12
1999	65(26*)	7	2	11

* indicates the number of licensees who are also licensed to fish with a 'T' net. Prior to 1993 all Northern Licensees enjoyed this entitlement, though only about 1/3 ever exercised it.

- v. The mechanism being used to achieve the phase out is a 10-year net limitation order. There are serious doubts whether this mechanism can properly be used to extinguish a fishery and also whether the EA could justify renewing or making a new net limitation order unless it could clearly show that the existence of the net fishery was to the detriment of fishery interests in the EA's jurisdiction, (i.e. England and Wales). It will become increasingly difficult to do this as the fishery becomes smaller, and especially so as it predominantly takes fish destined for Scottish rivers. There may therefore be a need for MAFF to act directly in relation to the phasing out of this fishery.

d. EXTENT TO WHICH INTERCEPTORY

i. In 1982, "Fisheries Research Technical Report No 67," by ECE Potter and A Swain concluded that 90% of salmon caught were in fact returning to Scottish rivers, although with the improvement in the Tyne in recent years it is probable that this percentage has decreased slightly to nearer 80%. The Rivers mainly affected in Scotland are the Tweed, Forth and Tay. It has been estimated that the fishery accounts for more than 40% of total fishing mortality of Tweed stocks. ("Report of the Technical Working Group on the English NECSF" 1996 p.iv.)

ii. Although only a small proportion of total catch comes from the Coquet, Wear, Tyne, Tees and other rivers in the North East of England, a very substantial percentage of the returning stocks of these rivers is intercepted by the NECSF. The NWA Report 1986 suggested 75% and the Report of the Technical Working Group on the English NECSF 1996 suggested 40%. It follows that its termination could lead to greatly increased runs, and the Tyne, and perhaps the Tees, again ranking with the major salmon rivers of Scotland.

e. NEED FOR CHANGE

i. In the context of current stock levels, the need to manage stocks in a sounder manner, and the economic implications, there can be no excuse for allowing this highly indiscriminate and damaging fishery to continue to the end of the proposed phase out period.

ii. It has been argued that the entire fishing industry along the North East coast will collapse if the salmon licences are withdrawn. This is most unlikely. In 1989 less than 30% of the total number of boats were operated by holders of salmon licences. The percentage would be less today. The larger vessels, which are the main employers, would be largely unaffected.

iii. Also activities are virtually confined to three months; June, July and August; no salmon may now be taken by nets before 1 June.

f. OTHER FISHERIES

i. The only other "significant" (and very controversial) interceptory fishery takes place in the Solway where, on the English side alone, more than 150 haaf net licences are available resulting in a take of about 2000 salmon in each year. These fish would be heading for one of the many rivers which discharge into the Solway, several of which have stocks at or near critical levels.

ii. To add to this, there are also the fixed engines on the Scottish side of the Solway which are also taking substantial numbers of salmon, making the Solway a prime example of the difficulty or impossibility of managing individual river stocks properly where mixed stock fisheries of this nature operate.

iii. The net proprietors claim the haaf net fishery to be recreational. Others claim that its catches are significantly under declared and that local surpluses

have resulted in salmon selling through local shops at £1.00 per lb during the peak summer period. Concern has been expressed that haaf net licences may be used to "launder" salmon caught illegally elsewhere outside the Solway.

iv. Although there are no other fisheries taking more than 1000 fish per annum, the effects of even a small interceptory fishery taking a few hundred fish a year, may have a very major (but unquantifiable) impact on the stocks of nearby rivers, where stocks may be at or near crisis level.

2. Scotland

a. GENERAL

i. *"The right to fish for salmon at any place in Scotland, whether in inland waters or the sea, is a heritable right, like the ownership of land. Under the feudal system the rights originally belonged the Crown but, as with land, the Crown has made grants of salmon fishing to othersthe salmon fishing right can be bought sold or leased independently of land."* (Robert Williamson: "Salmon Fisheries in Scotland" p3).

ii. *"There is however no licensing system and no need to obtain a permit from a Government Department or from the local District Board".* (idem p7.)

iii. *"In the sea it is prohibited to use drift nets or other gill nets, trawls, seine nets, other than beach seines, troll or long line for catching salmon."* (idem p9.)

iv. The Salmon Act 1986 ss21 & 45(a) provides that the lawful methods for fishing for salmon in the sea are rod and line, net and coble and bag net, fly net or other stake net.

v. This is very different to the position in England and Wales.

b. CATCHES

i. The five year average for all wild salmon and grilse caught in Scotland 1992-96 was:

Rod and line	74,500
Net and coble	32,400
Fixed engine	58,300
TOTAL	165,200

(Freshwater Fisheries Laboratory Statistics Bulletin October 1998)

ii. With a few exceptions of limited significance, the net and coble catch can be taken to represent the estuary or in river catch and the fixed engine catch to represent the catch at sea.

iii. The fixed engine (or at sea) element comprises more than 30% of the total catch

c. EXTENT TO WHICH INTERCEPTORY

i. *"Most fixed engine fisheries exploit fish originating from more than one river system"* (W.M. Shearer: "The Exploitation of Atlantic Salmon in Scottish Home Water Fisheries in 1952."-1983).

ii. This informative and extensive survey by W.M. Shearer shows the extent to which each fixed engine fishery is interceptory. For example the fixed engine fisheries on the North Coast captured salmon which were travelling to a wide variety of rivers on both the East and West coasts and to The Republic of Ireland.

iii. Fixed engine fisheries in the North East Region account for more than 50% of the total catch of all fixed engine fisheries in Scotland, (in 1997, 15,253 out of 26,085 salmon.) The largest of these fisheries is that in Montrose Bay. W.M. Shearer states: *"23-43% of the fish recaptured after tagging at Rockall in 1954,55,77 & 78 were caught in the North and South Esks."* i.e. it is likely that a very substantial proportion of the fish caught in this fishery were intercepted on their homeward migration to other rivers of origin.

d. There are several other areas where significant interceptory exploitation takes place:-

i. The North particularly affecting the Brora, Helmsdale, Thurso, Halladale, Strathy, Naver and possibly other north/east rivers of Scotland where 4,936 salmon were intercepted in 1997.

ii. Between Stonehaven and Aberdeen 61 salmon were intercepted by the nets in 1995, radio tagged and returned. Subsequent tracking has shown that about 35% entered the Dee, the nearest river, and that the balance were spread over a much wider area. (1996 Fisheries Research Report No 5/96)

iii. The Solway (largely affecting the Luce, Bladnoch, Cree, Fleet, Nith and Annan) where 3,425 fish were intercepted in 1997, in addition to those intercepted by the haaf netters.

e. NEED FOR CHANGE

i. By any standards the above estimates of exploitation are worrying, must impact adversely on many important salmon rivers in Scotland, and cannot be acceptable in the context of an important and well managed industry.

ii. Why should X river invest in (and exercise painful restraints over) its stocks when these are being exploited by nets in Y district fishery, which make no contribution whatsoever to the management of these stocks; and, more important, what incentive is there to the X River Board to continue investing in research, habitat improvement and other improvements while this practice continues?

f. THE POSSIBILITY OF CHANGE

i. An heritable right may normally only be removed with the agreement of the owner or by means of legislation. In either case the owner would expect to receive reasonable compensation.

ii. Nevertheless, there are many precedents for heritable property being taken away without the agreement of the owner. Property is compulsorily purchased when it is considered in the public interest or for the greater good: e.g. roads, housing developments, airports etc. The Forestry Authority, the Water Boards and the Electricity Industry all acquired large parts of their assets by compulsory purchase.

iii. But the preferred way forward would be for the owner to agree to sell his property. This has occurred extensively over the past 10 years where the individual rivers, fishery Boards and the ASCT(S) (funded by riparian interests, anglers and conservation trusts) have purchased commercial netting stations (both in-river and in the sea). As stated earlier, the ASCT(S) has paid about £2m to "save" about 100,000 salmon at a single purchase cost of about £20 each.

iv. In the meantime the coastal nets should continue, where appropriate, to be represented on District Fishery Boards and the Boards should look after their interests as now.

3. Northern Ireland

For the administration of salmon fisheries, Northern Ireland is split into two fishery boards:

- ◆ The Fisheries Conservancy Board for NI, covering all of the Province outside the River Foyle catchment, and;
- ◆ The Foyle Fisheries Commission, which covers that part of Northern Ireland lying within the catchment plus that part of the Republic lying within the catchment, administered on a cross-border basis as one fishery zone.

a. The FCBNI area has returned a salmon net catch averaging 11,000 fish for recent years with an estimated rod catch in the region of 3,000 fish. Approximately 10 drift nets and 24 bag/draft nets are operated, almost all on the North coast of the Province. Recent proposals to reduce netting pressure, especially for spring fish which are extremely scarce, have been rejected by the Department of Agriculture for NI, who retain overall control.

b. Within the Foyle Fisheries Commission area it is estimated that the annual rod catch of salmon is about 10,000, that 55 draft nets catch about 10,000 and that 110 drift nets catch about 30,000 fish. The draft nets generally operate within estuaries and the drift nets up to six miles off the coast. The draft and drift net fishers operate under licence. The number of drift net licences cannot be increased, but there are no proposals for reductions.

c. For statistical records the Foyle Area net catch is split 50:50 between Northern Ireland and the Republic. In fact the net catch accrues almost entirely to the Republic of Ireland, to boats from NE Donegal. Most of the rod catch is taken in NI rivers but the Finn River in Donegal accounts for significant rod catches.

d. In summary, the total catch of salmon in Northern Ireland is likely to be more than 50,000, with over 50% of these fish being intercepted by drift nets.

4. Outside the UK

a. THE REPUBLIC OF IRELAND

i. The total recorded Irish salmon catch for 1997 was 565t. versus 817t in 1994, 790t in 1995 and 685t in 1996, and only about one third of the average 1970-80 catch. It is thought that this exceptionally poor catch (1997), the lowest in recent records, is partly due to poor survival at sea of both reared and wild smolts. In this context Annual Report no. 42 of the Salmon Research Agency of Ireland calls for a 5 year moratorium on commercial exploitation.

ii. But a major factor in this decline must be the huge increase in the drift net fishery between 1962 and 1974, when drift net licences rose from 363 to 1048, due partly to grants and loans to increase the Irish inshore fleet and partly to the availability of the much more effective multifilament or monofilament nets which replaced hemp.

iii. The drift net fishery accounted for around 80% of the total Irish catch in the late 1980's and still accounts for around 70%.

iv. There have been five government task forces, two of which have recommended the total abolition of the offshore fishery. The last accepts "*the balance of advantage on conservation, environmental and economic grounds should be increasingly with redirecting salmon stocks from interceptory commercial exploitation towards recreational fishing*" but opts for curtailment and restriction of the drift net fishery rather than abolition.

v. In 1997 a number of restrictions were introduced including, *inter alia*, reduction in licences from 847 to 773, reduction in sea area from 12 to 6 miles, delaying the opening until 1st June, the extension of weekend close to 3 days and introduction of daytime only fishing. In 1999 further measures were introduced including tagging, quotas, banning of certain baits, of gaffs and the encouragement of 'catch and release.'

vi. Although welcome, these restrictions, together with a claimed reduction in illegal fishing, are totally inadequate. It remains difficult to understand how the Irish government can continue to allow 70% of their seriously declining total catch of salmon to be exploited in this manner.

vii. The Republic of Ireland enjoys great financial benefit from the EU, not least in relation to fishery improvements. It must be persuaded to discontinue this indiscriminate fishery, which exploits salmon from other countries, makes

no significant contribution to the management resource and, most important of all, makes a nonsense of the efforts to try to manage this important industry in a modern, scientific way.

b. THE GREENLAND AND FAROE ISLAND FISHERIES

i. There are fisheries for salmon in waters off the west coast of Greenland and to the north of the Faroe Islands which take salmon from many countries, including the UK. The fishery at Greenland has been operated for many years but escalated during the 1960's when vessels from a number of countries fished for salmon, often many miles offshore, using drift nets. Catches peaked in 1971 at an estimated 2,689t (about 770,000 fish). In 1972-1975, fishing by non Greenlandic vessels was phased out by international agreement. In 1976, as a result of negotiations between the USA and Denmark, a quota of 1,190t was agreed, and a catch of 1,175t (about 340,000 fish) was recorded. Since then quotas have been agreed in most years. Since 1993 quotas have been set (except in 1996) as a result of negotiations by NASCO, using advice supplied by ICES.

ii. A small long-line fishery for salmon started at the Faroe Islands in the late 1960's, when less than 10t were taken. Originally, the fishery was close to the Islands and mainly caught fish which would have returned to their rivers of origin as grilse. Later, the fishery moved further north, up to 200 miles from the Islands and the catch comprised mostly fish destined to return home as multi-sea winter fish. The catches increased throughout the 1970's and reached a total of 1,025t (about 300,000 fish) in 1981. Since 1982, the fishery has been regulated by a combination of quotas and effort restrictions. In the early years these were agreed in negotiations between the European Commission and the Faroese authorities. More recently they have been set in regulations made through NASCO.

iii. In 1992 the North Atlantic Salmon Fund (NASF) was established for compensating fishermen for not fishing for their allocated quota. These purchases were initially funded by the private sector in Iceland, but additional private sector funding from other salmon producing countries followed. More than £600k was contributed to the purchase agreements during 1994 to 1998 by the UK private sector, of which about £400k came from the Scottish District Salmon Fishery Boards. Support for NASF has also been provided by the governments of Iceland, USA, Canada and, for a time, Norway. The total expenditure for quota purchases from these fisheries over the past six years from all sources exceeds £3m.

iv. NASF (UK)'s Scientific advisor estimated that during the period of closure of both the Faroes and Greenland fisheries some 20,000 additional multi-sea-winter salmon were returning to the UK each year, at a cost to the contributors of about £5 each (a sum that compares very favourably with the estimated costs from other stock enhancement methods).

v. Since 1995, despite the Herculean endeavours of its founder Orri Vigfusson, NASF has been unable to agree terms for the purchase of the much reduced Greenlandic quotas. More recently, no agreement has been reached over the

purchase of the Faroe Islands quota. In both cases, the reasons are complex and political, and are certainly aggravated by the UK's failure to curb its own interceptory netting. Nevertheless, efforts continue both to reach a solution and also to set up alternative long term employment projects in these needy and remote areas.

vi. Despite the current problems, it is vital that Orri Vigfusson's initiative continues to receive full support from the UK, both from fishery managers and from anglers. Unless these high seas fisheries are managed in an agreed and orderly way, it makes it impossible for the UK to manage its salmon resource properly.

vii. *"NASCO should be supported in its regulation of the salmon fisheries at Greenland and Faroes but the aim should be the permanent closure of these fisheries. The efforts of NASF and others to achieve this should be supported."* (Report of the Scottish Salmon Strategy Task Force p 82).

SECTION 6

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