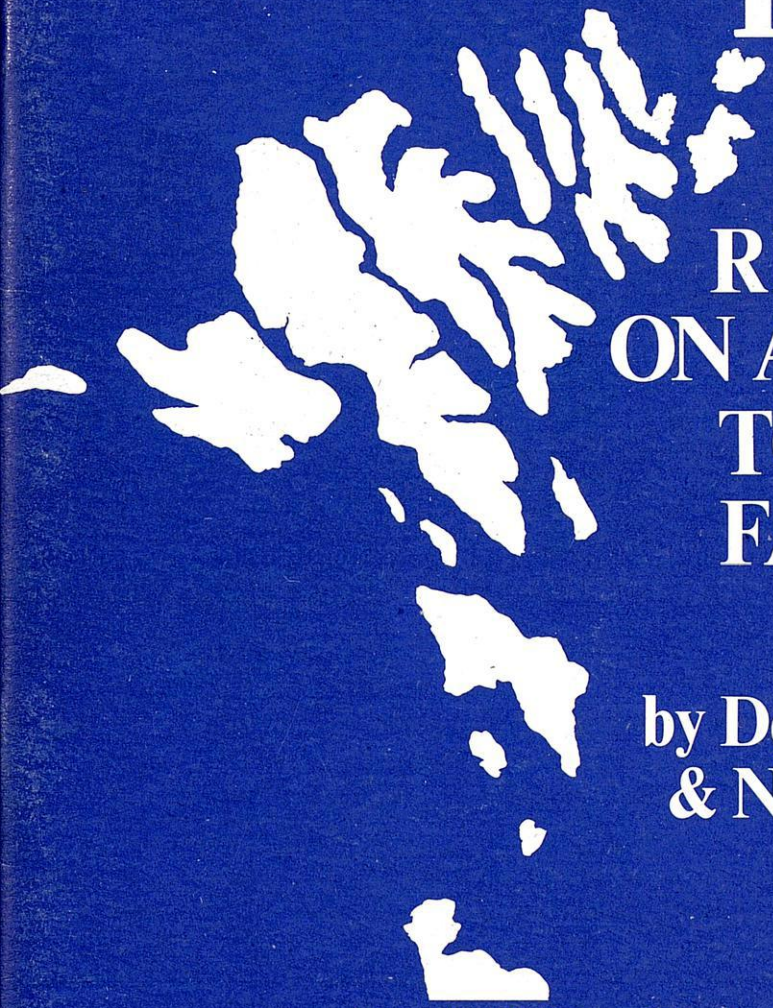
Atlantic Salmon Trust



REPORT ON A VISIT TO THE FAROES

by Derek Mills & Noel Smart

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FOREWORD

The Atlantic Salmon Trust has not only adopted the role of 'watch dog' to identify dangers and potential threats to Atlantic salmon, but has acted also as a focal point for the collection and dissemination of new knowledge and factual information about salmon. This report is published in pursuance of this policy in an attempt to enable salmon conservationists to understand the nature and complexities of the Faroes Salmon Fishery.

The Trust is most grateful to Dr. Derek Mills and Mr. Noel Smart for agreeing to undertake the investigation at very short notice, and wishes to place on record its appreciation and thanks to Unilever PLC for its generous contribution towards the cost. The Trust is pleased that its team was able to join a similar delegation representing the International Atlantic Salmon Foundation of North America since both the Foundation and the Trust jointly undertook in 1980 an expedition to the Greenland Salmon Fishery and produced a comprehensive report. Dr. Derek Mills was a member of that expedition also.

This report is published by the Trust which does not necessarily accept the recommendations contained in it.

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ACKNOWLEDGEMENTS

Without the thoughtful organisation and generous hospitality of members of the Faroese Home Government and the Faroes Sport Fishing Association our visit would have had little chance of success. We should particularly like to thank the Prime Minister, Mr. Pauli Ellefsen; Mr. Arni Olafsson, the Minister of Fisheries; Mr. Jørgen Hansen, Attorney at Law; Mr. Gunnar Gunnarsson, Chairman of the Fishermen's Association; Mr. Andreas Reinert, senior research biologist at the Fisheries Research Institute; Mr. Svend Krosstein, President of the Faroes Sport Fishing Association and Mr. Hans Joensen, Secretary to the Faroes Sport Fishing Association.

Everyone we met during our stay did everything they could to make it a pleasant and interesting time. We particularly appreciate the effort they put into providing us with information and giving so generously of their time to participate in lengthy discussions. It is difficult to mention all those others to whom we owe our gratitude. However, we should particularly like to express our thanks to Mr. Ditleif Eldevig, Director and Mr. Andreas Olsen, Managing Director of I/F Havsbrun, Fuglafjordur; Mr. Robert Poulsen, Technical Director of Faroe Sea Food (Føroya Fiskasola); Mr. Ole Jakobsen, Secretary of the Fishermen's Trade Union (Føroya Fiskimannafelag); Mr. Osmønd Jøstenossen of Laksaskip, and to the Captain of the Fisheries Protection vessel "Tjaldrid".

Derek Mills

Noel Smart

May, 1982.

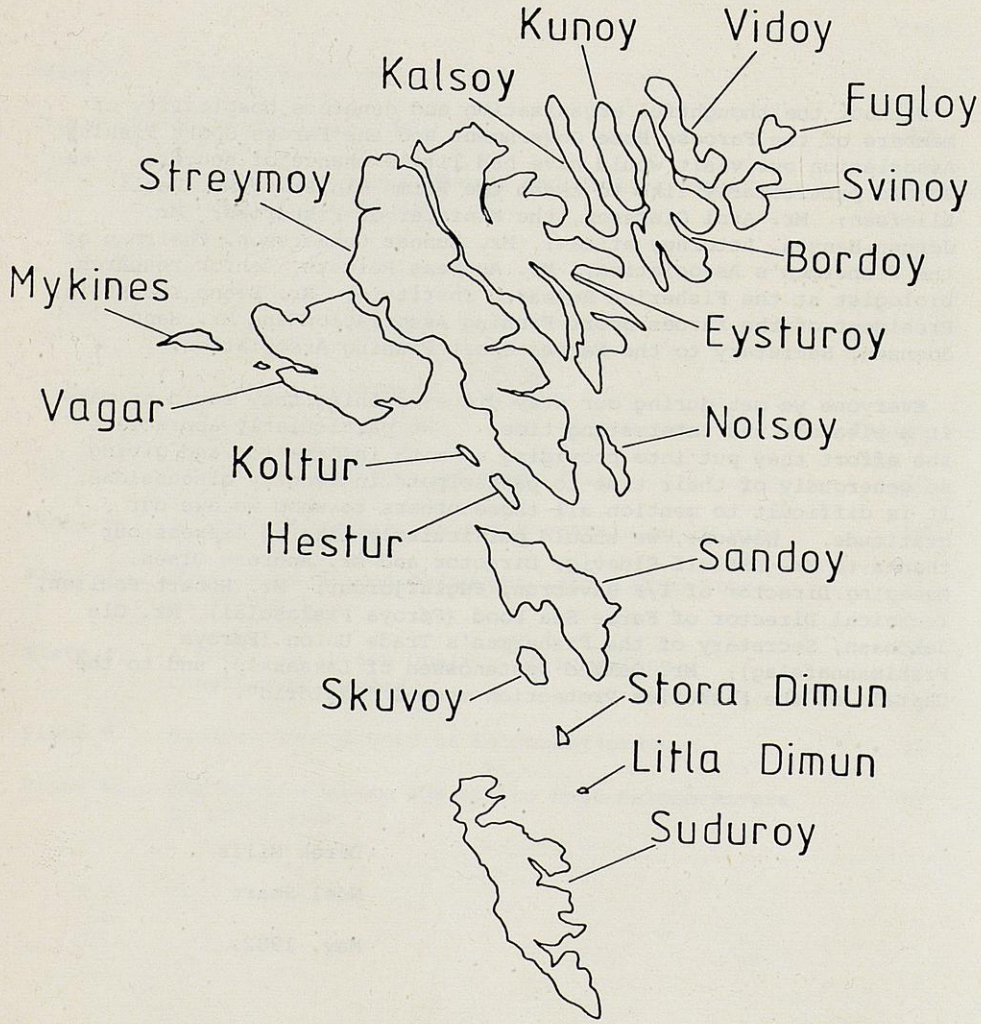


Figure 1. The Faroe Islands

REPORT ON A VISIT TO THE FAROES

DEREK MILLS AND NOEL SMART

INTRODUCTION

The escalation of a floating long-line fishery for salmon within the 200-mile zone of the Faroe Islands in the last two years to a catch of 718 tonnes in 1980 and 970 tonnes in 1981, added to a threat early in the current season of a rise to 1400 tonnes has caused great concern to salmon-producing nations.

The increase in the catch comes on top of an annual harvest in West Greenland waters of almost 1200 tonnes of salmon destined for European and North American rivers. It is, therefore, not surprising that salmon anglers and netsmen in other countries have tended to relate their declining catches to these distant fisheries. Such a relationship is not easy to establish without hard facts and certainly carries little weight during international negotiations to establish fishery limitations and quota allocations. The origin and destination of salmon taken in Faroese waters requires considerable scientific information which can only be collected through extensive sampling of catches on fishing voyages.

After an initial hard line being taken by the Faroese on the size of future salmon catches, a breakthrough came during EEC negotiations in the autumn of 1981. This resulted in the setting up of a Special Study Group by the International Council for the Exploration of the Sea which had its first meeting in Torshavn in December, 1981. Further promises of co-operation came with the signing in Reykjavik of the Final Act of 22nd January 1982, of the Diplomatic Conference on the Conservation of Atlantic Salmon by Canada, the EEC, Faroe Islands, Iceland, Norway, Sweden and the U.S.A. An announcement at that time that the Faroese salmon quota for this season would be 750 tonnes, and would be reduced to 625 tonnes next season was also encouraging. Observers from Scotland, Ireland and Iceland were subsequently allowed on Faroese salmon long-line vessels to record observations and collect samples.

Details of work by Government scientists are inevitably restricted and anglers and netsmen are likely to remain ignorant of the Faroese scene. A great deal of worry arises out of such ignorance and for this reason the Atlantic Salmon Trust arranged to send representatives to the Faroes to obtain a first-hand account of the fishery, its administration and regulations. The facts would then be relayed to anglers, netsmen and the general public so that they could more fully appreciate the steps being taken to protect what is now a truly international resource as well as a national heritage.

The Faroese Government was agreeable to such a visit and offered us every co-operation. Consequently, two representatives of the Trust went to the Faroes from March 17th to 24th. We were accompanied by two delegates from the Trust's North American counterpart, the International Atlantic Salmon Foundation (Appendix 1), who were concerned about the indirect effects of the Faroese fishery on their own stocks of salmon feeding in Greenland waters. If the Faroese fishery intercepts salmon from European rivers destined for Greenland then it could result in a greater proportion of North American fish being taken in the Greenland quota.

Our seven-day visit was well planned by the Faroese Government. There were excursions to fish-processing plants, at which we saw salmon being unloaded from the long-liners; to salmon hatcheries and cage-rearing installations for salmon and rainbow trout, and to rivers in which, since 1957, they have established local runs of salmon. Useful meetings and discussions were also had with various sectors of the fishing industry - the fishermen and their trade unions, the fish processors, the exporters, the fisheries protection service and the Faroes Sport Fishing Association (Appendix 2). Forthright talks were held with members of the Government including the Prime Minister - Mr. Pauli Ellefsen.

THE FAROE ISLANDS

a) Physical

The Faroes (the Islands of Sheep) consist of eighteen islands and numerous stacks and skerries. They lie in the North Atlantic, between latitudes 61° 15' and 62° 24' north and longtitudes 6° 15' and 7° 41' west, with a north-south extent of 113 km and an east-west extent of 75 km. Their total area is 1,396.9 km^2. (Figure 1).

The islands are formed from a dissected basalt plateau. The average height of the land is approximately 300 m, the highest mountains being Slaettaratindur (882 m) and Grafelli (857 m) on Eysturoy, and Arnafjall (722 m) on Vagar. The furthest one can get from the coast is 5 km, on Streymoy.

The islands are part of the North Atlantic basalt area, which includes Scotland, Iceland and Greenland. They lie on the Wyville-Thomson Ridge between Iceland and Scotland. The Faroes consist of layer upon layer of basalt, laid down by submarine volcanic action during the tertiary period. These basalt layers are generally separated by layers of tuff, a friable stone formed from volcanic ash. The alternation between the hard basalt and the more easily eroded tuff has given a peculiar 'layer-cake' appearance to the hills, especially since in the main, the strata hardly vary from the horizontal.

The coasts are generally precipitous, particularly the more northerly ones. In the north, vertical cliffs of 500-700 m are common. These cliffs are of major significance for nesting sea birds.

Wet moorland covers most of the islands, and peat of 1 to 3 m thickness is general below 300 - 400 m. At greater heights there are barren stony patches, especially on the tops of hills. There are no large rivers but there are many streams, some of them precipitous. There are 40 lakes, most of them of glacial origin. The largest is Sørvagsvatn with an area of 9 sq. km.

The climate is mild as a result of the Islands lying in the main track of the North Atlantic Drift (an extension of the Gulf Stream). The average temperature in February is 4.1 °C and in August, 11.1 °C. The lowest recorded air temperature from 1931 to 1960 was only - 10.5 °C. Gales are frequent in winter with 82 hours of storms over Force 9. There is a good deal of mist, particularly in July and August. There is an average rainfall of 1,422 mm. Precipitation is heaviest in December and January. Snow rarely lies for long at sea level, but above 300 m partial snow cover is frequent from October to May.

b) Political

According to the Home Rule Act, passed by the Danish parliament in 1948, the Faroes are a self-governing state inside the Danish Kingdom. The Faroese have two seats in the Danish parliament.

The Home Rule Act recognises the Faroese language and the Faroese flag.

The areas of authority are divided into sermal - the area of separate responsibility where the legislating Løgting and administering Landsstyri have power and felagsmal - the area of joint responsibility which is administered by governmental authority according to laws written in Denmark. The area of joint responsibility can be further divided into three: those affairs for which the Faroese Government may assume responsibility if it so wishes, those affairs which may be taken over with the agreement of the Danish Government and those affairs which cannot be made separate.

The Faroese Government consists of the democratically elected legislating parliament or assembly, the Løgting, and the administering Landsstyri which is chosen by the Løgting. The Kikisumbodsmadur (Danish High Commissioner) represents Danish authority in the Faroes.

The Faroes are an independent duty zone, but otherwise the responsibility for all foreign affairs lies with the Danish Government.

As agreed in the Home Rule Act, the Faroese government is overruled by those treaties, pacts or agreements drawn up by Denmark with foreign countries.

The Faroese are often represented in Danish negotiating communities when Faroese trade is being dealt with directly. The Danish Ministry of Foreign Affairs can empower the Faroese Home Government to negotiate directly with the assistance of Danish Foreign Affairs personnel. As an example of Faroese independence it should be mentioned that while Denmark is a member of the EEC the Faroes are not. On the other hand, when Denmark left EFTA, the Faroes were also obliged to leave. The Faroes belong to NATO.

c) Social

The Faroese stem from those Norsemen who settled on the islands during Viking times. Faroese is a west Norse language most closely related to the dialects of the west coast of Norway and Icelandic. The written form of the language used today was only developed in 1846, from an Old Norse model. For this reason, there is considerable divergence between the written and the spoken language.

The population of the Faroes in 1980 was 43,609. At the last main census in 1977 there were 41,969 of which 17,585 (41.8 %) were employed, 6,346 (36.0 %) of these were employed in the fishing industry. The mobility between fishing and other trades is large. In certain industries, such as shipbuilding, there is a shortage of skilled workers.

d) Economics

The Faroese economy is based on the fishing industry and the Danish state subsidy. The latter, during recent years has accounted for about

one-seventh of the national revenue. In 1977 about one-third of the gross factor income stemmed from fishing and 95 % of exports consisted of fish or fish products.

Agricultural production is diminishing. It is impossible for the Faroese farmers to stand up against the competition of agricultural products on the international market. All agricultural produce is imported in large quantities, even lamb and milk.

Half of industrial production comes from the fishing industry. Besides the fish factories only the knitting factories contribute directly to exports. In 1976 exports of woollens were worth 1.7 million kroner (£120,000) and exports of fish and fish products, including landings abroad, were worth 608 million kroner (£41.8 m) or 96 % of exports.

With such an overspecialized economy as the Faroes, foreign trade is extensive. Figures for foreign trade from 1976 to 1980 are given in Appendix 3. The value of imports exceeds that for exports as can be seen from the Balance of Trade figures. Over the past five years there has been a steady increase in the value of exports to West Germany.

The Balance of Payments is set out in Appendix 4.

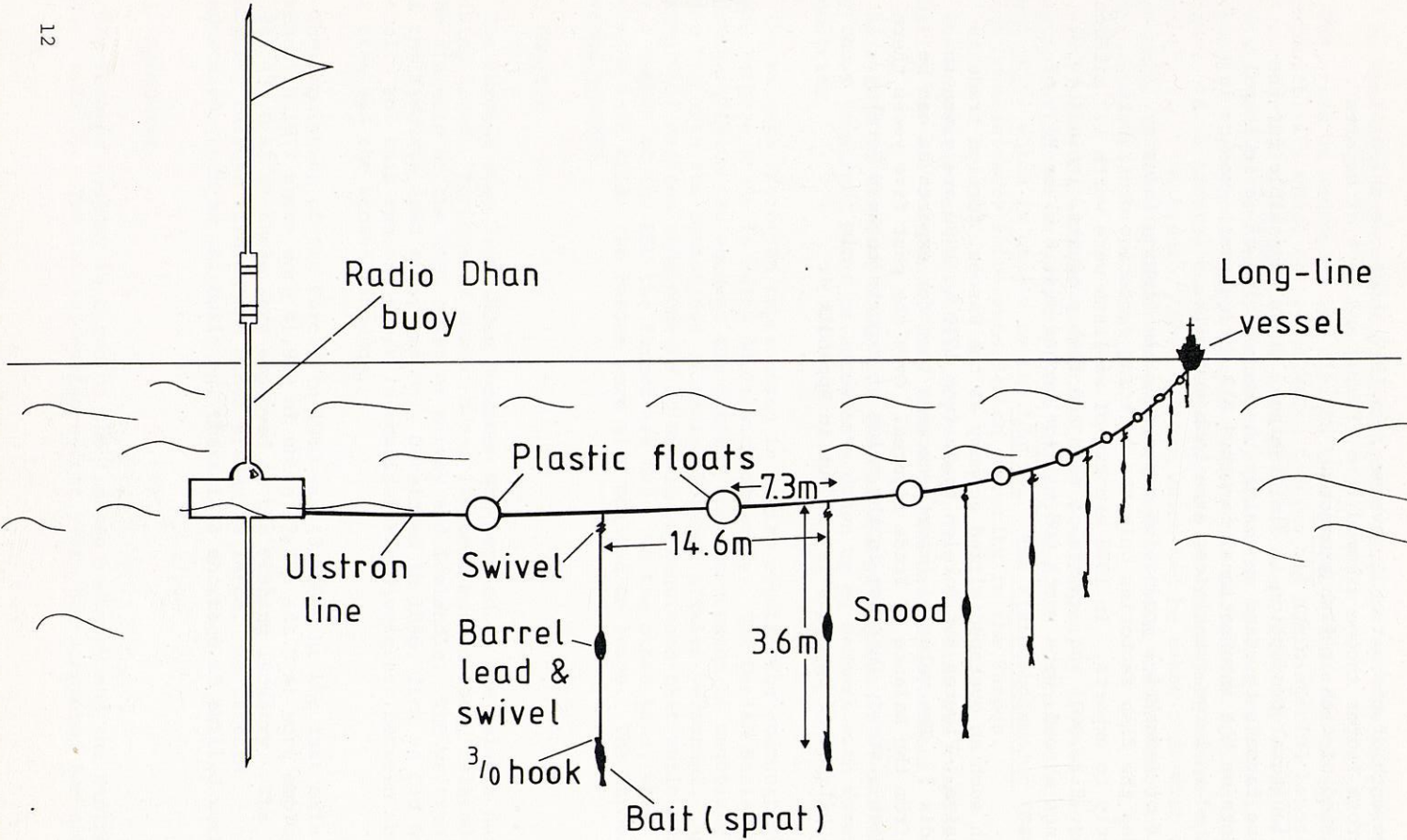


Figure 2. A Salmon Long-line

THE SALMON FISHERY

In April 1968, the Faroese research vessel "JensChr.Svabo" carried out an experimental long-lining cruise for salmon in the waters around the Faroes. Most of the salmon caught were small, 55-59 cm (22-23 in.) in length, but a few were up to over 100 cm (39 in.) and weighed more than 9 kg (20 lb.).

Following the "Jens Chr.Svabo's" cruise in 1968 a few Danish and Faroese vessels fished in this area but the catch was small and did not exceed 5 tonnes. However, the records of catches of one Faroese vessel, which fished at intervals from May to early August, indicated that later in the season the average weight of the fish caught increased sharply, suggesting that the smaller fish, which dominated the catches in April, were no longer present in the area.

In April 1969, the "Jens Chr.Svabo" carried out a second cruise in the same areas as those fished in 1968. Most of the salmon caught were again small, almost 90% of the catch measuring 60 cm (23½ in.) or less.

Despite the high catch per unit effort (80 salmon per 1000 hooks) experienced by the "Jens Chr.Svabo" during the experimental cruises there was little immediate development in the area of a salmon fishery of serious proportions.

This was probably due to the high proportion of very small fish in the catch, which are in poor condition in the early part of the year, and also because, although the average size of the fish is better later, they are then not so plentiful.

Most of the catches were made relatively close to the islands and many of them to the south. In 1970 a small part of the catch was taken more than 200 miles from the Faroese baseline. Up until, and including, 1972, salmon landings were small (Appendix 5). In the period 1973 to 1978 the mean annual catch rose to 34.5 tonnes as a result of a few more Faroese vessels entering the fishery. In 1978, the first Danish vessels started long-lining for salmon off the Faroes. The increase in the salmon catch in 1979 to 194 tonnes was partly due to an extension of the fishing season and higher catch rates. There is no doubt also that, after the 200 mile fishery limits were established off the Faroes in 1977, there was a realignment of fisheries policy. This enabled the Faroes to put an increased effort into the salmon fishery and reduce the effort on the over-exploited cod stocks. This increased effort is clearly shown in 1980 and 1981 when the number of Faroese vessels participating in the fishery rose to 22 in 1980 and 42 in 1981. The figures for Danish vessels in these two years was 6 and 7 respectively. This is a three-fold increase in Danish participation. So in the period 1978 to 1981 the salmon landings escalated from 51 to 968 tonnes.

The earlier evidence that a salmon fishery off the Faroes was not viable due to the number of small fish was misleading. This was probably because the earlier voyages were chiefly centred close to the islands and in the south, while in recent years the fishing has been centred on an area 100 miles north of the islands in the region of 63°N and 64°30' N. Between April and May, the fishing extends further north and is in the area approximately between 4°W and 4°E, and 70°N and 71°30' N and in May the area is approximately between 3° W and 2° E and 67° N and 69° N.

a) Fishing Methods

(i) Vessels

There are approximately 36 Faroese and 6 Danish fishing vessels licensed to participate in the salmon fishery. Some of the larger vessels are steel-hulled long-line vessels and multi-capability offshore trawlers with side-gallows of up to 285 gross-registered tonnes. The smaller ships are line boats of 50 feet overall length and are of the traditional north-ern European design, wooden-hulled and decked with a gross-registered tonnage of 49 or less. Most of the ships are capable of staying at sea for a week or ten days and are equipped with radar and direction-finding equipment. Only one or two ships have refrigeration plants, the majority store their catch in ice. The size of the crew ranges from 4 to 9 men.

Ships with no freezing facilities are not allowed to be at sea for salmon fishing more than 9 days including the days the ship leaves and enters harbour. Ships under 49 GRT were not allowed during the current season (1981/82) to fish for salmon during the period 15th December, 1981 and 1st March, 1982 (Appendix 9).

(ii) Gear

The floating long-lines are made up of pins, each of 80 hooks, one line consists of 10 pins or 800 hooks. The hooks are No. 3/0 Mustad hollow-point. They are tied to a 12-foot (3.6 m) length of monofilament nylon known as a snood. The snood, which is attached to the main line by means of a swivel, is weighted at its mid-point by a barrel lead incorporating another swivel. The guage of the nylon snood from the main line, which is made of ulstron, to the barrel lead is 0.5 to 0.6 mm and between the barrel lead and the hook it is 0.3 to 0.4 mm. The snoods are mounted 8 fathoms (14.6 m) apart, with yellow 2½" dia. (6.3 cm) plastic floats being positioned on the main line at the mid-point between two snoods. A radio-transmitting 'Dhan' buoy is attached at invervals along the line (Figure 2). These are often spaced 2½ miles (4 km) apart. As many as 25 pins may on occasions be joined together. These will extend over a distance of 18 miles (28.9 km). The whole length of line is often referred to as a set.

The bait consists of sprats which are hooked behind the eyes so that

they hang 'tail down'. Catches tend to be best in rough weather and at dawn and dusk. Fishing success can also be affected by squid. In the early part of the present season catches were very poor due to the bait being taken by squid which also ate any fish already hooked.

(iii) Procedure

The line is shot, usually at night, from the quarter of the vessel as it steams slowly along. The hooks are baited while the line is being shot. The line is retrieved by hand and all fish are lifted out with a long-handled net. It takes 4 to 5 hours to shoot one set 20 miles long and 10 to 12 hours to haul the same. If the line is cut or broken, which it frequently is, it can be found by picking up the radio-transmiss -ions from one of the Dhan buoys.

The fish, on being brought abroad, are placed on an inverted-V board facing belly up. There is a notch cut on the board at 60 cm (23½ in.). Those that are above 60 cm in length are retained. They are cut open from the vent to the pectoral fins and the gut, gonads, kidney and heart are removed. They are then thrown into boxes and later, when the crew has time, are stored away in ice, or frozen if there is a refrigeration unit on board. Salmon will remain fresh for a week if not frozen.

The condition of the fish caught appears to vary and, judging by those seen at some of the processing plants during our visit, ranges from the thick, deep-bellied fish in first-class condition to some very thin and emaciated individuals which must have certainly been poor-conditioned kelts. Some particularly large fish were noted including one of 32 kg (70½ lb.). One box of six fish weighed 120 kg (264½ lb.) giving an average gutted weight of 20 kg (44 lb.).

b) Processing

When the salmon are unloaded at the processing plants in the Faroes they are classified as follows:

Class 1	over 9 kilogrammes	
Class 2	over 7 "	up to 9 kilogrammes
Class 3	over 5 "	up to 7 "
Class 4	over 4 "	up to 5 "
Class 5	over 3 "	up to 4 "
Class 6	3 kilogrammes and less	

The unloading and classification are controlled by the Fish Quality Inspection Authorities. According to the executive order regarding possible export of salmon to the U.S.A. it is required that one salmon in a thousand is handed to the Veterinary authorities for inspection. The salmon must come from the catch in the last setting of every trip. It must be bled but not gutted and kept whole and chilled by being packed in ice.

The fishermen sell their salmon through the processors to one of the three fish export companies. The major company is the Torshavn-based Føroya Fiskasola (The Faroese Fish Exporting Company - Faroe Sea Food) which markets about 90% of the processed fish and sells about 50% of the salmon landed, although about 70% of the frozen salmon passes through the company. Føroya Fiskasola together with P.F. Marr & Co. (The British Consulate) export about 95% of all salmon landed. A smaller fish export company is situated at Klaksvik on the island of Bordoy. The processors are members of the export companies and are obliged to sell through them.

Føroya Fiskasola has a subsidiary in Grimsby called "Chaldur". The greatest proportion of salmon (about 55%) is exported to Denmark, smaller amounts are exported to France, West Germany, United Kingdom and Switzerland. Much of the salmon sent to Denmark goes for smoking at Bornholm, Copenhagen and Esbjerg.

There is no local tradition for eating salmon and the islanders prefer cod or haddock. There is therefore only a minimal use of salmon within the Islands.

c) Fishery Economics.

Salmon can not be exported without a permit from the Fishermen's Association of the Home Government (Fiskivinnustovan). Application for permission to export containing information about prices and sale-conditions is sent to the Fiskivinnustovan in sufficient time before exporting.

Salmon C.I.F. (Carriage, Insurance, Freight) prices prevailing in March, 1982 were as follows:

kilogrammes	Kroner	£ per lb.
1 - 2½	36	1.14
2½ - 3	45	1.43
3 - 4	50	1.58
4 - 5	55	1.74
5 - 7	60	1.90
7 - 9	69	2.19
9 +	78	2.47

A service charge of 2% is levied on the processor, and this is passed on to the fishermen, by the Faroese Fish Exporting Company.

In addition, for fishing licences, the Home Government department, Føroya Gjaldstova, charges 1 kroner per kilogramme (3p per lb.) landed weight of salmon according to Act No. 68 of May 21st, 1980, concerning fee on salmon caught in the fisheries zone. The fee has to be paid for each voyage separately and is due 14 days after unloading the catch.

A specimen expense account showing how the income obtained from a 15-

day salmon fishing voyage is distributed between ship's running costs, provisions, bait, harbour and landing dues, government levies and union subscriptions and the crew is shown in Appendix 6. One item absent from the account is the cost of fishing gear. A line of 10 pins ready for fishing and stowed in a wooden box costs Kr. 11,000 (£800). The Home Government guarantees a fisherman a minimum wage of Kr. 8,043 a month (£575). If the money received from the catch is less than this the government makes up the amount.

d) Fishery Administration and Regulation

The agreed Faroese salmon quota for this season is 750 tonnes and will be reduced to 625 tonnes next season. This agreement is set out in a copy of a letter from the Home Government of the Faroe Islands to the EEC in Appendix 7. A copy of the letter of acknowledgement from the EEC is also included. The 1980/81 season was from 20th October to 1st June, and the current one is from 15th October to 31st May.

All vessels have to be licensed by the Fishermen's Association and each is allocated a quota which is not transferable. The quota is divided between vessels in different weight categories. Vessels up to 49 GRT are classified as small and are allocated a certain proportion of the total and vessels above 50 GRT are allocated the remainder. Salmon caught by Faroese vessels beyond the 200 mile fisheries zone are included in the permitted total catch. Salmon under 60 cm in length, measured from the front of the head to the back of the tail is considered undersized. It is not permitted to have such fish on board and they must be returned to the sea immediately.

The master of the ship has to keep a log book and enter into it daily the number of salmon taken and where they were caught. Every Monday the master of the ship has to inform the Fishermen's Association (Fiskivinnus-tovan) of the number and weight of salmon caught. When the catch is unloaded and classified the master of the ship sends a note of the weight to the Fishermen's Association immediately. The unloading, classification and loading as well as the observance of the regulations regarding minimum size are controlled by the Fish Quality Inspection Authorities. To the landed catch is added 11% fresh weight, compensating for quota purposes for the removal of entrails.

The Home Government also negotiates with the Union of Salmon Shipowners (Laksaskip). For example, if it should decide to suspend fishing for a period during the season it would first negotiate the time of the suspension with Laksaskip.

A breach of the regulations set out in Executive Order No. 81 of 27th August, 1980 on Salmon Fishing in the Fisheries Zone, of the conditions in the fishing licences are subject to fines, and in addition all fishing gear, such as lines and buoys, as well as catch may be confiscated. The ship may also be retained to cover fines and costs.

A copy of the Executive Order and a Licence for the Salmon Fishery are set out in Appendices 8 and 9.

The fishermen have a number of trade unions. The major one is Føroya Fiskimannafelag which has 3,000 members of which 100 are salmon fishermen. Fishermen working from boats of under 80 GRT have different unions.

The Fisheries Protection Service consists of two Faroese protection vessels assisted by a Danish fisheries cruiser equipped with a Lynx helicopter and a small Danish coastguard vessel.

e) Fishery Research

As a result of the setting up of the Special Study Group of the North Atlantic Salmon Working Group by the International Council for the Exploration of the Sea, the acquisition of data required for a more detailed assessment of the effects of the Faroes salmon fishery on home-water stocks will be considerably hastened. It will be further facilitated by the Faroese allowing observers from other countries to accompany their fishing vessels on their voyages to collect the necessary information. Data at present available on the Faroes fishery including: tag recaptures, age composition of the salmon population, mean weight of salmon in the fishery, natural mortality rates, non-catch fishing mortality, time between the Faroes area fishery and return of stocks to home waters and proportion of fish returning to home waters in the same year, appears in the Report of Meeting of North Atlantic Salmon Group, Copenhagen, 1-6 April, 1981 (C.M. 1981/Mi 10) which has been approved and is shortly to be published by the International Council for the Exploration of the Sea. However, as a result of increased co-operation with the Faroes Home Government and their fishery scientists much more data will be available. For example, it is a requisite of the Executive Order No. 81 that the master of the ship sends the tags from the salmon he has caught to the Fiskirannsoknarstovan (the Fisheries Research Institute) at the end of each voyage. The tags are not always detached by the fishermen, although there is a Kr. 5 reward for the return of each tag, and observers at the processing plants frequently find them on the fish.

Salmon scale examination is a lengthy and tedious study and the majority of this work is being carried out in Scotland by the staff of the Freshwater Fisheries Laboratory of the Department of Agriculture and Fisheries of Scotland, in close liaison with the staff of the Faroes Fisheries Research Institute.

The staff of the Fisheries Research Institute consists only of three scientists and 10 technicians, which hardly seems sufficient when one considers that the fishing industry is the mainstay of the country's economy. The staff duties involve an assessment of the main marine fish stocks; investigating the possibilities of developing fisheries for relatively unexploited stocks such as squid, blue ling, blue whiting, argentines (golden salmon) and myctophids; fish capture technology; sea bird ecology; salmon, and producing information for publication.

f) Discussion

Even though the salmon fishery is carried on throughout the winter months in bad weather conditions and involves long hours of hard work, the Faroese fishermen find it rewarding and have come to depend on this fishery for part of their annual income. At times there can be a high expenditure and effort for little return. The poor fishing early this season (i.e. before Christmas) as a result of squid on the grounds is likely to lead to the fishery starting later next season, perhaps not until January. As well as avoiding the squid, which resulted in a waste of bait, time and money, there may be other advantages, the main one being the lower incidence of fish below 60 cm in the catches. However, even later in the season the quality of the fish varies and even some fish above 60 cm should be returned if seen to be in poor condition. For example, a number of long and very thin fish, which were obviously poor-conditioned kelts, were seen at one processing plant. Although a size limit is the only way to impose a restriction on the size of fish landed in terms of length in a line fishery, fishermen should be informed that it is not in their long-term interest to take very thin fish as, in time, they will be available as good-conditioned fish.

Many fishermen have found it hard to understand why there should be so much concern over the amount of salmon they are taking, as they say that the numbers of salmon they see while hauling their lines are countless. This remark has been quoted from a number of independent sources and must be reasonably authentic.

However, the Faroese fishermen are reasonable people and, although they will feel the consequences of the proposed quota reduction they are prepared to support their government's decision, although the older men do not readily understand the need for such restrictions. They feel that, with the collapse of the herring fishery in the late 1960's and the reduction in the cod stocks, the salmon is a valuable substitute.

However, members of Føroya Fiskimannafelag (the Fishermen's Trade Union) support the government in this decision but have recommended that more money goes into improving local salmon production.

SALMON PRODUCTION

a) Salmon rivers

Until 1957 no salmon were recorded in the rivers of the Faroe Islands, although one small river on Eysturoy, called the Laksa or 'salmon river' may have held salmon a long time ago. There had been attempts 10 years earlier, in 1947, to establish a run by importing 10,000 eggs from Iceland and releasing the subsequent fry in the Fjardara. However, there were no records of returning adults from the early plantings although the first record in 1957 is almost certainly attributable to these early attempts. Some of the fish seen in 1957 were caught and formed the basis of all subsequent salmon plantings in the Faroes. Over the last 20 years salmon have become established in five rivers through the efforts of the Fisheries Research Institute and the Faroes Sport Fishing Association who have released fry and smolts from their hatcheries. These rivers are the Leynara, Dalsa or Saksun and Stora on Streymoy, the Fjardara on Eysturoy and the Sanda on Sandoy (Fig. 3). These are relatively small spate rivers reminiscent of rivers on the Inner and Outer Hebrides of Scotland.

The Leynara has two lakes on its course, the Leynavatn and Mjovuvatn, in which salmon tend to stay until spawning time. The other good salmon river is the Dalsa on which there is one large lake in its lower reaches, the Saksunarvatn, which holds many salmon. The Sanda also flows from a lake. The Stora and Fjardara have no natural lakes on their course, although there have been plans to construct small man-made lakes to serve as holding areas for salmon as the rivers themselves have few good holding pools.

Fish passes have been constructed on the lower reaches of the Leynara to enable salmon to negotiate a series of steep falls.

b) The sport fishery

Many of the rivers have runs of sea trout, although most of the angling takes place at the river-mouths and in the fjords. Angling in these areas, and in the lakes, is permitted all year round, but in the streams only from 1st May until 10th August.

The Faroes Sport Fishing Association (Føroya Silaveidifelag) is a very active organisation with a most enthusiastic committee and a membership of 300. The Association has two hatcheries. One is a small building at Silastovan in Torshavn on the banks of a good sea trout river, the Sanda. The hatchery has a capacity for 2 - 3,000 sea trout and 3,000 salmon smolts. The larger hatchery is more recent and is at Havnadal at the top of the Sanda immediately below the Torshavn water supply reservoir. The ground floor of the building has the capacity to raise 130,000 salmon smolts and 35,000 sea trout smolts and to incubate 200,000 salmon eggs. The upper floor of the building is the Association's clubhouse.

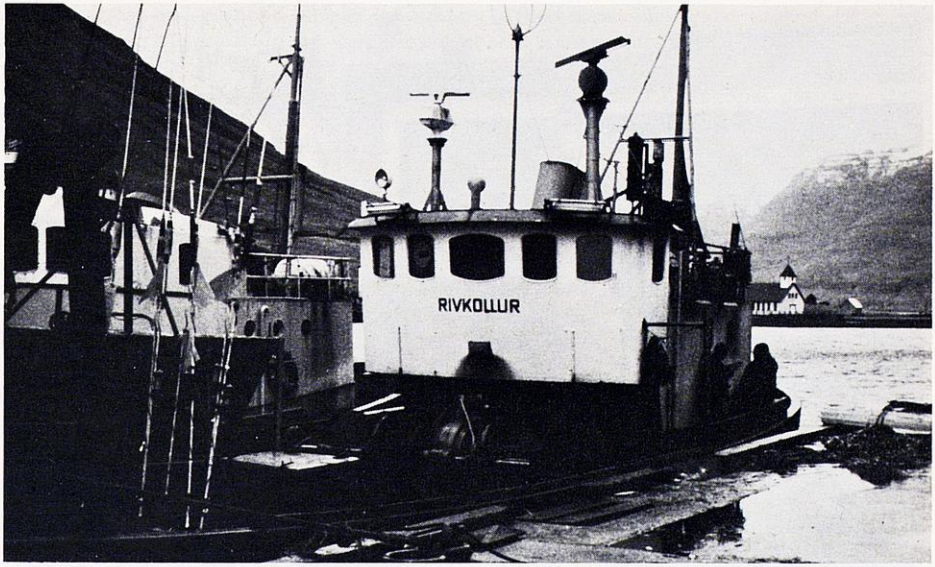


Plate 1. A salmon long-liner at Hordtoftir.

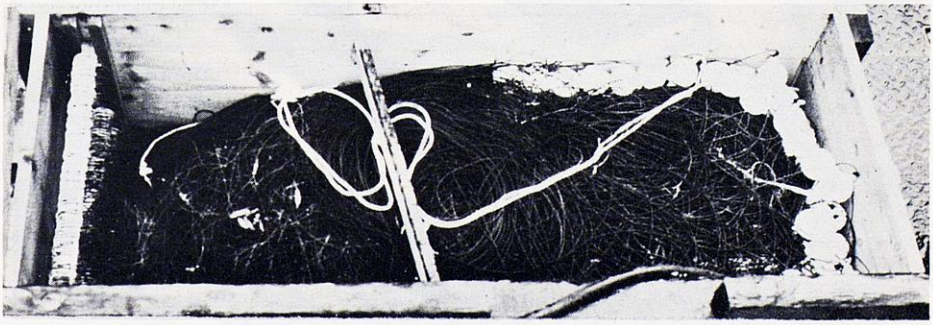


Plate 2. A salmon long-line. The box contains 10 pins, each of 80 hooks. The hooks are on rods at the left end of the box. Some of the barrel leads on the snoods can be seen lying on the line in the left-hand compartment. The yellow plastic floats are on the right of the right-hand compartment.

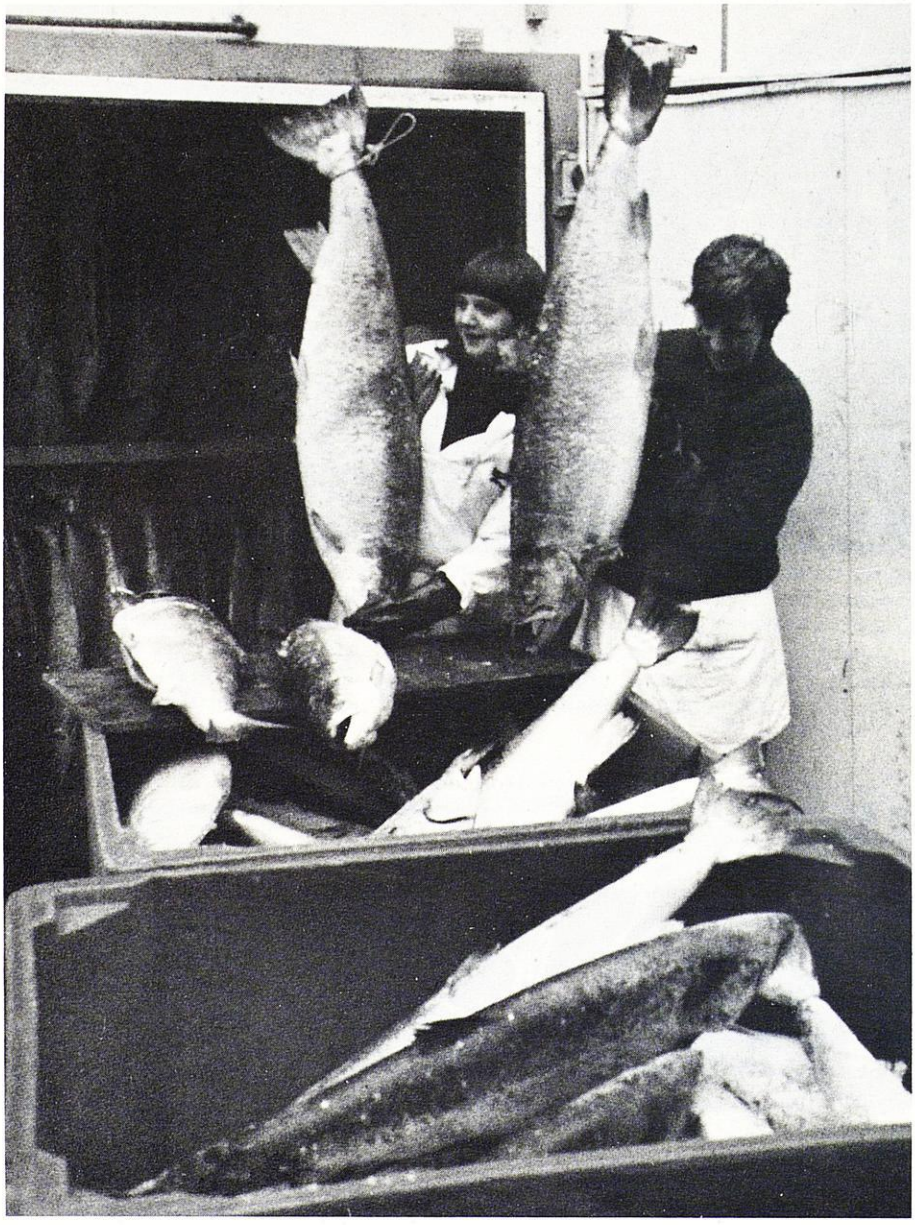


Plate 3. Some large salmon being put into a cold store in Klaksvik to await shipment.

The Association committee members are anxious to continue their river improvements and extend their stocking programme, but are aware that they require expert guidance on many fisheries management problems.

The Association obtains its funds from club subscriptions (50 Kr. or £3.50/yr) and visitor's tickets. Half the revenue goes to the farmers who own the fishing and half to the Association.

c) Smolt production

Although in the region of 150,000 salmon smolts can be reared at the two hatcheries belonging to the Faroes Sport Fishing Association, the majority of smolts are produced by Fiskaaling, a branch of the Faroes Fisheries Research Institute. The work is funded by the government partly through the levy of 1 kr. per kg (3p per lb.) landed weight of fish paid by the salmon fishermen on their licence. The main smolt-rearing unit belonging to Fiskaaling is at vid Air near Hvalvik on Streymoy. At the moment this indoor unit can rear on site in the region of 60,000 smolts, but fry and parr surplus to the holding capacity of the tanks are reared to the smolt stage in net cages in Heidalur reservoir near Vestmanna on Streymoy. At the moment there are 16 cages in Heidalur each 4 m deep and 5.5 m wide. Each cage can hold 15,000 smolts, so the present production in these cages is 240,000 smolts. It is also planned to take other excess fry from vid Air to an outdoor rearing unit at Skalabotnur at the head of Skalafjordur on Eysturoy where five fibre-glass tanks have recently been assembled. Each of these tanks (6 m wide x 1½ m deep, shelving a further 40 cm to the centre) will hold 18,000 smolts, giving a total smolt production at Skalabotnur of 90,000. The total smolt production from these sites by next year will therefore be in the region of 480,000. However, future developments planned for vid Air include further indoor smolt-rearing facilities which will raise the smolt production by 1984 or 1985 to 1 million. The rearing station at vid Air has the advantage of a supply of warm ground water, which has been such an advantage to smolt-rearing in Iceland. This water, which comes from a warm spring on the neighbouring mountain, flows at the rate of 8 litres/second and has a temperature at source of between 14 - 15° C. Because of these high temperatures, the eggs, many of them from Norwegian fish, hatch in January.

A further major development in the smolt production scheme is the proposed construction of a unit, capable of producing 1½ million smolts, at Midvagur on Vagar. This will be supplied with water by pipeline from Sørvagsvatn, a lake which is also capable of holding many cages for smolt-rearing.

There are also plans for a small unit for rearing fish to the fry and parr stage at Sund on the south shore of Kaldbaksfjordur on Streymoy. Here warm water from the neighbouring power station will be an added advantage.

Most of the smolts produced at present are sold to salmon farms (at 70p

each), the remainder (about 20%) are released into fjords as part of an ocean-ranching scheme.

At present there are no disease problems at these rearing units. A Diseases of Fish Act prevents the import of smolts from Iceland.

d) Salmon farming

The Faroese Home Government is keen to promote cage-rearing of adult salmon because of the employment prospects it offers. It also, of course, adds to the total export of salmon.

At the present time there are only three or four salmon farms - one in Kaldbaksfjordur on Streymoy, one in Funningsfjordur on Eysturoy and one in Haraldssund off the south point of Kunoy opposite Klaksvik.

The most efficiently-operated farm is the one in Kaldbaksfjordur run by a private group, with four major shareholders, called "Salmo". There are 10 circular net cages set close to the north shore as a group. They are made locally and are 5 m deep. This is the first year of production and it is estimated that this will amount to between 25 and 30 tonnes of salmon with an average weight of 3½ kg (7.7 lb.) with some fish of 7 kg (15 lb). This production comes from 8,000 smolts (weighing 25 to 30 gms and originating from Norwegian eggs) placed in the cages in June 1980. Not all the 10 cages held salmon, as some rainbow trout are also reared. The fish are killed at weekly intervals from March onwards and are export -ed by ship, through Faroe Sea Food. The fish are not frozen but are despatched fresh and simply chilled. "Salmo" also has plans to build its own smolt-rearing unit.

The farm, "Joki", in Funningsfjordur rears salmon and rainbow trout in 26 cages. The actual production of salmon is slightly less than that of "Salmo" as at present only four cages are used for rearing salmon, the remainder are for rainbow trout production which amounts to 4 tonnes per cage.

The actual amount of salmon produced at Klaksvik is not known for certain but would appear to be in the region of 15 to 20 tonnes. The majority of fish reared at this farm, like "Joki", are rainbow trout.

There is a small sea-cage unit in Skalafjordur belonging to Bakkafrost at Glyvrar. At this unit the firm I/F Havsbrun of Fuglafjordur are carrying out feeding experiments with salmon.

The fjords in the Faroes are well suited for cage-rearing of salmon. They are deep, well-sheltered, winter water temperatures (5° C) are well above freezing point, summer temperatures 12° C) are cool, and there is no appreciable tide. Surface run-off of freshwater reduces the salinity sufficiently so that sea lice infestation is not a problem. Water

quality is good and cages do not foul quickly and only require cleaning once or twice a year.

There is one sea-pond unit at vid Streymin, on Eysturoy, run by Fiskaaling. This, at present, is used for rearing rainbow trout, but there are plans to rear salmon there in the future. The two rectangular ponds have screened sluices at either end which allows sea water to flow through continuously. The flow is appreciable due to the ponds being situated on the side of the Sundini fjord in the narrows between Eysturoy and Streymoy.

e) Ocean-ranching

At present ocean-ranching is developing slowly. Although a proportion of the smolt production is released in the fjords, there are no fixed recapture sites as exist in Iceland where the practice of ocean-ranching is well-advanced. However, recapture facilities are being planned for the rearing unit at vid Air and probably at Midvagur.

There are certainly many suitable ocean-ranching sites where both release and recapture sites involving a lagoon or lake, as in Iceland, could be constructed. One obvious site is Sørvagsvatn on Vagar where smolts could be reared in cages in the lake, released in the outlet stream and recaptured using a trap at the lake outlet.

It was mentioned that when ocean-ranching was further advanced there would probably be no fishing for salmon in the sea within the 12-mile limits. At present no netting is allowed in the fjords or the lakes.

f) Environmental hazards

With such a small population and no heavy industry the likelihood of there being many environmental hazards to affect salmon production is small. However, there were a few local incidents of river pollution. For example, there was evidence of pollution at the water treatment works on the upper reaches of the Sanda below the Torshavn water supply reservoir and fish no longer inhabit this area. In another instance, effluent was seen entering a small stream from a knitwear factory at Gotugjogv. Perhaps the most serious case was that of silage effluent entering the lower reaches of the Sanda on Sandoy which prevented fish from ascending the river.

One new development in land use practice in the last few years has been that of land drainage. With the aid of more advanced machinery drainage channels are being cut through the peat to improve low-lying ground. This will lead to a more rapid run-off in the streams and rivers flowing through these improved areas, and will result in more sedimentation from peat erosion.

An area of particular concern is that of the introduction of alien

species. Rainbow trout are now being intensively-reared in sea cages and there have been incidents involving the escape of substantial numbers of this fish. For example, one incident in Funningsfjordur led to the escape of some 10,000 fish as a result of aluminium screens in certain cages becoming distorted and broken. Another substantial loss of rainbow trout occurred from cages near Klaksvik. Neighbouring streams could well become populated by spawning rainbow trout to the detriment of the existing stocks of young salmon, sea trout and brown trout. One ripe male rainbow trout was caught at the mouth of the Stora near Streymnes during our visit there one day.

Another possible introduction which was mentioned in certain quarters was the mink. The attraction being a ready supply of mink food which is manufactured locally in some of the fish processing plants and exported to the continent. Mink have previously been farmed near Torshavn and there were no records of escapes. However, escaped mink could form a feral population on the Islands to the detriment of the fish populations in the streams as well as the nesting sea-birds.

Human interference with fish stocks cannot be overlooked. There is already some illegal netting in some of the fjords and lakes, and this is likely to increase when ocean-ranching becomes well-established. This illegal fishing may warrant the establishment of some form of fish-warden service.

g) Discussion

Although runs of salmon have become established in five rivers, the average annual catch is not known at all precisely and there seems to be little effort made to organise the submission of angling returns at the end of the season. Some reports suggest that between 600 and 1,000 fish are taken annually from the Leynara and Saksun respectively, but these figures have not been verified. In the last few years it is said that the rod catches have declined and some members of the Faroes Sport Fishing Association attribute this decline to the commercial salmon fishery. The Association is anxious to improve the sport fishery for salmon and are stocking many of their streams. There is no information on the results of this practice but it is felt that some waters are being overstocked.

The smolt production programme appears to be developing very successfully and the government scheme for funding this work from a levy on their commercial salmon fishermen is admirable and one which should be considered by other countries.

The geographical features of the Faroes make the country well-suited to adult salmon production in sea cages. This form of fish-farming together with ocean-ranching could provide much-needed extra employment.

Ocean-ranching is a very promising venture and it is hoped that more attention is given to this in the future, as there is no reason why it should not be as successful as it is in Iceland.

There is an urgent need for a larger fisheries staff in both the research and management fields, and fisheries inspectors or wardens will also be required as the salmon enhancement programmes progress.

GENERAL DISCUSSION

As a result of establishing runs of salmon in five rivers the Faroese can with some justification consider themselves a salmon-producing nation and not solely a salmon-harvesting country, as are Greenland and Denmark. For this reason it could be said that they have a right to fish for salmon. Furthermore, they have been exploring the salmon potential off their islands for many years. As a result of the realignment of the Faroese fisheries after the 200 mile fishery limits were established in 1977 fishing for salmon became a necessary alternative. It gave them a chance to reduce the fishing effort on their over-exploited cod and herring stocks. The fishing industry is of great importance to their economy and they need a greater access to fish stocks. As the Director of one fish-export company said: "If our livelihood is based on what one can obtain within the 200 mile fishery limits we could not earn enough to maintain our standard of living". For this reason they are also exploring the possibility of fishing off the west coast of Africa.

The Faroese authorities are 'aware of the worries raised in some quarters on recent developments in Faroese salmon fishing' and this is reflected in a 'Statement of the representative of the Faroese Home Government concerning salmon fishing' given in Appendix 10. The authorities have shown their willingness to take part in international co-operation on the management of these stocks and have demonstrated this further by taking steps to reduce their salmon catch, bearing in mind their entitlement to a grazing fee. There are, of course, some Faroese who would like to uphold the old Norse Law which states that: 'If a man lets his animals graze on another man's land he loses the right to those animals!'

The observance of quota regulations has been effective and strict. For example, when in the 1980/81 season one fisherman supplemented his completed quota by fishing beyond the 200 mile fishery limits he was penalised by being allocated a lower quota in the current 1981/82 season.

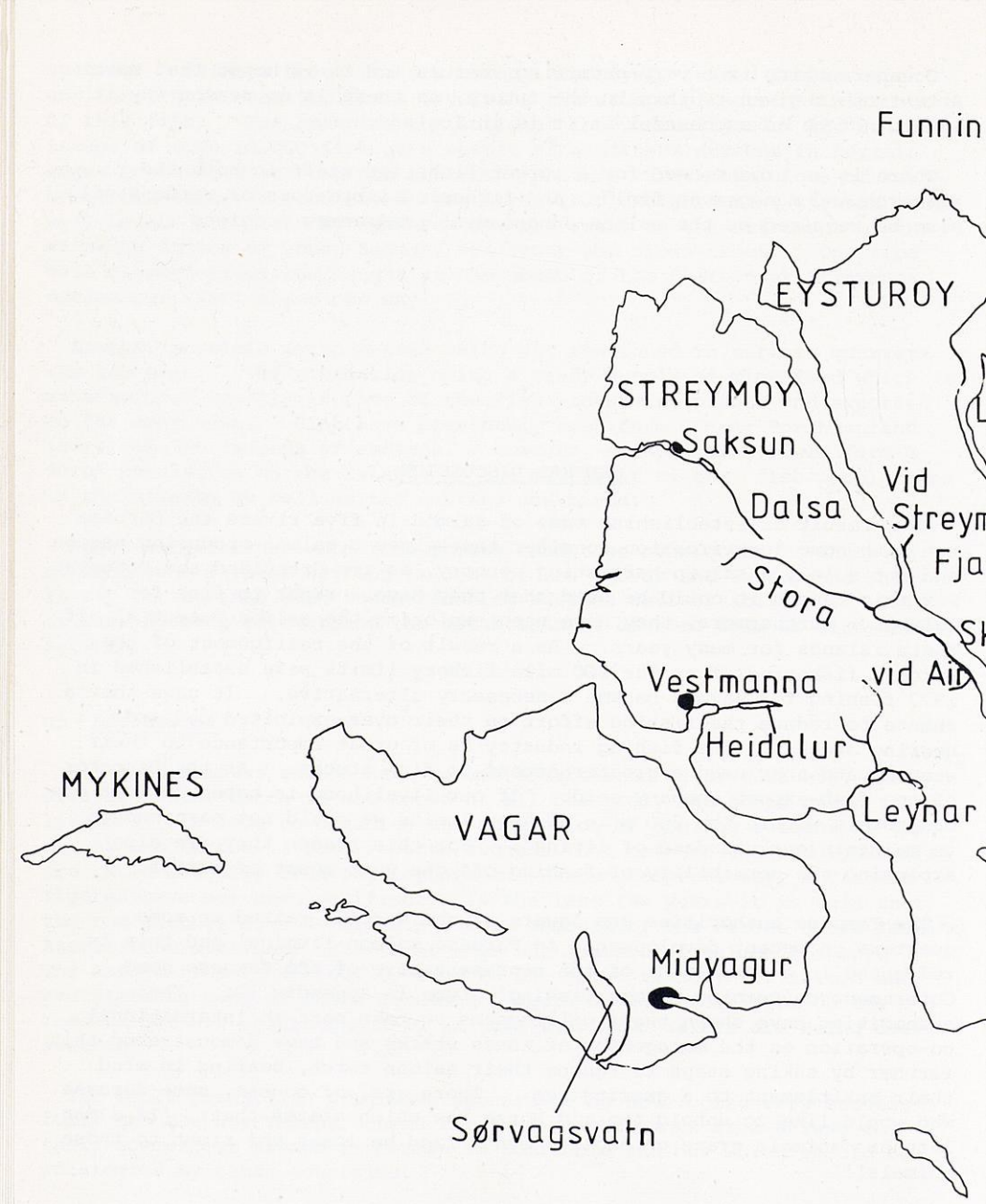
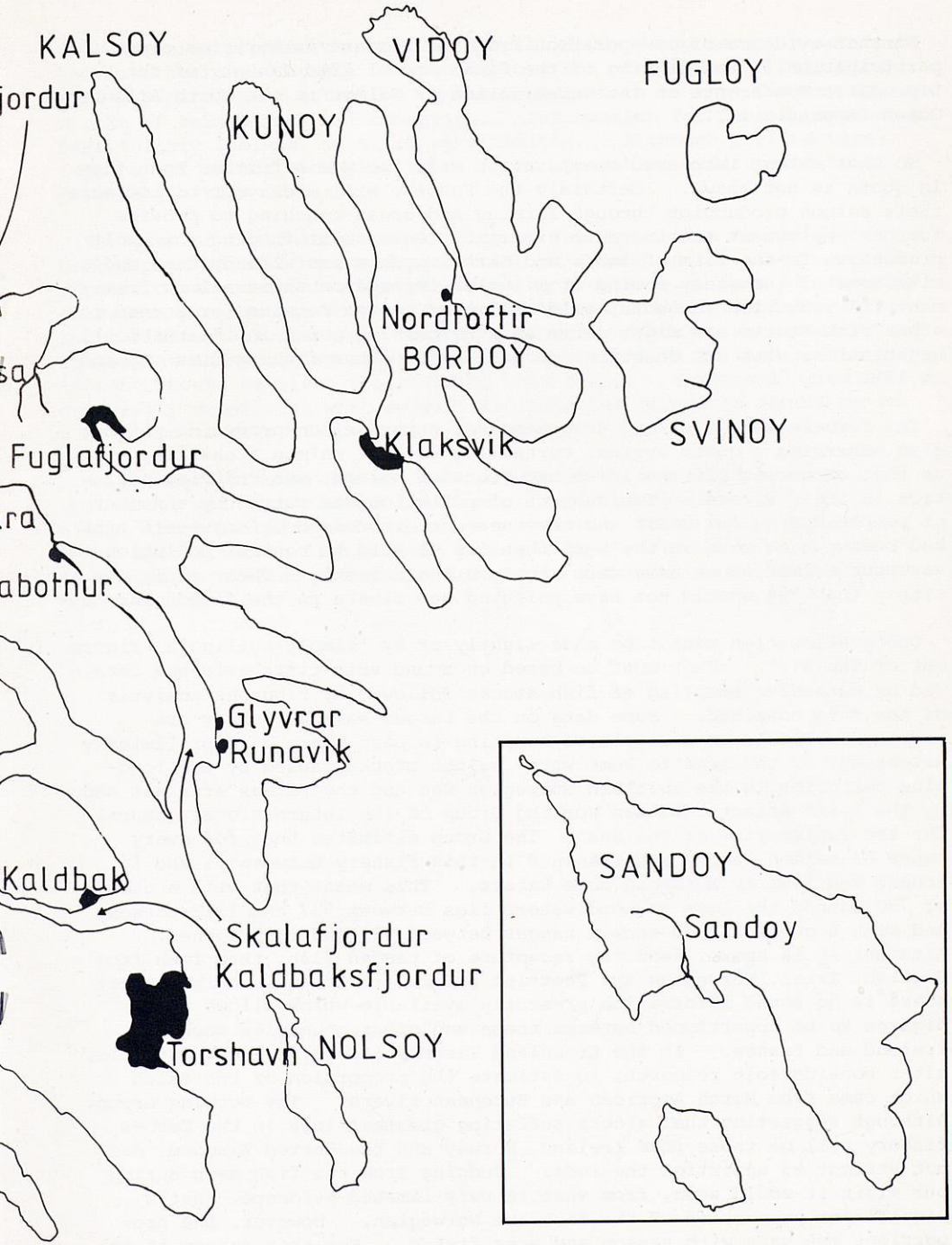


Figure 3. Map showing Salmon Rivers and Smolt-rearing and Salmon Farming sites


KALSOY
VIDOY
FUGLOY
KUNOY
Nordtoftir
BORDOY
SVINOY
Klaksvik
Fuglafjordur
Glyvrar
Runavik
Kaldbak
Skalafjordur
Kaldbaksfjordur
Torshavn
NOLSOY
SANDOY
Sandoy

Further evidence of co-operation from the Faroese authorities came with participation in the signing of the Final Act of 22nd January of the Diplomatic Conference on the Conservation of Salmon in the North Atlantic Ocean (Appendix 11).

To what extent increased co-operation will include a further reduction in quota is not known. Certainly the Faroese will endeavour to increase their salmon production through farming and ocean-ranching to provide further employment and increase exports. Government funding for smolt production in the form of loans and direct grants has already been made, with some of the money coming from levies imposed on their salmon fishermen. A reduction in quota could be linked to the demands for access to other fish stocks and might serve as a bargaining point in international negotiations with EEC countries on quotas for other fish species (Appendix 12).

The Faroese have a strong desire to see other salmon-producing nations also observing a quota system, curtailing illegal salmon fisheries, such as that occurring off the Irish and Scottish coasts, and reducing pollution in their rivers. The subject of pollution was raised by a number of people during our visit and they were not impressed by arguments that had been put to them in the past that 'as we paid to control pollution to save our salmon so we have more right to those fish'. Their reply was simply that 'we should not have polluted our rivers in the first place'.

Quota allocation cannot be made lightly or by 'simply pulling a figure out of the air'. They must be based on sound scientific evidence obtained by extensive sampling of fish stocks followed by rigorous analysis of the data obtained. Some data on the Faroes salmon fishery are already available as a result of sampling in past years. A preliminary assessment of the loss to home water salmon stocks caused by the long-line fisheries in the Northern Norwegian Sea and the Faroes area was made by the North Atlantic Salmon Working Group of the International Council for the Exploration of the Sea. The Group estimated that for every tonne of salmon caught and retained in this fishery between 1¼ and 1¾ tonnes was lost to European home waters. This means that with a quota of 750 tonnes the loss to home waters lies between 937 and 1312 tonnes, and with a quota of 625 tonnes ranges between 781 and 1093 tonnes. Although it is known, from the recapture of tagged fish, that fish from English, Irish, Norwegian and Scottish rivers are taken in this fishery there is no sound information presently available which allows these figures to be apportioned between these and other countries such as Iceland and France. In the Greenland Fishery it was at least possible, after considerable research, to estimate the proportion of the catch which came from North American and European rivers. The Working Group, although suggesting that stocks suffering greatest loss in the Faroes fishery will be those from Ireland, Norway and the United Kingdom, does not attempt to apportion the loss. Judging from the fish seen during our visit it would seem, from what is very limited evidence, that a significant proportion of the fish are Norwegian. However, the proportions may vary with season and area fished. For this reason it is stressed that research should continue and the effort be increased.

This is being planned through the Special Study Group recently set up by the International Council for the Exploration of the Sea. This Group will pay particular attention to the contribution to this fishery by stocks of salmon from all countries. Information for certain countries, particularly Iceland, is still very limited. Although Iceland tags a number of salmon each year there is at present no evidence of their presence in this fishery.

The size of the future contribution of Faroese salmon to the fishery will depend on the increased production of salmon in the rivers and the further development of the ocean-ranching programme. Much of the work on salmon propagation in the rivers is the responsibility of the Faroes Sport Fishing Association. Expert guidance and advice with their river management and stocking programmes would be of value to them and some thought should be given to providing this help. Personnel from a university department with specialist fisheries expertise should be in a position to help if adequately financed.

At present, disease has not been a problem in the smolt-rearing units, but with the planned increase in smolt production there is always the possibility of a disease outbreak. There would appear to be no specialist in fish disease problems in the Faroes and the offer of advice in disease prevention, diagnosis and cure would certainly be most welcome.

CONCLUSIONS

1. Faroes, as a salmon-producing nation, should be entitled to fish commercially for salmon within their 200 mile fishery limits.

2. The present regulations for controlling the salmon fishery and keeping to the agreed quota appear satisfactory.

3. More research is needed before any realistic figure for a quota can be achieved.

4. Although a legal size limit of 60 cm is presently imposed, fishermen should be encouraged to return poor-conditioned fish above this minimum length.

5. Due to the shortage of Faroese fishery scientists a substantial input of scientific help is required from other interested nations. This is to some extent being met by the setting up of a Special Study Group. The success of this type of international fisheries investigation will depend to a large degree on co-operation and goodwill. This could be influenced by thoughtless and uninformed criticism of the present quota agreements.

6. Salmon farming is likely to play a major role in Faroese salmon production in the future, but expert advice is needed both in this field and in river management.

7. Reports of Swedish and Finnish vessels long-lining for salmon north of the Faroes beyond the 200 mile fishery limits should be verified. The involvement of any other nation in this should also be investigated.

RECOMMENDATIONS

1. Any quota finally agreed should include a grazing fee element and account should be taken of the Faroese contribution to the salmon fishery.

2. Any future arrangements for reaching an agreed quota for the Faroese salmon fishery should not be considered in isolation.

3. Research into the effects of the Faroes fishery on home water stocks should be increased.

4. It is most important, to further understanding, that Faroese fisheries personnel should be invited to other salmon producing countries to see the extent of the salmon conservation and restoration programmes and the work of water and pollution control authorities.

5. Advice and assistance should be given with river management and salmon farming programmes.

6. Levies on commercial and sports fishermen which can be used to fund further salmon production should be considered by those other nations where such a system does not at present exist.

7. Some thought should be given by other salmon producing nations to the practicality of imposing local rod and net quotas.

READING LIST

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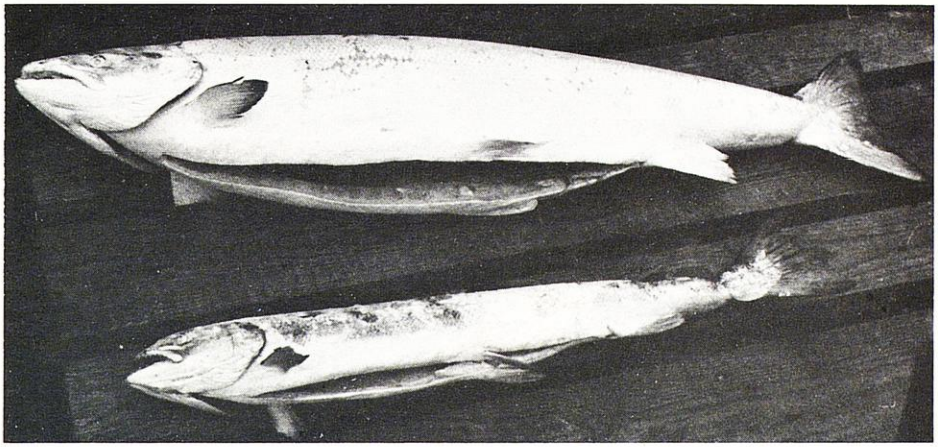

Plate 4. A contrast in the quality of the line-caught fish landed.

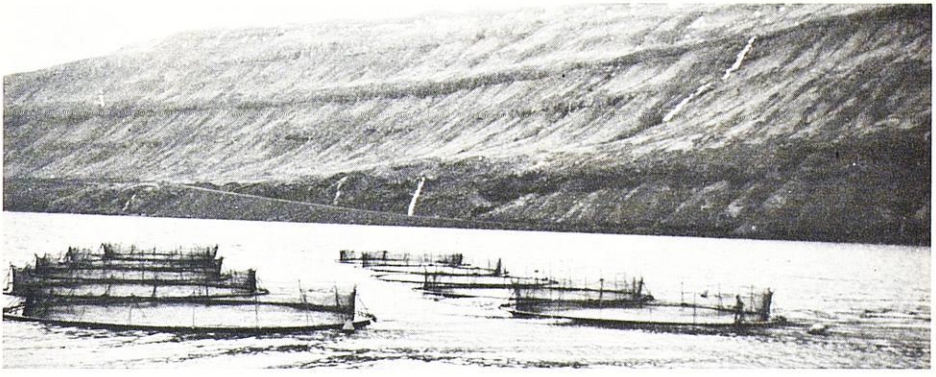

Plate 5. Salmon farming unit owned by "Salmo" at Kalbaksfjordur.

Plate 6. The Lower Leymara — one of the best salmon rivers in the Faroes.

APPENDIX 1 Representatives from the Atlantic Salmon Trust and International Atlantic Salmon Foundation.

Atlantic Salmon Trust

Dr. Derek Mills, Senior Lecturer, Department of Forestry and Natural Resources, University of Edinburgh. Member of Management Committee and Scientific Advisory Panel of the Atlantic Salmon Trust and member of Administrative Council of the Association Internationale de Défense du Salmon Atlantique.

Mr. Noel Smart, Managing Director, Joseph Johnston & Sons, Montrose, Angus. Chairman of the Salmon Net Fishing Association of Scotland, and member of Fisheries Committee to North of Scotland Hydro-electric Board.

International Atlantic Salmon Foundation

Mr. William S. Brewster, Vice-President and Director of the International Atlantic Salmon Foundation, Plymouth, Massachusetts.

Dr. Alfred L. Meister, Chief Biologist, State of Maine, Atlantic Sea Run Salmon Commission, Bangor, Maine.

APPENDIX 2. ITINERARY

Tuesday,	March 16	Travel to Copenhagen
Wednesday,	March 17	a.m. Travel to Faroes p.m. Meet Jørgen Hansen and Andreas Reinert at Vagar Airport. Travel to Torshavn, visit Heidalur reservoir and Leynar en route. Meeting with the Prime Minister - Pauli Ellefsen and Minister of Fisheries - Arni Olafsson.
Thursday,	March 18	Local in Torshavn a.m. Visits - Silastovan salmon hatchery; Bacalao processing plant; and P/F Torshavn ship-building yard. p.m. Meeting with Minister of Fisheries - Arni Olafsson and Chairman of the Fisheries Association - Gunnar Gunnarsson.
Friday,	March 19	a.m. Ferry to Toftir (Eysturoy) with Gunnar Gunnarsson and Home Government officials and representatives of the Nordic Investment Bank. Coach tour of fish processing plants in Runavik and Glyvrar. Lunch as guests of I/F Havsbrun, Fuglafjordur. p.m. Continue tour - visiting fish processing plant, herring meal and oil plant in Fuglafjordur: salmon and trout rearing unit at Skalabotnur. Return by coach to Torshavn. Banquet as guests of Prime Minister.
Saturday,	March 20	a.m. & p.m. Guests of Faroes Sport Fishing Association. Visit to their salmon hatchery at Havnadal, Leynavatn and fish pass at Leynar; salmon-rearing station at vid Air (belonging to Fiskaaling); rivers Stora and Dalsa and Saksunarvatn.
Sunday,	March 21	Guests of Faroes Sport Fishing Association. a.m. & p.m. Visit salmon cage-rearing unit (Salmo) at Kaldbaksfjordur; rainbow trout rearing unit at vid Streymin; salmon cage-rearing unit (Joki) at Funningsfjordur; rivers Laksa, Elduvik.
Monday,	March 22	a.m. Visit to Fisheries Research Institute; maritime museum. Lunch as guests of the Fisheries Research Institute, p.m. Meeting with Robert Poulsen, Technical Director of Faroe Sea Food.

Tuesday,	March 23	a.m. Sail to Klaksvik (Bordoy) on Fisheries Protection vessel "Tjaldrid" with Gunnar Gunnarsson. Lunch on board as guests of Fisheries Protection Service. p.m. Tour to Vidareidi (Vidoy); visit fish processing plant and salmon line-boats at Nordtoftir; rope and fishing line manufacturers in Klaksvik. Return to Torshavn aboard the "Smyril".
Wednesday,	March 24	a.m. Travel to Vagar Airport. p.m. Fly to Copenhagen.

APPENDIX 3. Foreign Trade (in million kr.)

Exports (FOB)	1976	1977	1978	1979	1980
Principle Markets:					
U.S.A.	100.0	219.0	153.6	108.7	117.5
Denmark	138.8	193.5	175.0	181.9	214.7
Great Britain	95.9	97.9	100.2	141.3	135.0
Italy	63.3	81.4	67.9	57.0	97.9
France	36.7	71.1	65.8	64.1	75.2
Spain	43.4	50.7	69.2	56.7	70.4
Norway	42.4	37.8	15.8	21.7	41.8
Sweden	35.9	28.3	35.1	16.3	31.0
West Germany	19.9	23.4	51.3	71.8	125.3
Imports (CIF)					
Principal Suppliers:					
Denmark	524.8	656.8	698.8	780.1	896.3
Norway	152.3	108.4	135.4	110.5	170.8
Sweden	22.4	37.3	50.9	30.8	50.3
Great Britain	17.7	29.9	42.6	67.8	30.1
Other EEC Countries	12.6	25.5	34.8	35.4	33.0
Iceland	7.9	18.2	18.9	18.6	21.3
Terms of Trade (1975 = 100)					
	109	122	113	103	99

Balance of Trade

Million kr.	Exp.	Imp.	Balance
1976	631.4	730	- 100
1977	862.0	910.7	- 48
1978	744.8	1,013.5	- 268
1979	757.8	1,078.2	- 320
1980	1,007.2	1,234.6	- 227

(Source: Statistical Office of Faroes Islands)

APPENDIX 4. Balance of Payments in million kroner.

	1976	1977	1978	1979	1980
Current account	- 53.6	+ 11.8	- 137.8	- 122.9	- 160.0
Balance of trade	- 158.1	- 48.7	- 211.2	- 289.8	- 248.0
Balance of services	- 86.4	- 157.7	- 167.1	- 136.3	- 221.0
Balance of transfer payments	- 33.0	- 45.0	- 54.5	- 77.0	- 81.0
Denmark, state expenditures	+ 223.9	+ 263.2	+ 295.0	+ 380.2	+ 390.0
Omissions and adjustments	- 5.8	- 4.0	- 18.5	- 55.1	0.0

Source: Economic data. Faroe Islands, published by the Statistical Office of the Faroe Islands.

APPENDIX 5. Reported nominal salmon catches in the Faroese Area long-line fishery 1968 - 1981.
(tonnes round fresh weight, gutted)

Year	DENMARK		FAROES		
	No. of Vessels	Catch	No. of Vessels	Catch	Total long-line Catch
1968	0	0	2	5[a]	5
1969	0	0	4	7	7
1970	0	0	5	12[a]	12
1971	0	0	0	0	0
1972	0	0	2	9	9
1973	0	0	5	28	28
1974	0	0	5	20	20
1975	0	0	6	28	28
1976	0	0	9	40	40
1977	0	0	9	40	40
1978	2	14	8	37	51
1979	2	75	7	119	194
1980	6	150	22	568	718
1981	7	135	42	822	968

[a] A small part of the catch taken more than 200 miles from the Faroese baseline.

APPENDIX 6.

EXPENSE ACCOUNT FOR A 15-DAY SALMON-FISHING VOYAGE AND A CATCH OF 4 TONNES

Sold to L/f Føroya Fiskasola				Total value of catch Kr. 201466,50
Expenditure:				
Bait	600 kg	@ 16/-	9600,00	
Provisions	15 days, 6 men	@ 52/-	4680,00	
Fuel	15 days	@ 2300/-	34580,00	
Insurance	15 days	@ 45/-	675,00	
Harbour dues			300,00	
Ice	8 tons	@ 100/-	800,00	
Commission (2%)			4029,33	
Landing dues			14453,75	
Government levy	(Kr.1/- per kg)		4183,50	
Fee to union of salmon ship owners (Laksaskip) (0.5% of sale)			1007,33	74228,91
				Kr. 127237,59
Remaining 40% (crew's share) of kr. 127237,59				50895,03
Fishing crew (deckhand 1 part)		6 men		8482,50
Skipper:		2 parts		16965,00
Mate:		1½ parts		12723,75
Ship's Engineer:		1½ parts		12723,75
Cook:		1¼ parts		
and an allowance per man of		kr. 1330/-		11268,11
Deckhand:		1 part		8482,50
Deckhand:		1 part		8482,50
				Kr. 70645,61

Signed: Fiskimannafelagid (Fishermen's Trade Union)

The amount due to the crew is worked out by apportioning 40 % of the sum remaining (kr. 50895,03) after running costs have been met and dividing by the number in the crew (in this case 6). This then gives the amount due to each crew member (kr. 8482,50). However, as the skipper receives twice that received by the deckhands, and the mate and ship's engineer 1½ times the amount, and the cook 1¼ times plus an allowance for each man (5), the amount paid to the crew is kr. 70645,61. The remainder (kr. 56581,49) will go to the salmon ship owner.

APPENDIX 7

A. Letter from the Home Government of the Faroe Islands

Sir,

The Faroese authorities have noted that the EEC has expressed concern regarding Faroese fishery of salmon.

I have the honour to confirm that the Faroese authorities have undertaken to introduce the following restrictions on Faroese salmon fishery:

1. The Faroese authorities will restrict the total volume of salmon catches in Faroese waters (area of fisheries jurisdiction of Faroe Islands) as well as salmon caught by Faroese vessels in waters outside the fisheries jurisdiction of the Faroe Islands to a total of 625 metric tonnes in fresh round weight for the season starting on October 1, 1982 and ending on May 31, 1983.
2. The corresponding figure for the season ending May 31, 1982 shall be 750 metric tonnes in fresh round weight.
3. No fishing for salmon will take place outside the fishing seasons referred to under paragraph 1 and 2.

I would be grateful, if you would confirm that the European Economic Community is in agreement with the foregoing.

Please accept, Sir, the assurance of my highest consideration.

For the Home Government of the Faroe Islands

B. Letter from the European Economic Community

Sir,

I have the honour to acknowledge receipt of your letter of today's date, which reads as follows:

"The Faroese authorities have noted that the EEC has expressed concern regarding Faroese fishery of salmon.

I have the honour to confirm that the Faroese authorities have undertaken to introduce the following restrictions on Faroese salmon fishery:

1. The Faroese authorities will restrict the total volume of salmon catches in Faroese waters (area of fisheries jurisdiction of Faroe Islands) as well as of salmon caught by Faroese vessels in waters outside the fisheries jurisdiction of the Faroe Islands to a total of 625 metric tonnes in fresh round weight for the season starting on October 1, 1982 and ending on May 31, 1983.

2. The corresponding figure for the season ending May 31, 1982 shall be 750 metric tonnes in fresh round weight.

3. No fishing for salmon will take place outside the fishing seasons referred to under paragraph 1 and 2.

I would be grateful, if you would confirm that the European Economic Community is in agreement with the foregoing.

Please accept, Sir, the assurance of my highest consideration."

I have the honour to inform you that the Community has taken note of the contents of your letter.

Please accept, Sir, the assurance of my highest consideration.

For the Council of the European Communities

APPENDIX 8.

Executive Order No. 81 of 27th August, 1980

on

salmon fishing in the fisheries zone

As authorised by Act No. 8 from March 29th, 1978, concerning fishery in the fisheries zone and in concert with the fisheries committee, the Home Government has decided:

Article 1

Fishing for salmon with other gear than long-line is not permitted. The fishing requires a fishery licence from the Home Government (the Fiskinvinnustovan). The licences are granted for a specified period.

Article 2

Salmon under 60 cm, measured from the front of the head to the back of the tail, is considered undersized. It is not allowed to have such salmon on board; but it shall be thrown back into the sea immediately.

Article 3

The master of the ship shall keep a long book and daily enter into it the number of salmon caught and where the catch has taken place. Every Mønday the master of the ship shall inform the Fiskivinnustovan of the number and weight of salmon.

2. Paragraph. When the catch is unloaded in the Faroes, it shall be classified as follows:

Class 1	over 9	kilogrammes					
" 2	" 7	"	up to 9	kilogrammes			
" 3	" 5	"	"	" 7	"		
" 4	" 4	"	"	" 5	"		
" 5	" 3	"	"	" 4	"		
" 6	3 kilogramme and less						

3. Paragraph. The master of the ship shall send a copy of the weight-note to the Fiskivinnustovan immediately after the unloading of the catch. Salmon-tags from caught salmon shall be sent to the Fiskirann-soknarstovan immediately by the master of the ship.

Article 4

For fishing licences the Home Government (Føroya Gjaldstova) charges 1 kronu per kilogramme landed weight of salmon according to Act No. 68 of May 21st, 1980, concerning fee on salmon caught in the fisheries zone. The fee shall be paid for each voyage separately and is due 14 days after the unloading.

Article 5

The unloading, classification and loading as well as the observance of the regulations about minimum size are controlled by the Fish Quality Inspection Authorities.

Article 6

Breach of the regulations of this executive order and of the conditions in the fishing licences are subject to fines, and besides, all fishing gear, such as lines, standards etc., as well as catch may be confiscated. The ship may also be retained to cover fines and costs.

Article 7

This executive order will come into force at once; however, Article 4, 1st item, shall be valid for all unloadings after January 1st, 1980. Simultaneously with the coming into force of this executive order, Article 7 in executive order of February 4th, 1980, on fishing in the fisheries zone with vessels registered in the Kingdom, is invalidated.

The Faroese Home Government, 27th August 1980

Hergeir Nielsen
Member of the Home Government

APPENDIX 9.

FISKIVINNUSTOVAN Nr. L. 1981/82 -

TINGANES

Phone 11080 (18)

TRANSLATION

Licence for salmon-fishery

Referring to executive order No. 81 from the 27. August 1980 on salmon fishing in the fisheries zone and as authorised by Act No. 8 of the 29th March 1978 §4 on fishery in the fisheries zone the Home Government announces that your vessel

Name and Number:

is granted permission to fish salmon - *Salmo Salar* - with line in the Faroese fisheries zone

Max. tons landed weight

in the period starting from 15th October 1981.

The conditions of carrying out fishery for salmon are as follows:

1. The conditions of this licence are that the regulations stated in the executive order No. 81 of 27th August 1980 are strictly complied with.
2. The fishing season starts on the 15th October 1981 and ends by 31st May 1982. The vessel shall notify to the Home Government (Fiskivinnustovan) if the fishery period ends before the date. Ships under 49 GRT may not fish salmons in the period from 15th December 1981 to 1st March 1982.
3. Salmons fished beyond the fisheries zone shall be included the permitted total catch that means that the total catch of salmons irrespective of fishing area shall not exceed tons.

4. In the fishing period the Home Government intends to set in force suspension of the fishery certain date. The Home Government shall negotiate the time of the suspension with the association "LAKSASKIP" and shall in due time announce the ships of the date of the suspension.

5. The vessels which receive fishing licence not being freezing-boats are not allowed to be on salmon fishery more than 9 days including the day when the ship leaves harbour until the ship enters harbour.

6. Salmon can not be exported without a permit from the Home Government. Application for permission to export containing information about prices and sale-conditions shall be sent to the Fiskivinnustovan in due time before exporting.

N.B. According to executive order regarding possible export of salmon - *Salmo salar* - to the U.S.A. it is required that one salmon in a thousand is handed the Veterinary for inspection f.ex. a salmon from the last setting of every trip, these salmons will only be bled (ungutted) otherwise whole and chilled (packe in ice).

Fiskivinnustovan, 1st October, 1981.

v.f.

APPENDIX 10 Statement by the representative of the Faroese Home Government concerning salmon fishing

1. Faroese authorities are aware of the worries raised in some quarters on recent developments in Faroese salmon fishing.

2. The Faroese authorities recognise that the salmon occurring in Faroese waters also are of interest to other countries and are willing to take part in international co-operation on the management of these salmon stocks. Faroese scientists are playing an active part in scientific co-operation on this subject in the framework of ICES.

3. In order to demonstrate its readiness to protect the stocks concerned, the Faroese Home Government intend, as a precautionary measure, to take the steps necessary to ensure, that the quantity of salmon caught in the offshore salmon fishery in the fishery zone of the Faroe Islands, and by Faroese vessels outside the zone, in the season October 1981 to June 1982 and in the season October 1982 to June 1983 does not exceed the quantity of 1.065 tonnes caught in the season October 1980 to June 1981.

4. Furthermore, the Faroese authorities are ready to take the steps necessary to reduce the salmon catch by 300-400 tonnes in the season 1982/83 compared to the 1980/81 season, the figure in 1981/82 for practical reasons being approximately 100 tonnes higher (minus 200-300 tonnes compared to 1980/81). The possibility of implementing these reductions will depend upon an assessment of Faroese fishing needs, and will therefore not be put into effect until bilateral agreements concerning important Faroese fisheries in the fishery zones of other Parties have been brought to a successful conclusion.

APPENDIX 11: Statement of the representative of Faroese home Government

By participating in the signing of the Final Act of 22nd January of the Diplomatic Conference on the Conservation of Salmon in the North Atlantic Ocean, the Home Government of the Faroe Islands accept the Convention text drawn up by the Conference as a useful basis for the establishment of cooperation between the parties on salmon stocks of mutual interest.

However, before deciding on signing the Convention itself further study will be made concerning its implications including the probability that participation in its activities may serve to protect a small society dependent upon good and stable relations to other Countries bordering on the Convention area, from being subject to undue bilateral pressures through linkages of salmon issues with other questions of vital importance for the Faroe Islands.

APPENDIX 12. AGREED RECORD OF CONCLUSIONS OF FISHERY CONSULTATIONS BETWEEN THE EUROPEAN ECONOMIC COMMUNITY AND THE FAROE ISLANDS - BRUSSELS, 1 FEBRUARY 1982.

I. A delegation of the Community headed by Mr. R. SIMONNET and a delegation representing the Home Government of the Faroe Islands headed by Mr. P. ELLEFSEN met in Brussels on 15 January 1982 for consultations on mutual fisheries relations in 1982. This meeting was a continuation of previous meetings in Copenhagen and Brussels.

II. The delegations agreed to recommend to their respective authorities that the allocations for 1982 set out in the Annex should be made to vessels of either Party fishing in the waters of the other Party. In further consultations the two Parties agreed on the text of the agreed record.

III. Fishery regulations

1. The Faroese delegation informed the Community delegation about the technical measures which will apply for fishing in Faroese waters in 1982.

2. In conformity with § 2 of Article 4 of the Agreement on Fisheries between the two Parties the Community delegation informed the Faroese delegation about the new measures the Community might introduce, in the course of 1982.

3. The delegations agreed that a Party intending to introduce or to amend fishery regulations applicable to vessels of the other Party shall inform the latter of such intentions with a notice of at least two weeks. Consultations shall be held if so requested by either Party.

IV. Future consultations

1. If the situation of the cod stocks off West and East Greenland

IV. 1.
improves and the cod fishing will be reopened for fishermen other than Greenland fishermen, the Parties will consult with a view to establishing a quota for the Faroe Islands for those stocks, taking into account Faroese fishing interests in the area.

2. If herring fishery in ICES division IV should be reopened in 1982, the Parties shall consult.

V. Licences

The delegations agreed to recommend to their authorities that licences in force as of 31 December 1981 shall remain in force until 28 February 1982 and that the parties shall consult before the said date on the licensing regimes applicable for the rest of 1982.

Brussels, 1 February 1982.

For P. ELLEFSEN

M. RIBERHOLDT

R. SIMONNET

APPENDIX 13 LIST OF CONTACTS MADE

Mr. Ditleif Eldevig	Director, l/F Havsbrun, 3813 Fuglafjordur
Mr. Pauli Ellefsen	Prime Minister, Føroya Landsstyri, Tinganes, 3800 Torshavn
Mr. Gunnar Gunnarsson	Chairman, Fiskivinnustovan, Føroya Landsstyri, Tinganes, 3800 Torshavn
Mr. Axel Hansen	Director, l/F Bacalao, 3800 Torshavn
Mr. Jørgen Hansen	Attorney at Law, Føroya Landsstyri, Tinganes, 3800 Torshavn
Mr. Danjal Højgaard	Biologist, l/F Havsbrun, 3813 Fuglafjordur,
Mr. Ole Jakobsen	Chairman Føroya Fiskimannafelag, 3800 Torshavn
Mr. Hans Joensen	Secretary, Føroya Silaveidifelag, P.O.Box 1123, 3800 Torshavn
Mr. Osmønd Jøstenossen	Chairman, Laksaskip, Sralsa, 3800 Torshavn
Mr. Svend Krosstein	President, Føroya Silaveidifelag, P.O.Box 1123, 3800 Torshavn

Mr. Paul Mohr	Manager, Torshavanar Skipasmidja, (Torshavn Shipbuilders), 3800 Torshavn
Mr. Arni Olafsson	Minister of Fisheries, Føroya Landsstyri, Tinganes, 3800 Torshavn
Mr. Andreas Olsen	Managing Director, 1/F Havsbrun, 3183 Fuglafjordur
Mr. Robert Poulsen	Technical Director, Føroya Fiskasola, 3800 Torshavn
Mr. Andreas Reinert	Senior Research Biologist, Fiskirannsoknarstovan, (Fisheries Research Institute), Debessartroo, 3800 Torshavn
Mr. Marius Thomassen	Managing Director, Tryggingarsambandio Føroyar, Faroese Insurance Company, 3800 Torshavn
Mr. Samal Thorsteinsson	Owner, Snorisvirkid, Rope and Net Factory, 3870 Klaksvik