Flow Country

Fisheries Management Organisation

An analysis for a potential FMO

Northern District Salmon Fishery Board
Helmsdale District Salmon Fishery Board
Caithness District Salmon Fishery Board
&
The Flow Country Rivers Trust
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1. Introduction.

1.1 The Scottish Government commissioned the Wild Fisheries Review (WFR) to examine the management of wild fisheries to enable the government to fulfil its manifesto commitment "to support and protect Scotland's famous and valuable salmon and freshwater fisheries and to modernise the management framework". Both the WFR and the Government response make clear that wild fisheries includes all species thus requiring a fresh approach to management. The WFR also made clear that the new management system should be built on the strengths of the current system. The Scottish Government agrees and has published a draft bill for consultation.

1.2 The WFR proposed a management structure led by a National Body, with local management delivered by Fisheries Management Organisations (FMOs). WFR makes clear the need for the National Body to be able to formulate a clear and coherent national strategy for fisheries management having as its priority the environmental and economic sustainability of this valuable resource for the nation based on sound science so as to be able to advise ministers both on strategy and on ministers' duties towards international obligations.

1.3 WFR recommended a network of local FMOs to provide a delivery mechanism for the national strategy, whereby effective and efficient wild fisheries management can be implemented on the ground. FMOs "are proposed as the main mechanism through which most wild fisheries management is delivered". It also makes clear the value of local input and the voluntary contributions made and sees FMOs as capturing these strengths already existing in much present management. The government have recognised the importance of local and voluntary management and sections 6 to 8 of the draft bill sets the structure of FMOs

1.4 The Northern, Caithness, and Helmsdale District Salmon Fishery Boards, in consultation with the Environmental research Institute (ERI) of North Highland College in Thurso and The Flow Country Rivers Trust, have therefore discussed the possibility of an FMO based on the area currently served by the 3 DSFBs working in collaboration with the ERI and Trust to create an FMO covering all fish species and having sound science at its core to enable a locally based management body in tune with, and able to deliver the Government's wild fisheries management priorities.

2. FMO Objectives and Values.

2.1 The first 5 recommendations of WFR make clear that the new management structure should be firmly based on a decentralised and locally empowered model; that clear strategic direction, effective regulation and consistent national coordination will come from a National Wild Fisheries Unit; that the Government should facilitate a network of FMOs based on Fisheries Management Areas (FMA) defined by ministers to deliver the national plan; that the new system must be based on an all species approach; and that effective reporting, scientific evidence based management, and public value outcomes should be at the heart of the structure. The Flow Country potential FMO (FCFMO) puts these values and objectives at the heart of its proposal.

2.2 In administrative terms FMOs should have sufficient size to be workable whilst being small enough to remain local. This is defined as having sufficient resources to deliver the required outputs whilst being of a size that enables attendance and management without undue travel. In environmental management terms the area covered will benefit from geography

and environmental challenges that are common and coherent including the area of sea which the riverine habitats give on to.

2.3 Government sets out the regulatory framework for ensuring that fisheries are managed in line with the national interest through the national strategy and plan. However sound management of rivers, habitats, and fisheries is the responsibility of those who own those rights and who are exploiting them. FCFMO will regulate and coordinate management by setting and agreeing plans within their area which are in line with the National Strategy but would expect fishery managers to undertake the work and bear the costs.

2.4 Sound science will be at the heart of FCFMO. Section 8 of the WFR makes clear that "Effective wild fisheries management and regulation must be based on sound science, including social science." It goes on to underline the importance of sound data sets. The proposed North Highland FMO benefits from the Environmental Research Institute in Thurso which is already working on many aspects of fishery management and sustainability, particularly with regard to juvenile salmonids. In addition a data base of juvenile biomass has been established over 3 years covering many rivers in the proposed area. The Helmsdale board have a long track record of electro fishing and has undertaken research work for the Scottish Government. It is also undertaking a DNA project under the supervision of Prof. Gage as is The Dunbeath. FCFMO will continue to use consultant scientists of the highest calibre and to maintain and enhance expenditure on research and monitoring. As part of this it may from time to time employ its own resource.

2.5 FCFMO will have training at the forefront of delivery by creating and reviewing annually a training plan both for its own staff and those of fishery managers ensuring CPD across all required disciplines.

2.6 Section 35 of the draft bill sets out the powers for both FMOs and ministers in relation to the appointment of bailiffs and wardens. Given the size of the geographic area it is proposed that the existing bailiff structure remains in place with the FCFMO director coordinating operations as required.

2.7 FCFMO would take a strong leadership role in creating a local version of the national angling for all programme as well as working with tourist bodies and schools to increase awareness of angling potential. Although most of this would be undertaken on a volunteer basis by fishery managers and volunteers it will be coordinated by FCFMO and this would require a .5 FTE job.

3. Geographical Area.

3.1 The proposed North Highland FMO covers an area of approximately 1000 square miles and is dominated by the world famous blanket bog of Caithness and Sutherland. It is triangular in shape and consists of coasts on two sides. All of the rivers in the area rise in the flow country and pass through the peatlands for at least part of their journey before arriving at the sea, with roughly half flowing to the north coast and half to the east coast. The river catchments are (from North West to South East): The Kinloch, Borgie, Naver, Strathy, Halladale, Forss, Thurso, Wester, Wick, Dunbeath, Berriedale & Langwell, and the Helmsdale. Most of these have important tributaries and burns and negotiable falls. In addition a number of smaller rivers and burns give out onto the north and east coasts. Studies funded by the Caithness district board and Crown Estate over the Caithness rivers indicate a remarkable consistency

of habitat and population and evidence suggests that these factors are common to rivers in both the Northern and Helmsdale areas.

3.2 The area is covered by a number of environmental designations. There are three freshwater SAC's in the area, Naver & Borgie SAC (Pearl Mussels & Atlantic Salmon), River Thurso SAC (Atlantic Salmon), Berriedale & Langwell Waters SAC (Atlantic Salmon). There are a large number of Peatland SSSI's in the area which together form the Caithness & Sutherland Peatlands SAC (also a RAMSAR and Natura 2000 site). The East Caithness Cliffs is an SAC and SPA, this covers most of the East Coast of the proposed FMO. Other features include a number of native woodlands SSSI's and three areas (or parts thereof) of 'Wild Land' as well as two areas of 'High Landscape Value'. At present an application is being pursued to make part of the area a world heritage site to reflect the global importance of the area's peatlands.

3.3 The coastal area stretches from south of Helmsdale on the east coast via the Pentland Firth and Dunnet Head to Tongue on the North Coast. In the past much of this area was worked by netting stations, most of which are no longer in use leaving large areas of coast unwatched by legal owners. Regular sea patrols are therefore a common feature throughout the area. Four netting stations continue to be operated on a commercial basis (Armadale, Melvich, Murkle, & Castletown) with a few others operating on an occasional basis or for scientific research.

3.4 The Pentland Firth is considered a major resource for the development of marine tidal energy with deployment by MeyGen, a subsidiary of Atlantis Resources PLC, expected in 2016. A key challenge for all Far North rivers has been to assess the impacts, if any, of this deployment on migratory fish. A partnership between the Caithness district salmon fishery board, the Crown Estate, and the ERI have, over three years created an invaluable data base of the riverine biomass of all the rivers in Caithness. This has delivered interesting additional information and is a study that would be widened by the FMO to cover the whole proposed area.

3.5 Hill lochs abound throughout the flow country some of which are already fished and managed, others of which are broadly untouched. These lochs are typically acidic and of low nutrient status but there are a number of exceptions particularly in lowland Caithness where much richer alkali lochs feature. A number of seemingly peaty hill lochs also benefit from alkali outcrops below the peat layer and can support very different communities to one only a few hundred yards away. Loch Watten in Caithness is considered by many as one of the finest in Scotland. There is one put and take fishery which has been created from artificial waters with no ingress or egress to the riverine habitat.

3.6 The proposed area:

4. Species

4.1 There are a wide range of species present in the rivers and lochs of the proposed area. In many cases these populations have not been studied and are therefore poorly understood. One of the aims of the FMO should be to try to define this resource as it is today and subsequently monitor any changes. The main species of interest are:-

- Atlantic Salmon
- Brown Trout (Also sea trout, ferox trout etc. Some lochs may contain more than one sub species but as yet very little if any work has been done to identify these).
- Arctic Charr (at least one sub species known in a number of lochs across the area but there may be more than one sub species in some locations).
- European Eel.
- Brook lamprey.
- Sea Lamprey.
- 3 spine stickleback.
- Pearl Mussels (Naver, Borgie).

4.2 Very few invasive species are known in the area at and those that are present do not seem to have any significant impact as yet, with the exception of Canadian Pondweed which has taken a serious grip on Loch Watten in Caithness and is known in several other lochs. Japanese Knotweed is known to be present and so is giant Hogweed. Other invasive species such as Himalayan Balsam, signal crayfish have never been reported in the area.

4.3 Man-made barriers are not a major feature in the area although natural barriers (falls) are present on nearly all the systems. Most of these falls can be ascended by returning anadromous salmon and sea trout under favourable conditions (flow and water temperature). There is a man-made barrier on the Vagastie (upper Naver catchment) which diverts water down the Tirry and into the Shin Hydro system. This barrier is known to prevent Atlantic Salmon from ascending to suitable upstream spawning and juvenile habitat. There are stems or sluices on a number of lochs many of which are operated by Proprietors of salmon fisheries. Most notably at Loch More (Thurso system), Loch Badanloch (Helmsdale system), Loch Slaim (Borgie system). In addition the dam on Loch Shurrery (Forss system) was built to ensure a private water supply to Dounreay Nuclear Plant. All the others were built 80 to 130 years ago to regulate flow in rivers for the benefit of salmon angling.

5. Existing Management Structures.

5.1 Fish populations in the FMO area are currently managed by individual fishery proprietors supervised by three organisations:

- Northern District Salmon Fishery Board
- The Helmsdale District Fisheries Board.
- The Caithness District Fishery Board

5.2 District Salmon Fishery Boards (DSFBs) are statutory bodies responsible for the protection and enhancement of salmon and sea trout fisheries within a defined district. They take their remit from the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003 and finance their common work by levying a rate on salmon fishery owners in the district. Each board operates according to its needs with varying models but share a common goal of sound, science based management

5.3 A summary of the financial structures of the existing DSFBs and Trusts operating within the potential FMO area is presented in **Table 1** below.

Item	Organisation					Combined Total
	Caithness	Northern	Helmsdale	Flow trust		
Background						
Rateable Value	90,700	110,150	86,000[E]	0		200,850
Levy per £	0.36	0.38	0.36	0		n/a
Basic Assessment Income	32,652	41,857	30,960[E]	0		74,509
Income (from latest published accounts)						
Most Recent Assessment Income	31,780	43,662	0	0		75,442
Donations	-	-	-	10,000		10,000
Grants and Projects	24,790	-	-	-		24,790
Other income	44	-	-	4,000		4,044
Totals	56,614	43,662	0	14,000		114,276
Expenditure (from latest published accounts)						
	54,039	51,608	30,960[E]	350		105,997
Surplus/Deficit (from latest published accounts)						
	2,254	(7,946)	0[E]	13,650		7,958

[E] These are estimated figures for the Helmsdale pending a rating assessment.

6. Proposed New Structure.

6.1 The structure below relies on four main principles. First that form should follow function, second stakeholder involvement and sound governance are essential, third that voluntary effort and proprietor participation are a major component in delivering value to the public purse, and last that the best science comes from the best scientists.

6.2 The requirements for an FMO can be summed up under three headings. First administration including fundraising; second use of first class science to enable sound advice to the national body, proper data collection in the area, and monitoring of local management; and third regulation of both proprietors and others to ensure sound compliance. These three requirements enable the FMO to deliver the four functions identified in the WFR of protecting and growing the resource, Delivering science and research, working in

partnership and engaging with stakeholders and the public, and promoting fishing and fisheries. In addition the FMO will need to build partnerships across sectors, engage in regular public communication, and undertake promotion of access and youth programmes.

6.3 FCFMO propose to deliver the required science using an existing model of employing a part time but very high grade scientific advisor to identify actions required and to commission work from the best academic provider. FCFMO will form a strategic partnership with ERI who would be expected to be one of the main providers of support. Data collection would continue to be provided by trained volunteers. If required seasonal, part or full time human resource would be employed if this proved necessary.

6.4 Administration would require one and a half FTE although it is expected that would be shared between an administrative director and a part time administrative assistant, with accounting outsourced to an on line provider.

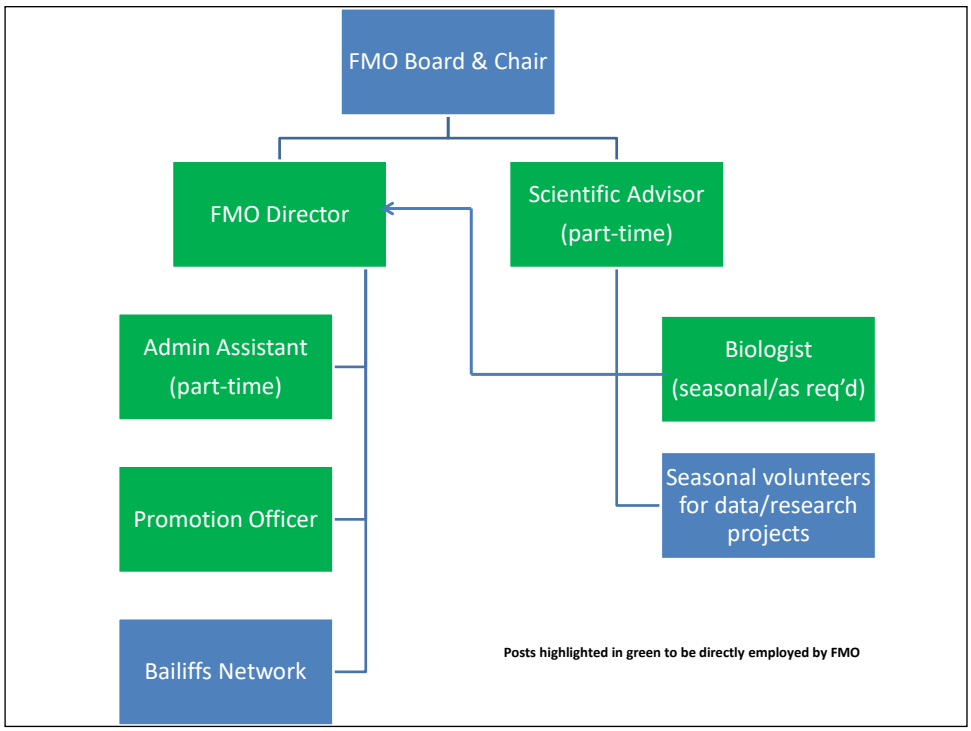
6.5 Regulatory controls would be provided as now by a bailiff network based on the existing work force and current employers. Coordination of the bailiff function where necessary would be undertaken by the director who would also be responsible for any consequential administration. Current head bailiffs would continue as Senior Bailiffs responsible for their current areas with their existing support. Current activities such as the sea patrols on the North Coast would continue to operate.

6.6 The FMO board would be responsible for discussing and agreeing policies, ensuring the strategic framework, and undertaking public engagement. Board members would also undertake fundraising activities.

6.7 Given the large geographical area in the proposed FMO and scattered nature of communities it is proposed that existing area management remain in place for planning purposes and to ensure that current effort and knowledge is not lost. Thereafter a transition to area organisation based on management simplicity and local engagement would take place.

6.8 The above demonstrates a relatively lean organisation relying on high class outsourcing for science and accounting with a small but high quality administration function. It builds on the existing strengths whilst offering an opportunity to widen species and habitat management together with public engagement. The practical management of fisheries would be undertaken and paid for by proprietors with the FMO undertaking strategy, science, public engagement and regulation ensuring the implementation of the Government's objectives as set through the National Unit.

6.9 Proposed Organisation Chart of the FCFMO:



6.10 Based on the above the key roles and responsibilities are:-

6.10..1 The Board. The board will have overall responsibility for the strategic direction of the FMO, ensuring a sound plan and compliance with ministerial and national objectives as well as ensuring local delivery. It will operate according to best practice for public bodies including transparency, openness and accountability and ensure the highest standards of corporate governance. It will deliver through the executive team which it will hold to account.

6.10..2 Chair of the Board. The Chair will take the lead in ensuring the board performs its tasks set out above. He will ensure challenge to the executive, oversee corporate governance according to the principles laid out for public bodies, and engage with stakeholders and the wider public.

6.10..3 Board members. The board will have 11 members including the Chair. It is not proposed that sectoral interests will have specific representation on the board, rather that the overall board composition will reflect the required knowledge and experience. There will therefore be members who understand science, who have experience of public bodies such as SNH, SEPA, NGOs or the Peatlands project, who have fishery management experience or who can represent major stakeholder groups.

6.10..4 Scientific Advisor. Responsible to the board for advising and planning on all matters scientific relating to the boards activities and for commissioning of external work.

6.10..5 Director. The director will report to the board and be responsible for the executive management, including all administration and accounting.

6.10..6 Administrative assistant. Reporting to the director and responsible for admin.

6.10..7 Promotion Officer. Responsible for planning and executing engagement with schools and colleges and for promoting inclusivity.

6.10..8 Biologist. As required seasonal or part time assistance for specific projects.

6.11 Budget

Budget Heading	Description	Amount p.a.	Subtotal p.a.
Proposed Expenditure			
Salary Costs	FMO Director (30hrs/wk)	£30,000	£70,000
	Admin Assistant (15hrs/wk)	£10,000	
	Scientific Advisor	£5,000	
	Biologist (seasonal/as reqd)	£10,000	
	Promotion Officer (15hrs/wk)	£7,000	
	Contingency	£8,000	
Administration	Meetings, printing, postage etc.		£10,000
Travel			£2,000
Scientific Research			£35,000
Protection			£10,000
Total Expenditure			**£127,000**
Proposed Income			
Total Income			**£115,469**
Surplus/Deficit			
Surplus /Deficit			**(£11,531)**

7. Conclusion

7.1 To function well an FMO needs to be large enough to achieve sufficient scale to ensure good delivery of the proposed objectives whilst remaining sufficiently locally based to ensure buy in and support from the existing local volunteer base. It needs to be a viable organisational unit. It needs to be able to support policies that are science based. The proposed Flow Country FMO meets these Criteria. The model has been considered by each of the three boards whose area would be covered and agreed in principle by them. Both the Rivers Trust and The Environmental Institute of UHI have considered the proposal and indicated their support.

7.2 Covering the blanket bog of Caithness & Sutherland and with rivers flowing onto the north coast and northern East Coast with the Pentland Firth at the heart of the coastal area the FCFMO covers a logical, albeit large, land area sharing common geology, flora, and fauna. It is an area of specific designations and consistent with existing studies by ERI and the "Flows to the Future" project.

7.3 Each of the organisations has strong support from local volunteer effort including Trout fishing associations, Salmon angling clubs and other interested scientific volunteers who will be critical to the delivery of an effective plan. There is already some shared activity across the area which can be encouraged going forward.

7.4 The collaboration with the ERI – a noted academic resource – which is already undertaking research into flora and fauna in the flows as well as looking at smolt tracking in the marine environment is a logical partnership all of which complements the research work being undertaken by proprietors and boards across the proposed area.

7.5 The available financial resources are a sound base on which to found an FMO being able to deliver the envisaged plan as part of the national strategy. It relies on the continuing use of first class scientific advice with the majority of funds spent on delivery rather than administration.

7.6 Based on the evidence and having regard to the common science and geography the proposal for a Flow Country FMO is logical and consistent with the likely national strategy.