



One size does not fit all

Aligning the needs of Scottish sea angling for 'more and bigger' fish to the Scottish Marine Bill.

Introduction

Fish stocks are a shared resource.

The commercial fishing sector may be deemed to be exercising the public's right to fish on their behalf – sea anglers are exercising that right directly.

Headline figures of 100,000+ sea anglers spending in excess of £141 million/yr and supporting 3500+ jobs summarise the apparent strength of Scottish sea angling.

However, what is not immediately apparent is the fact that these values could be far greater as the sector has been in decline since the early 1980s with tourism being particularly affected as many major competitions and festivals have been lost from the sea angling calendar.

The recent economic study identified “ *The future of sea angling is crucial dependency on wild fish stocks....*”

which would facilitate “ *a significant growth potential for of sea angling and an enhanced contribution it could therefore make to income and employment across Scotland, particularly to economically fragile coastal communities. Indeed, the growth potential of sea angling probably exceeds that of many freshwater fisheries.*”

However, whilst it is easy to understand that political, fisheries management and tourism initiatives might increase the economic worth of sea angling in the short term, most of this is worthless in the long term without the basic ingredient – FISH.

This was equally recognised in the findings of the economic study “ *the key to unlocking the undoubted growth potential of sea angling is inshore stock abundance.* “

Historically there has been no concept of 'Best Value' in marine management, especially when related to fish stocks and their utilisation by the commercial and recreational sectors.

Allowing sea angling to continue to decline will cost Scotland around 1700 jobs and £37+ million/yr in household income.

The purpose of this paper is to try and highlight actions / discussion areas which would enable Scotland to rebuild its once world class sea angling sector; the difference between its loss and its enhancement would be in the region of 2,500+ jobs and £55+ million/yr in household income.

This could be achieved at very little cost if we **Protect and Enhance** our nearshore fish stocks and their environments where they live and breed.

Anglers and fish stocks

There are several different broadly defined 'archetypes' of sea angler who fish either from the shore or from vessels, these, and their requirements of stocks, may be considered to be :

- A) the competition angler – plenty of fish
- B) the pleasure angler – plenty of fish & range of species
- C) the species hunter – wide range of species
- D) the specimen hunter – quality across a wide range of species
- E) the single species specialist – quality

In general terms these groupings represent the steps along the way from a need for more fish to a need for bigger fish – quantity to quality.

The following table is based on the work done during the economic study. It highlights the spread of the key species across the regions and also those species most likely to offer 'quality' opportunities. In general it also reflects the need for a natural size range of all species around our coastline.

Region	Most common fish	Angler type	Exped. Flow £ Millions
D & G	Pollack , mackerel, dogfish , flatfish, cod, tope , bass , rays, coalfish, conger, whiting, haddock, huss	All	23.87
Argyll & Lochaber	Mackerel , pollack, dogfish , rays / skate , cod , coalfish, conger	All	11.30
Northern Scotland	Mackerel, cod, pollack, coalfish, flatfish, dogfish, porbeagle , skate	B, D, E	2.19
N.E. Scotland	Cod , pollack, mackerel, coalfish, flatfish	A, B, E	7.12
Edinburgh & East	Cod, mackerel, pollack, coalfish, flatfish	A, B	-1.61
Glasgow and West	Mackerel, pollack, dogfish, coalfish, flatfish	A, B	-10.8
Western Isles	Pollack, mackerel, cod, dogfish, coalfish, rays / skate , flatfish, haddock, spurdog	B, C, D, E	5.99
Orkney & Shetland	Conger, coalfish, mackerel, bass, porbeagle , flatfish	A, B, D, E	7.19

Table 1.

Figures in red indicate key specimen / quality species

In total, around 90 species of fish were once commonly found within 3 miles of Scotland's coastline, the most common included - 5 species of wrasse, 4 species of rays, plaice, dabs, flounder, cod, haddock, hake, spurdog, bass, ling, whiting, pollack, coalie, poor cod, 4 types of rockling, blennies, 3 types of gurnard, john dory, pout, skate, conger, huss, tope, blackmouth dogfish, dragonet, LSD, scad, Sprat, herring, launce, turbot, brill, 4 types of bream, smoothound, sea scorpion, sea trout, garfish, porbeagle and 2 types of weever.

However, the past two decades have seen the inshore stocks of many of these species become severely depleted and many stocks are now extremely scarce, or only exist in juvenile / refuge populations.

This has obviously impacted the quality of sea angling and it is very apparent that the areas of greatest depletion – the Inner Clyde, Firth of Forth and Ayrshire coast no longer attracts sea anglers from outwith their regions (Fig 1 below).

What compounds the issue is that those very regions were once top attractions for sea anglers from throughout the UK – millions of pounds of annual income and hundreds of jobs have been lost; in fact it is estimated that the Isle of Arran loses £2M/yr in tourist spend due to the lack of fish.

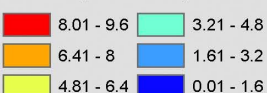
Sea Angling Activity by Region

Fig 1

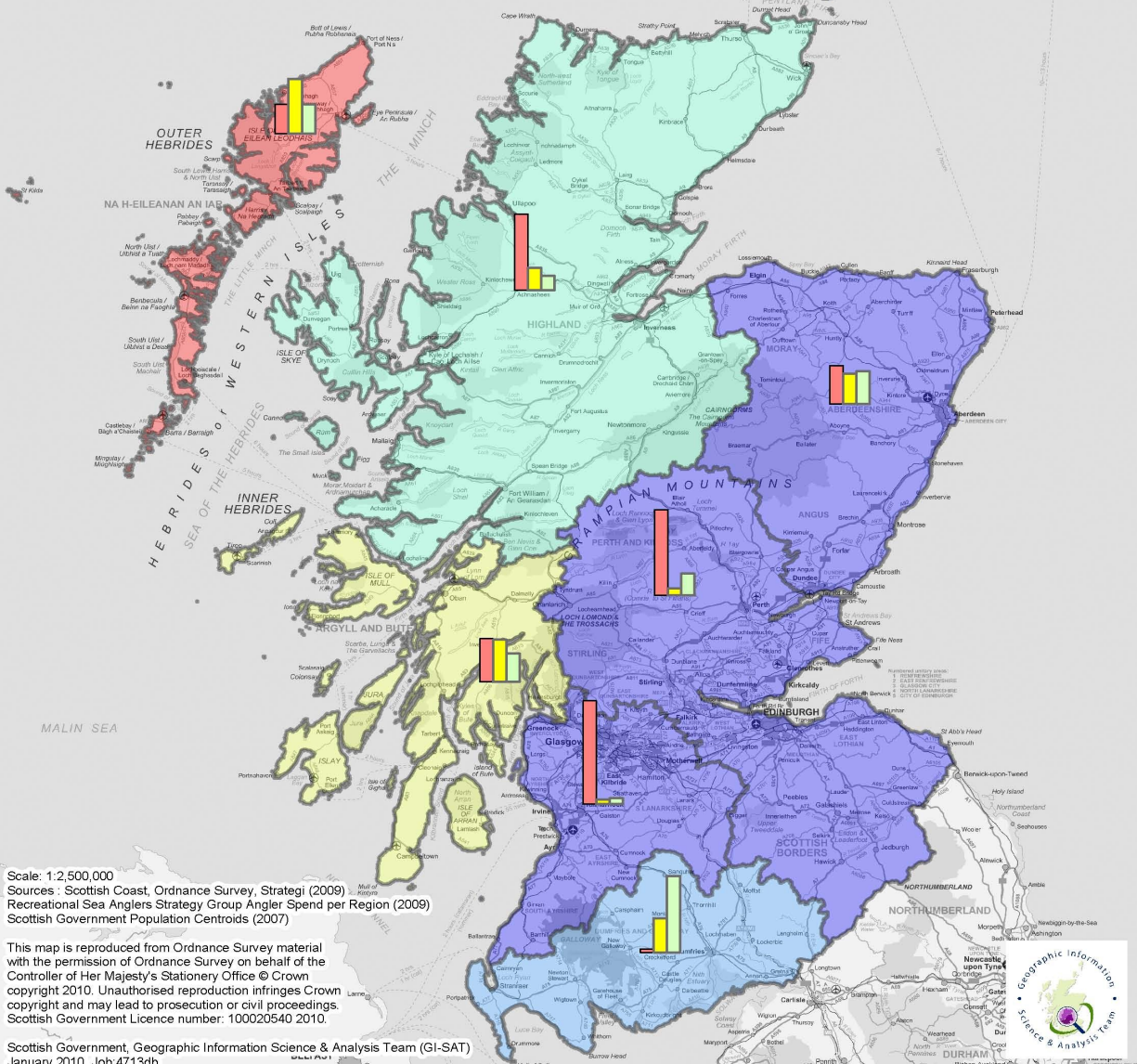
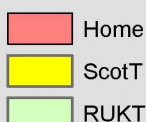
Recreational Sea Anglers Strategy Group Regional Activity Percentage

Region	Home	ScotT	RUKT
Dumfries and Galloway	3	30	67
Argyll and Lochaber	38	37	25
Northern Scotland	67	20	13
North East Scotland	34	27	29
Edinburgh and the East	75	6	19
Glasgow and the West	91	4	5
Western Isles	26	48	26
Orkney and Shetland	22	24	54

Angling Population % of Regional Population



For each region :
The % breakdown of angler effort in that region
Home - anglers from the region
ScotT - Scottish 'tourist' anglers - anglers travelling to fish in that region from another.
RUKT - 'tourist' anglers from the rest of the UK.



Scale: 1:2,500,000
Sources : Scottish Coast, Ordnance Survey, Strategi (2009)
Recreational Sea Anglers Strategy Group Angler Spend per Region (2009)
Scottish Government Population Centroids (2007)

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One size does not fit all

The dependency on wild fish stocks is a major limiting factor on the quality of the sea angling experience. Over the last two decades, inshore fish stocks have been depleted to the point that in many areas the quantity and quality of fish available to sea anglers has declined to the point where many are now considered locally extinct or only exist as juveniles.

Evidence from many other countries has shown that improving the quality of the experience generates substantial increases in angling activity, incomes and employment

The pre-requisite - Political willpower

A pre-requisite to making any significant progress towards developing sea angling stocks will require politicians and fisheries managers to change their mindset from producing a commercial product and make the necessary bold decisions to produce an enhanced sea angling experience.

Organisational steps to facilitate this could include :

- Creating within Marine Scotland a team dedicated to supporting sea angling and other marine recreational interests.
- The introduction of a management body to enable the sea angling sector to be directly involved in fisheries management decision making at national, regional and local levels
- Constituting and resourcing that body similar to, and at an equal level to, the IFGs established for the commercial sector.
- The development of a range of policies and works aimed at ensuring the long term viability of nearshore fish stocks of interest to the recreational sectors.

As the economic benefit of sea angling is typically generated within 3 miles of the coastline, it should therefore receive the same level of support as the inshore catching sector..

Conclusions

Other than the fact that a general increase in the quantity of all species relevant to each region is required, determining a strategy for enhancing stocks of interest to sea anglers is not a simple 'one size fits all' exercise, a number of parameters need to be considered, such as the :

- nature of angling within a region – (table 1- above) shows the range
- economic priorities - sea angling tourism accounts for 55% of all Scottish sea angling activity; in certain regions it can account for up to 94% of regional activity (fig 2)
- impact of / on other commercial and recreational sectors

Requirements will therefore differ from region to region which will in turn require a variety of short – medium – long term enhancement activities or plans, especially in those regions, such as the Clyde, where stocks have been excessively depleted. A suitable strategy could be to identify :

- Key geographic areas and their socio-economic priorities
- The 'at risk' and 'importance to anglers' status of species
- Short, medium and long term protection and enhancement plans
- Select specific activities / areas to pilot proposed solutions

Whatever priorities are developed, other than allowing sea angling in Scotland to deteriorate further, plans to 'protect and enhance' those species key to making Scotland a world class sea angling destination once more should be developed as a matter of urgency.

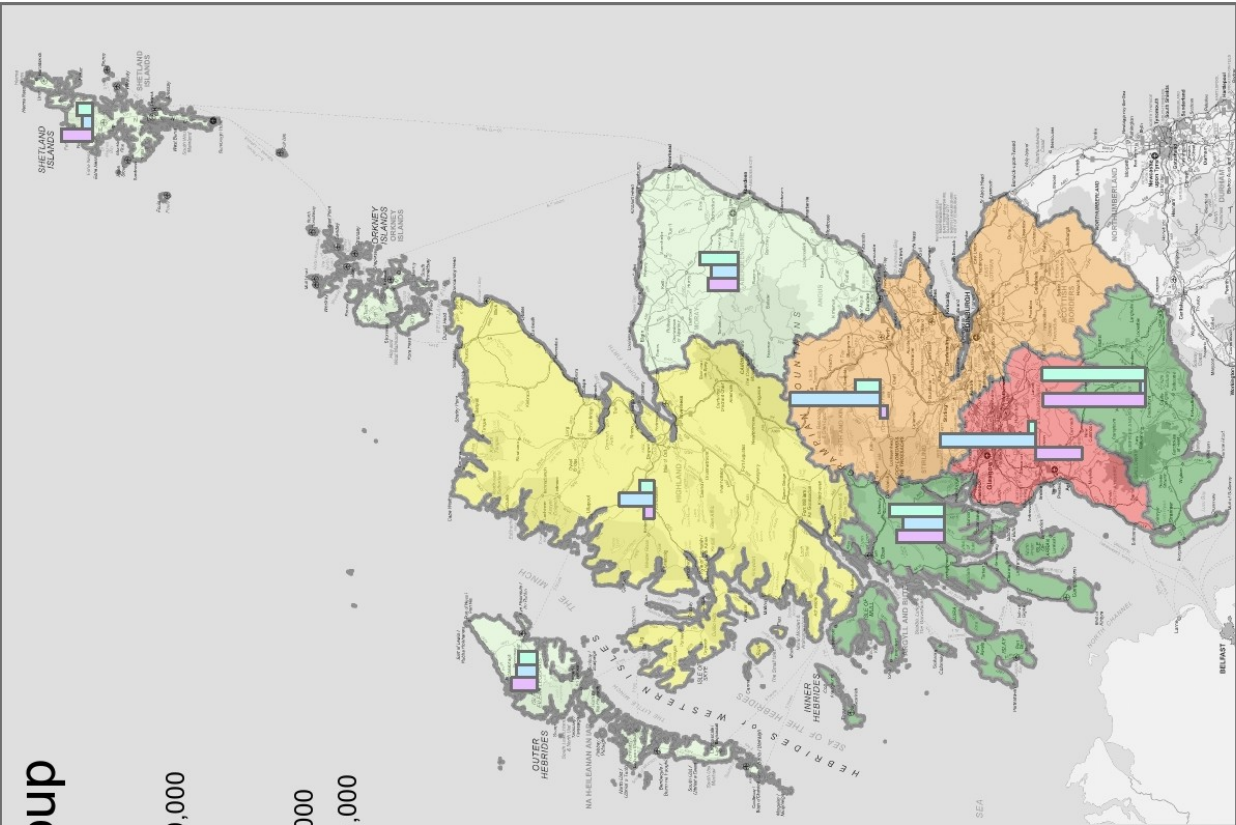
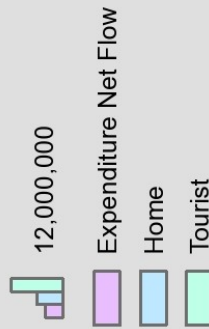
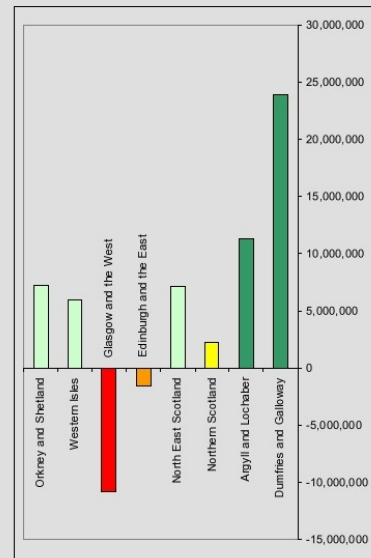
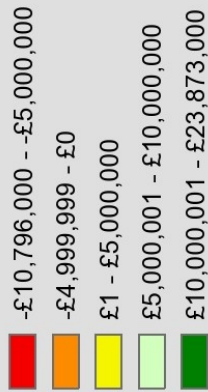
Regional expenditure source / flow

Fig 2

Recreational Sea Anglers Strategy Group Expenditure Net Flow

Region	Expenditure - Net flow in region
Dumfries and Galloway	£23,873,000
Argyll and Lochaber	£11,308,000
Northern Scotland	£2,193,000
North East Scotland	£7,121,000
Edinburgh and the East	-£1,618,000
Glasgow and the West	-£10,796,000
Western Isles	£5,985,000
Orkney and Shetland	£7,187,000

Net flow is amount of money spent in subject region minus amount of money spent in other regions by anglers from the subject region



Scale: 1:3,500,000
Sources: Scottish Coast, Ordnance Survey, Strategi (2009)
Recreational Sea Anglers Strategy Group Angler Spend per Region (2009)

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Scottish Government, Geographic Information Science & Analysis Team (GI-SAT)
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Appendix A

Basics of species management

Species management reflecting the varied needs of the sea angling sectors and, involving sea anglers in the sensible and constructive governance of fisheries would significantly increase the value of sea angling.

To achieve the optimum results, a variety of topics will need to be explored including the :

- Means by which to set clear objectives for protect / enhance plans and what range of management tools could be available.
- Processes to facilitate anglers to work in partnership with other NGOs, government bodies and academic institutions to ascertain gaps in data and develop initiatives to fill these.
- Means by which current and ongoing scientific advice can be integrated into the management plans.
- Consideration of recreational only species. There are a number of species that are particularly prized by anglers because of their biological or geographical 'rarity', 'catch-ability / sporting prowess' and potentially large size.
- Setting aside specific areas with a view to limiting commercial activity, establishing areas for recreational / sea angling use only.
- Measures that promote fish production (such as minimum and maximum landing sizes, nursery areas or protection of spawning aggregations) to be considered
- Measures that promote fish maturity; such as minimum and maximum landing sizes, nursery areas, commercial closed seasons during breeding times to be considered.

In the past SSACN have used the concept of Angling Regeneration Centres, summarised at Appendix B, as a vehicle for illustrating how species management, educational outreach and coaching could be combined to deliver socio-economic benefit whilst at the same time supporting the regeneration of the marine environment, including fish stocks.

Appendix B

Angling Regeneration Centres (ARC) Summary

An Angling Regeneration Centre (ARC), should be considered simply as being a specifically defined area, potentially within a Research & Demonstration MPA, or a greater protected conservation area eg: Marine Protected Area (MPA), set aside for the development of recreational sea angling.

- An ARC should be in a region where there is already a quantity of fish, attractive to both Scottish and visiting anglers but should also be in a region that offers an opportunity for habitat and stock recovery for other species like the rays, cod and haddock.
- An ARC should be an area where all destructive commercial activities are restricted to allow wildlife and their habitats to recover and be protected from future harm.
- Only sustainable recreational and commercial fishing practices would be allowed.
- Angling, diving and other stakeholders should have full access to the area providing their activities do not interfere with the previous statement.
- The designation of the Centres needs to be flexible, for example :
 - Luce Bay is 17x14 miles, is composed of shallow sandbanks and is a prime area for flatfish and the rays as it is an egg laying area.
 - Western sea lochs on the other hand have a totally different geomorphology and the key species are skate and spurdog, on the east coast it would be cod and plaice etc.
- Management controls within an ARC for all enjoying access could be
 - Angling methods and technical measures
 - Time based restrictions in breeding/pupping/nursery areas.
 - Catch and Release only on endangered species.
 - Minimum and maximum landing limits applied equally to all forms of fishing
 - plus any other relevant management tools could be considered
- Each centre have the necessary access and operational facilities to offer an all inclusive sea angling opportunity supported by enhanced educational and coaching elements.
- These centres will need the support of local authorities, sea angling clubs or associations, and organisations geared to coaching and development.
- ARCs will require to be formally recognised by the Government and protected by suitable legislation unlike the Blairvadach centre on the Gairloch which failed when the fish stocks collapsed.

Overall, Angling Centres could not only be havens for sea anglers, but they could also offer a very valuable educational asset for all ages and abilities; create business opportunities, particularly in the field of managed leisure activities and supporting services; as well as help attract additional sports tourism.

Equally, if ARCs were to be strategically placed, a number of them could provide an opportunity for broader biodiversity regeneration and protection for many of the species of fish currently under threat through over-exploitation.