

MORAY FIRTH PARTNERSHIP FISHERIES TOPIC GROUP

1. Executive Summary

The Fisheries Topic Group includes representatives from the Aberdeenshire and Moray Councils, Association of Scottish Shellfish Growers, Economic Development Service, NE of Scotland Fisherman's Organisation Ltd., Scottish Fish Merchants Federation, Scottish Natural Heritage, Scottish Salmon Growers Association, Scottish White Fish Producers Association Ltd., Seafish Industry Authority and Shellfish and Fish Biology Section of SOAFD. The agreed vision of the Topic Group is *'to have a sustainable fishing industry which optimises the use of fishery resources, provides long-term economic benefit, a good employment base and a quality product, while minimising impacts on other users and the natural environment of the Moray Firth'*.

The Topic Group took as its area of interest the area that extends from Rattray Head to Duncansby Head, and principally the fisheries within ICES statistical squares 44E7 + 44E6 + 45E7 + 45E6. The fishing industry of the Moray Firth is summarised, with reference to relevant legislation and current management of fisheries; commercial fish and shellfish species in the Moray Firth and the economic importance of fishing within the Moray Firth.

A range of issues have been identified. These include issues that might be addressed by the Partnership, and those that may affect the Moray Firth area but which are being dealt with elsewhere. These issues address the subjects of water quality, natural heritage, artificial reefs, education and awareness, the oil industry, sand and gravel extraction and fishery management. Discussion of these issues led to identification of a number of opportunities. The key opportunities highlighted in this paper are the potential of the MF Partnership to take a long term and strategic view of fisheries; the potential of the Partnership to increase awareness of the economic importance of the fisheries and the high quality of the supporting environment; the opportunity for the Partnership to play a role in raising the profile of inshore fisheries management in the Moray Firth, with the aim of promoting a more strategic approach to inshore management in response to proposals to establish a Regulating Order (or Orders) for the Moray Firth area.

Information regarding salmon fishing and wild salmon is currently missing from this paper.

2. Area of interest

The area of interest to the topic group extends from Rattray Head to Duncansby Head, and principally the fisheries within the ICES statistical squares 44E7 + 44E6 + 45E7 + 45E6. The scope of the Topic Group has been to provide a brief summary of the fishing industry in the Moray Firth, highlight issues that the Partnership might usefully give consideration to and also to identify fishery issues that may affect the Moray Firth area but which are being dealt with elsewhere.

3. Agreed vision:

To have a sustainable fishing industry which optimises the use of fishery resources, provides long-term economic benefit, a good employment base, and a quality product while minimizing impacts on other users and the natural environment of the Moray Firth.

4. Review of information

4a. Relevant Legislation and current management of fisheries:

In Scotland the administration and management of sea fisheries is carried out by the Scottish Office Agriculture Environment and Fisheries Department (SOAEFD) in accordance with the Common Fisheries Policy (CFP) of the European Union (EU). European Council regulations are implemented through UK law, usually by means of statutory instruments, which define limits and restrictions and set down powers of enforcement and penalties. All national regulation measures conform with the requirements of the CFP.

The CFP seeks to manage stocks of fish in EU waters principally by implementing catch quota management measures, by setting agreed annual Total Allowable Catches (TAC) for particular stocks of commercial fish and by means of various technical conservation measures, including minimum landing sizes and fishing gear restrictions. The policy came into effect in 1983, was subject to a mid-term review in 1993 and a full review is planned for 2002.

Under the current CFP waters out to 6 nautical miles from baseline may only be fished by vessels registered in the UK. Between 6 and 12 nautical miles other member states with historic rights also have access. Beyond 12 miles (the limit of British Territorial Seas) access to vessels from the other member states is limited, based on historic rights and to vessels from non-member countries by reciprocal agreements with the EU.

The domestic regulations that are of most relevance to the Moray Firth area are as follows:

The Inshore Fishing (Scotland) Act 1984: This Act provides, amongst other things, general powers to prohibit sea fishing in specified areas, for all or specified species of fish and by any specified method of fishing.

Recent amendments have been made to the Act which are of significance;

- In 1994 the act was amended in response to difficulties that had arisen in controlling cockle fishing. It was possible to control boat-based dredging using the Act, but not tractor-drawn dredges. These were not covered by the Act as they were not “vessels”. The amendment allowed for the control of fishing “from or by means of any vehicle or any vehicle of a specified description” and “fishing by means of a specified description of equipment”. In addition, the use of the word “sea” has been removed to clarify the situation with regard to fishing on the intertidal when the tide was out so that Orders may prohibit fishing in any specified area of Scottish coastal waters.

- The Environment Act (1995) has further amended the Inshore Fishing Act so that it now has powers to restrict fishing for “marine environmental purposes”. Previously the various Sea Fisheries Acts could only be used for the management of fisheries and fishery ministers were not allowed to use their powers for any other purpose (although see Sea Fisheries (Conservation) Act below). “Marine environmental purposes” is described as “conserving or enhancing the natural beauty or amenity of marine or coastal areas (including their geological or physiographical features) or of any features of archaeological or historic interest in such areas; or of conserving flora and fauna which are dependent on, or associated with, a marine or coastal environment”. This amendment was introduced to allow the Government to meet its obligations under the EU Habitats and Species Directive.

The Inshore Fishing Act operates out to 6 miles from land. The Act is reviewed on a triennial basis, the most recent review being completed in 1996. Control measures are introduced by Statutory Instrument and a variety of controls are currently in place. These include areas where mobile gear is excluded for all or part of the year and restrictions on the size of vessels used in certain areas. These restrictions are in place for a variety of reasons. For example, to alleviate conflict between users of fixed and mobile gear, or to protect the nursery or spawning sites of commercial fish.

Sea Fisheries (Shellfish) Act 1967: Among the provisions of this Act is the ability to grant Several or Regulating Orders for shellfish. These Orders are of potential significance in the sustainable management of shellfish stocks. The Act has recently been amended to make Several Orders to allow such Orders for crustacea, thus enabling stock enhancement programmes (*e.g.* for lobster) to be carried out. Regulating Orders may be of value by increasing local community involvement in the management of local resources. It is likely that Several Orders will function best within a framework provided by a Regulating Order, rather than in isolation.

Sea Fisheries (Conservation) Act 1967 and 1992: The powers included in this Act allow for the setting of minimum landing sizes for fish and shellfish, control of the use of different types and sizes of fishing gear, the licensing of fishing vessels and landing controls. The 1992 amendment was made to introduce vessel licensing to all boats including those under 10m (due to EU regulations). Licensing was necessary to help ensure that the size and capacity of the fishing fleet was not allowed to expand further.

Wildlife and Countryside Act 1981 - this act does not control fisheries *per se* , however there is provision within the act to prevent activities that are considered damaging to the interest of designated sites. The Act does not operate below low water and therefore only intertidal fisheries are affected.

Exclusion areas currently in force:

- Sinclair Bay - Full year closure to mobile gear.

- Dornoch Firth, Cromarty Firth and Inverness Firth - Full year closure to mobile gear (however, this restriction allows for dredging but not suction dredging).
- Inner Moray Firth - closed to sprat fishing from October 1 to March 31 (to protect juvenile herring).
- Nature Conservation Orders issued under the W&C Act are in operation to protect intertidal SSSI from mechanical cockle dredging operations at Findhorn/Culbin and inner Moray Firth sites including Loch Fleet and parts of the Dornoch Firth.
- Cockle fishing by means of tractor-drawn dredges is currently prohibited from all foreshores in Scotland.

4b. Commercial fish and shellfish species in the Moray Firth

Foreshore:	Mobile Gear:	Static Gear:	Aquaculture:
Mussels Cockles Winkles	Scallop dredging Suction dredging Trawling (pelagic) Trawling (demersal)	Crabs Lobsters Scallops (diver caught) Buckies Bottom set gill and tangle netting?	Salmon Mussels Oysters

The Moray Firth has always been an important fishing area. The area has tended to produce reliable rather than spectacular catches, particularly of haddock, cod, whiting plaice and lemon sole from the demersal fishery and herring and sprats from the pelagic sector. The importance of the demersal and pelagic fisheries, particularly in the inner Moray Firth, has declined in recent years. The area however is still regarded as an important spawning and nursery ground for plaice. It is also an important nursery ground for herring.

Many of the vessels originally fishing for fish have switched their attentions to shellfish, primarily the Norway lobster (*Nephrops norvegicus*) and the scallop (*Pecten maximus*). The fishery for the Norway lobster began in a small way in the 1960's, with catches rising to around 2000mt in the mid 1980's, and has now settled around 1300mt in the 1990's. This is one of the smaller of the Scottish *Nephrops* fisheries, but is one of the most important shellfish fisheries in the Firth.

The fishery for scallops began in the 1970's. Within the confines of the Moray Firth scallop fishing is restricted to areas of sandy gravel, Smith Bank being one of the most important areas. Between September 1990 and August 1991 357mt of scallops were landed in the area. In the same period the following year 1300mt were landed. Landings have risen slowly since 1992 and were 2193mt in 1996.

There are a number of other commercially exploited shellfish species in the Moray Firth, namely lobster, edible crab, whelks, razor fish, cockles, and mussels. The mussel fishery at Tain is the largest in Scotland averaging 1450mt per year between 1992 and 1996 and while the magnitude of landings of each of the others is mostly

modest compared with other areas around Scotland, the shellfish resource is locally important.

Most shellfish species are restricted to a benthic way of life and the particular environmental requirements of each species dictate their distribution. The particular topography of the Moray Firth dictates that certain species are better represented than others.

In contrast to benthic shellfish squid are pelagic in nature and undergo migrations on a scale shown by, for example, mackerel. During the autumn period squid (principally *Loligo forbesi*) move into the Moray Firth and are frequently taken as a by-catch in the trawl fishery. Landings have reached as high as 400mt (1990), but the fishery is very unpredictable and there is very little directed effort.

Monitoring of all commercially landed species is carried out by the SOAEFD Marine Laboratory staff throughout the year. The market sampling programme typically involves collecting landings, length measurement, and where possible sex and age information data from vessels and at fishmarkets and fish processing factories. This is normally carried out on a monthly basis. Sampling is also carried out at sea during regular discard trips aboard commercial vessels and the laboratory's own research vessels. The information is then used in stock assessment.

Publication (in press) Greenstreet S.P.R., McMillan, J.A. & Armstrong, F. Seasonal variation in the importance of pelagic fish in the diet of piscivorous fish in the Moray Firth, NE Scotland; a response to variation in prey abundance? ICES Journal of Marine Science.

Summary points:

There have been some significant changes in the pattern of fishing in the Moray Firth over the last 30-40 years, including:

- The amount of pelagic fishing has declined markedly since the 60's (restriction on sprat fishery?)
- Trawling effort for whitefish has always tended to be concentrated to the east of the Partnership area, from Banff round to Aberdeen, with *relatively* little in the inner Moray Firth.
- On the other hand, trawling for Nephrops has grown substantially since the 60's, and now accounts for the majority of trawling activity in the inshore waters.

Shellfish now account for the majority of landings from the inshore waters of the Partnership area. Scallops, Nephrops, lobster and crabs being the principal species.

It is worth noting that the industry representatives in the Topic Group have expressed concern about the apparent lack of recovery in inshore fish stocks, even in areas where fishing effort has shifted elsewhere and would welcome research to provide some answers.

4c. Economic importance of fishing within the Moray Firth

Statistics for sea fisheries are collected by fisheries Districts. Those relevant to the Moray Firth Partnership are:

- Wick (Thurso to Black Isle)
- Lossiemouth (Black Isle to Lossiemouth)
- Buckie (Lossiemouth to Cullen)
- Macduff (Cullen to Macduff)
- Fraserburgh (Macduff to Fraserburgh)

As indicated in the table below, in 1995 a total of 596 vessels were registered in the Moray Firth Area, and 2573 fishermen were employed. By far the largest concentration is in Fraserburgh which accounted for nearly 50% of the vessels and over 61% of employment.

These figures emphasise the difference in importance of fishing to the local economies of the various local communities and reflect the changing pattern of the fishing within the Moray Firth Partnership area. A closer examination of the fishery districts statistics confirms this.

1995	BOATS				LANDINGS BY TONNAGE (value in brackets £000'0)				EMPLOYMENT		
	Fisheries District	< 10 m	10 to 15 m	> 15 m	Total boats	Demersal	Pelagic	Shellfish	Total	Regularly employed	Partially employed
Wick *	109	22	7	138	2209 (1,867.8)	----	1384 (2,085.4)	3593 (3,953.2)	140	155	295
Lossiemouth	----	----	----	----	1684 (1,462.3)	3 (1.0)	1426 (671.2)	3113 (2,134.4)	----	----	----
Buckie	41	28	97	166	2030 (2,376.3)	----	1732 (2,656.6)	3762 (5,032.9)	631	70	701
Macduff	----	----	----	----	1190 (1,101.3)	6 (1.0)	411 (369.8)	1607 (1,472)	----	----	----
Fraserburgh	74	32	186	292	19830 (17,591.7)	11486 (1,687.6)	6910 (12,131.1)	38226 (31,410.4)	1479	98	1557
TOTALS				596	26943 (24,399.4)	11495 (1689.6)	11863 (17,914.1)	50301 (44,003.1)	2250	323	2573

* Landing figures for Wick exclude Scrabster

Source: Scottish Sea Fisheries Statistical Tables 1995

Peak activity off the East Coast of Caithness and Sutherland was towards the end of the last century when herring fishing centered on Wick. The area now supports only 140 full-time fishermen and 155 part-time. Nearly 80% of fishing vessels are under 10 m in length, and the ports show the typical pattern concentrating on inshore fishing, which has meant concentrating on Nephrops in recent years due to the decline in herring and cod in these areas. This is reflected in the catch figures which show 2209 tonnes of demersal fish landed at Wick (2120), Lybster (33), Helmsdale (32) and Dunbeath (129), and 1338 tonnes of shellfish landed at Wick (1182), Helmsdale (129), Lybster (22), Dunbeath (4) and Brora (1). Total value of this catch was £3,953,200. Wick is obviously the prime landing port within this area. Scrabster, just outwith the Partnership area on the Northern Caithness coast, has expanded recently, with most of the increase in landings coming from larger boats owned and crewed from outside the area, both nationally and internationally. Over 19,000 tonnes of fish were landed here in 1995.

This pattern is repeated in the Easter Ross/Inverness area where Avoch (1066 tonnes fish; 3 tonnes shellfish), Portmahommack (28/1083 tonnes) and Inverness (61/37 tonnes) are the principal landing centres.

Moving eastwards into the Moray coast, Burghead and Lossiemouth account for very low landings (a combined total of 532 tonnes demersal and 303 tonnes shellfish). An illustration of Lossiemouth's declining role was the Harbour Boards decision to turn the east basin into a marina 4 to 5 years ago. Buckie, in a similar way to the Wick area, is now primarily a base for inshore fishing, particularly prawns, which accounted for 46% of landings by weight and 53% by value. Although 166 vessels are registered here, with 701 employees, the majority of vessels do not 'fish' out of Buckie, and operate out of other ports such as Peterhead and Kinlochbervie/Lochinver on the west coast. The town supports a significant fish processing infrastructure primarily through its two companies - Moray Seafoods, who employ around 250, and Strathaird (70). It is estimated that whilst Buckie accounts for only 3% of landings in Grampian and approximately 2% of tonnage, fishing dependent employment is around 38%. The boatbuilding industry in Buckie (which 20 years ago supported 3 yards) has contracted and the only remaining company - Buckie shipyard, now employing 60 - has had to diversify away from its traditional fishing vessel base.

The Macduff Fishery District landings totaled 1607 tonnes recorded at Macduff (942), Whitehills (650) and Gardenstown (15). This figure has fallen by 25% since 1991, the greatest loss being in demersal species, whilst shellfish has increased threefold. In contrast to the situation in Buckie, the Macduff shipyard has a busy order book for new fishing vessels.

Fraserburgh (population 13000) is estimated as having up to 50% of its workforce active in fishing or fishing related industries. In contrast to other Moray Firth ports, Fraserburgh is a major centre for pelagic fish landings, the 1995 figure being 11486 tonnes. This 'peaked' at 18910 tonnes in 1993. Whitefish landings reached their highest in 1995 at 19830 tonnes. Shellfish landings show an increase with the 6910 tonnes landed bringing the Fraserburgh total to 38227 tonnes, which had a value of over £31 million. The processing sector is well developed and there are a number of large factories within the town.

A study carried out by the Sea Fish Industry Authority highlighted the scale of dependence on fisheries and related activities in the former Grampian Region area. Of 23 Travel to Work Areas regarded as being highly dependent on fishing, Fraserburgh was ranked the most dependent in employment terms; Buckie ranked number 2, Peterhead fourth and Banff eighth. Measuring the relative importance of all fishing value added as a component of total GDP in each Travel to Work Area, Fraserburgh, Buckie and Peterhead were ranked as first, second and third of the highly dependent areas in Scotland. In Fraserburgh all fisheries value added accounted for 26% of total GDP. When scored against all indicators of employment, social and overall importance to the fishing industry, Banff, Buckie and Fraserburgh rank first, second and third most dependent of all Travel to Work Areas in Scotland and Northern Ireland.

Despite this reliance on fishing it must be acknowledged that the origin of the fish landings is primarily caught outwith the study area. The inshore fishing is not particularly fruitful and in consequence most of the larger boats do not operate on a day trip basis in the Moray Firth area. Instead they are going further afield for longer periods of time and will land at ports which are more convenient, and where there are more buyers/better prices. Despite this pattern there is still a strong loyalty to home ports in terms of supplies and services. Fishing tradition and employment continue although boats are not based at local harbours, with nearly all having their own van to transport them to where the boats are kept.

However, the infrastructure (harbours, processors, supplies/services etc.) is quite obviously in place to support investment in fish farming and aquaculture activities should the potential to expand this sector be identified. This could create new employment opportunities and diversify fishing effort, yet retain the traditional culture of fishing and the sea within local communities.

[NOTE: Since this paper was written it has been pointed out that the salmon fishing industry and wild salmon have not been adequately considered within the paper. The Fisheries Topic Group acknowledge this and information is currently being sought from the salmon netting organizations on current data available and management issues and opportunities.]

Review of issues and Opportunities

Issue	Factors	Comments/Opportunities
Water Quality	<ul style="list-style-type: none"> • Some non-implementation of designated shellfish growing waters • Impact of Health and Hygiene Directive • Cost of implementation • Sewage 	<p>General consensus on desire to seek and maintain high standards in water quality. There is an opportunity for the Partnership to highlight this as a shared objective with other topic areas - e.g. environmental quality, natural heritage, tourism, sport & recreation.</p> <p>Concerns exist about the costs to the processing industry of implementing effluent regulations especially if legislative costs are not kept even across the country.</p>
Natural Heritage	<ul style="list-style-type: none"> • Natural heritage designations • Interaction with seals • Impact of fishing activity on habitats and species 	<p>There is considerable interaction between natural heritage and fishery interests. There is potential for conflict over certain issues, but there is also a lot of common ground particularly when taking the long-term view.</p> <p>There is concern over the increasing population of seals.</p> <p>There are potential marketing opportunities through highlighting the high quality environment</p>
Artificial Reefs	<ul style="list-style-type: none"> • recreational fishery benefits • Selection of suitable sites 	<p>Artificial reefs have been proposed for enhancing sport fishing opportunities and for lobster stock enhancement facilities. The identification of suitable sites is critical as a number of the Firth user groups would be affected. There is an opportunity for the Partnership to provide a forum in which interested parties could be brought together to reach a view on the role that artificial reefs might play in sustainable fishery management in the Firth. Some interaction with oil issues regarding fate of decommissioned rigs.</p>
Education/Awareness	<ul style="list-style-type: none"> • Fisheries are part of a complex ecosystem • Moray Firth has a high quality marine environment • Enhanced marketing of products by association with high quality environment 	<p>There is considerable opportunity for the Partnership to focus the promotion of the area as a high quality environment with knock on benefits for the reputation of fishery products from the Moray Firth.</p>
Oil Industry	<ul style="list-style-type: none"> • Oil installations and 	<p>fishing industry policy is for the removal of all material where feasible.</p>

	<p>pipelines</p> <ul style="list-style-type: none"> • Pollution • Decommissioning of rigs and pipelines 	<p>Need for continued dialogue with oil and fishing industry. Continued concern over loss of fishing grounds.</p>
Sand and Gravel Extraction	<ul style="list-style-type: none"> • Potential impact on fishing areas 	<p>Loss of fishing grounds, impact on spawning and nursery areas. Strong resistance to this activity from the fishing industry. Need for early consultation on any applications.</p>
Fishery Management	<ul style="list-style-type: none"> • Review of CFP • Management of inshore shellfish fisheries 	<p>Elsewhere in Scotland there is considerable activity in relation to the proposed establishment of Regulating Orders. The Shetland group is most advanced in preparation of its application to have an Order for all of Shetland for all shellfish. Of direct relevance to the Moray Firth area is the proposal to have an Order that would cover the HC area.</p> <p>Opportunity - The partnership is in a good position to provide a forum for consideration of this approach and to promote it with the other user groups. In addition, the existence of such an Order lends itself to the long-term view of marine resource management that the Partnership is trying to encourage. However, there are problems over finance.</p> <p>In review of CFP, there would need to be retention of 6/12 mile limits and relative stability.</p> <p>If Regulating Orders are to be used within the Moray Firth it would be preferable to base them on fisheries and environment issues, rather than split the area up according to councils boundaries, which will inevitably cause problems and duplication of work.</p>

Opportunities:

The key opportunities to emerge from discussion of the above issues:

1. The potential of the MF Partnership to take a long term and strategic view of fisheries, identifying the broad and common aims and to encourage relevant authorities to do likewise.
2. The potential of the MF Partnership to increase awareness of the economic importance of fisheries to the area and the high quality of the environment that supports those fisheries.
3. There is an opportunity for the Partnership to play a role in raising the profile of inshore fisheries management in Moray Firth - with the aim of promoting a more strategic approach to inshore management in response to proposals being made to establish a Regulating Order (or Orders) for all or part of the Moray Firth area. Such a strategy would lead towards long-term goals for fisheries in the Firth (see vision above), and might include:
 - Regulating Order - extending the Order proposed by HC to cover the whole area of interest
 - Several Orders - the success of SOs is likely to be largely dependent on appropriate siting and therefore would best fit within the overall strategy rather than be ad hoc.
 - Scallop and lobster enhancement/ranching - would require Several Orders and cooperation among fishermen
 - Lobster conservation initiatives - in addition to enhancement there is V-notching
 - Take into account other activities such as aquaculture and nature conservation to reduce potential for conflict
 - Considerations of infrastructure necessary to support the fisheries