

## Introduction

The shellfish industry in Scotland lands a variety of species, the majority of which are not controlled by EU quota. On the whole, it is these species that are discussed within this paper, although there are of necessity, references to *Nephrops*, a quota species, as the single most valuable component of the shellfish industry.

The SFF was the joint initiator, and co-chair, along with the Marine Scotland, of the Scottish Inshore Fisheries Action Group (SIFAG) which was the primary stakeholder consultative group for Scottish Inshore Fisheries until May 2011. It is the stated policy of the SFF to continue with this work-stream by engaging fully in the new Fisheries Management and Conservation Group (FMAG), seeking to work under that umbrella to ensure there remains a proper management lead for inshore fisheries.

The SFF will continue to engage in any other sub-groups, such as Crab & Lobster, Scallop and *Nephrops*, which may be formed, in order to achieve sustainable fisheries for all fishermen.

The Inshore Fisheries Group's (IFG) system devised and instigated by SIFAG, to manage the fisheries inside the 6 mile-limit, is currently being run in "pilot" form. The SFF have from the outset, taken a lead in assisting the setting up of these groups, both at the national level, and through our member associations at the local "pilot" level. With these "pilots" having been reviewed in summer 2010, SFF are awaiting the outcomes of the review (not received @ September 2011) before deciding on the best course to take next with the IFG's.

It is the intention of the SFF to continue with leading these work streams in Scotland, with the Inshore Sub-committee (ISC), serviced by a policy officer, being the focal point of Inshore Fisheries decision making within the Federation, utilising a species themed approach to the work, which leaves the *Nephrops* Focus Group to deal with *Nephrops*. The ISC should serve as an appropriate place to ensure that the SFF has a clear input into the structure of the various groups, particularly on matters concerning the IFG's, which may become responsible for managing inshore fisheries.

In practice the ISC directs the policy officer, who then through a series of formal and informal meetings with the Marine Scotland Inshore (MSI) team, promotes the SFF policy on the inshore fisheries. The ISC will also have the opportunity, as required, to have updates from MSI staff.

Further to the work streams promoted through the FMAG, the appropriate association secretaries and the policy officer will engage with relevant groups at a UK and an International level to ensure SFF policy on inshore fisheries management is taken into account on the wider scale.

## The Fleet

Figure 1: Active Scottish Based Vessels by Main Fishing Method

	Creel	Hand	Dredge	Nephrops Trawl	Demersal	Pelagic	Total
2000	1529	41	108	314	550	38	2580
2001	1543	40	107	322	547	36	2595
2002	1559	45	103	308	465	33	2513
2003	1522	46	103	296	399	29	2395
2004	1539	48	110	289	382	26	2394
2005	1532	47	112	285	375	25	2376
2006	1420	36	110	269	368	21	2224
2007	1412	38	101	267	351	22	2191
2008	1418	40	94	274	355	24	2205
2009	1405	70	92	275	307	25	2174
2010	1409	73	90	269	285	24	2150

From the numbers above (Fig 1) we can see that hand gathering has increased, but the number of vessels targeting shellfish (discounting hand gathering, including Nephrops) within Scotland has seen a reduction of 183 vessels since 2000 (almost 10% of the sector), and 265 vessels have been lost to the Demersal fleet, a 48% loss and the Pelagic sector lost 14 vessels (about 36% by number of that sector).

This table uses the figures published annually in Scottish Sea Fisheries Statistics by Marine Scotland, and show that the 183 vessel reduction in the shellfish fleet was accounted for by a loss of 120 creel vessels, 18 dredgers and 45 Nephrops trawlers. Hand gatherers increased by 32 persons.

This means that as of 2010, the Fleet consists of 1572 Shellfish “boats”, 269 Nephrops trawlers, 285 Demersal vessels and 24 Pelagic vessels.

Employment numbers are only currently recorded by Marine Scotland Compliance by port, so an estimate by method has been made, which does not include the 73 hand gatherers.

Creelers = 2300,  
 Dredging= 400,  
 Nephrops= 1200,

Approx = 3900 Shellfish; 1208 Whitefish; 300 Pelagic

Which equates to 5218 fishermen employed on Scottish based vessels, numbers which are only applicable to those **vessels** which submit landing declarations to port fishery offices. This represents 1419 fewer fishermen than in 2001.

## The Catch

### By Volume

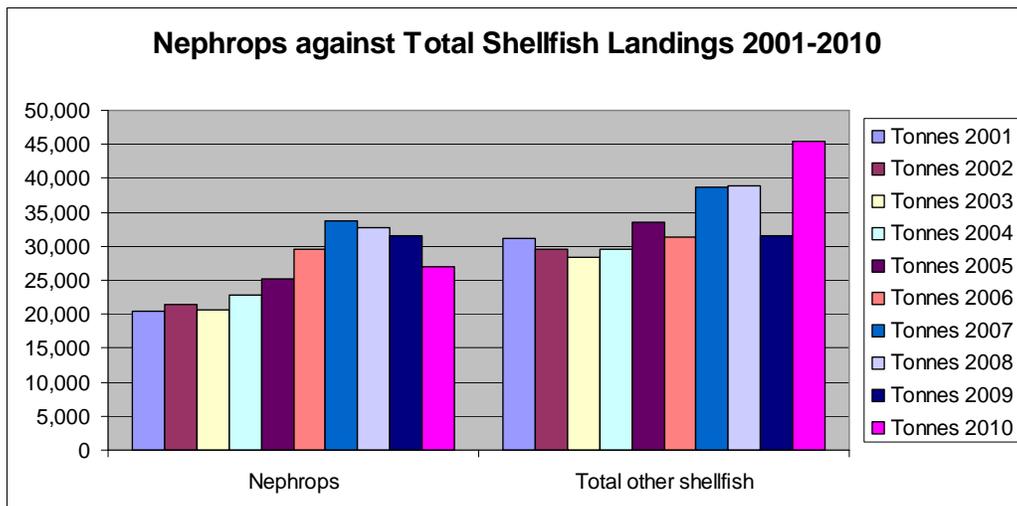
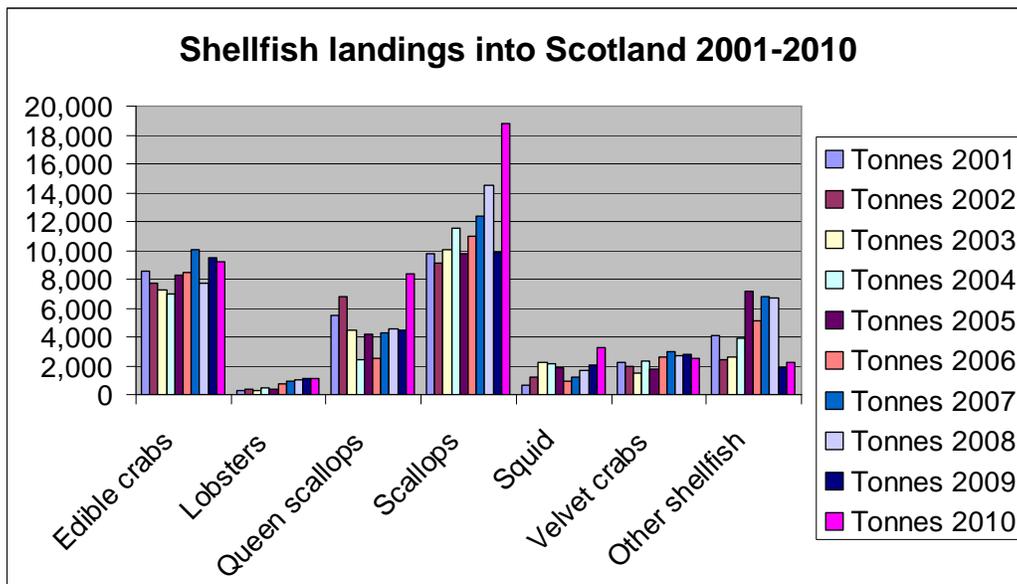


Figure 2: Shellfish landings into Scotland 2001 - 2010

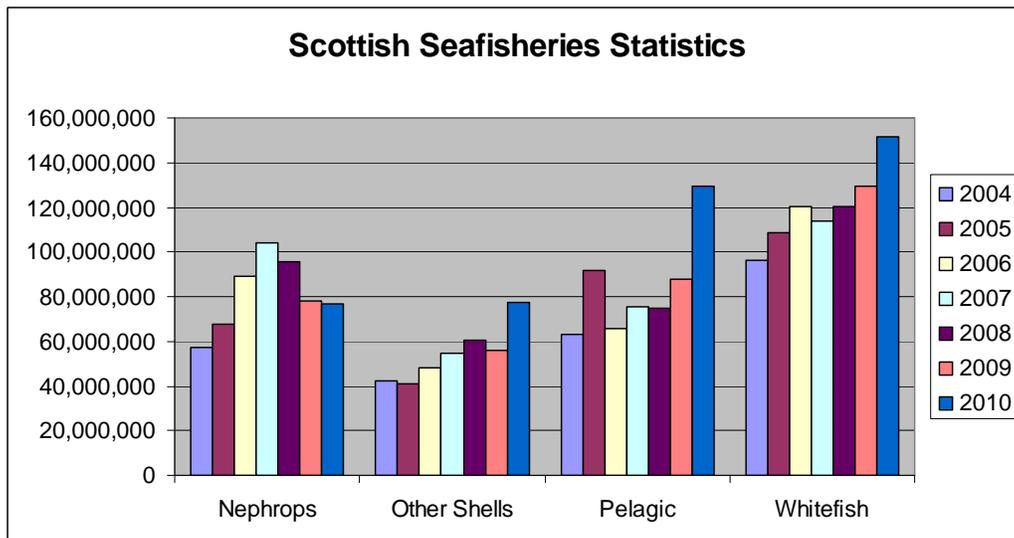
The volume of shellfish landed into Scotland, illustrated for 2001 – 2010 in figure 2, may be uncertain prior to the 2006 introduction of Registration of Buyers and Sellers, and certainly in many cases was estimated.

Despite seemingly low 2006 totals, the implementation of RBS illustrates that landings may have been underestimated and it is in-escapable that the 2007 and 2008 Sea Fisheries Statistics show higher quantities of non-quota shellfish being landed into Scotland than in previous years, with a blip in 2009 before a record 45478T in 2010.

It should be noted that although these figures show an increase, early years figures may not be as robust, an element of this increase could be incremental (due to technological creep and increased effort) and the introduction of the RBS legislation would certainly have influenced the upward movement of totals.

Although Scotland had not until 2010 seen the dramatic increase in effort on shellfish that the rest of the UK has experienced (which may or may not be down to the factors described above), the recent interest that DEFRA and the EU have taken in shellfisheries and the under 10m “inshore/artisanal” fleet, may result in added pressure on the Scottish Executive to scrutinise the industry. At the very least, changes in legislation south of the border will place an added administrative burden on members fishing in English waters or located closed to the border.

**By Value**



The most striking point from the value chart is the dominance of Nephrops as the single most valuable shellfish species, second only to Mackerel. (SFF has its Nephrops Focus Group, specifically to address any and all issues to do with nephrops.)

Of note in the current context is the value for “other shellfish”, as this policy is addressed primarily to them. This is showing a figure in excess of £77 million, landed by about 1600 vessels, employing over 2700 men.

Fraserburgh takes the title of top Nephrops port with landings of £25 million + which means that about £50 million of Nephrops landings will be widely dispersed throughout the peripheral regions of Scotland, providing immense economic value to these areas.

## **Crab & Lobster**

Association secretaries, with back up from policy officers, led the previous Scottish Fisheries Council Crab & Lobster group from inception, and would expect to continue this work in any new inshore group of the FMAC. The work of the SFC group led to the realisation that the Scottish crab market was inextricably linked to the produce of Ireland, Wales, England, Jersey and France, which led to the formation of the Trans-National Brown Crab Management Group, including the SFF, NFFO, KFO, WFA and SAGB, with secretarial duties falling to the SFF policy officer.

This wider group commissioned a report on the “Future management of Brown Crab in the UK and Ireland”, hereinafter referred to as the Crab report, which had wide industry participation, including public meetings for fishers to have an input. The findings of the Crab report were agreed as the basis of SFF policy on the subject by the Inshore sub-committee and are reflected in this paper. This policy will inform SFF dealings with Marine Scotland and DEFRA.

The Scottish Crab sector is best split by defining a small full time offshore Vivier sector, a seasonal offshore/inshore sector (some with vivier capacity) and the smaller traditional inshore boats. The number of boats is approx 1400, with employment around about of 2000 and landings in the region of 8200T worth £20 million.

As Marine Scotland do not compile stats to differentiate between these sectors of the crab fishery, an estimate (based on figures from the Crab report) would show approximately 9 vessels (15m+) landing 63% (i.e. 2050T for £12.6m) then about 110 vessels landing 27% (i.e. 2300T for £5.6m ) and 1100 vessels landing 10% (i.e. 800T for £2M). The final grouping of 1100 would include P/T and vessels who also fished for other species over the course of the year.

The main Scottish fishing areas can be categorised as Inshore (West Coast, Western Isles, North Coast, Northern Isles, Aberdeenshire/Moray Firth and South East (which extends south of the border)), and Offshore (the Windssock and deep water to the West of the Northern Isles.)

One important issue that must be addressed is the fact that there are something like 2000 vessels (throughout the UK) which have valid entitlements to fish for crab, but currently do not exercise that right. The active fishers are aware that some restrictions on effort may be inevitable, but expect to benefit in the long term. The prospect of this long term benefit luring “latent” entitlements into operation and destabilising the industry – reinforcing the boom/ bust cycle is a major barrier to the acceptance of new management measures.

It is acknowledged that the science base for crab stocks is sparse, but the best available evidence would show that on all the identified stocks catching is at or above the level of fully exploited. This is further complicated by the market being grossly over-supplied at peak times, leading to a collapse in prices. Therefore it would be appropriate for industry, in the spirit of sustainability to adopt the precautionary approach to these fisheries.

Evidence from the public meetings held as part of the process of the Crab report, suggests participants in the fishery are keen to manage the fishery in a sustainable manner, to help keep control of the resource in their own hands. There is a general aversion to the fishery being subject to a quota management system similar to that developed under the CFP. There is general agreement that subject to over-arching national strategy, crab stocks will be best managed on a regional basis, with a clear difference between the 4 Inshore and Offshore fisheries.

All the evidence points to effort increasing, with creel numbers climbing steadily. The SFF supports the principle of controlling the number of vessels involved in the fishery and helping new entrants.

Fleet marking should be encouraged, with due regard to the size of vessel and method of working, to ensure that safety is not compromised by any impractical legislative demands.

The Inshore Fisheries Groups would be ideally placed to manage limits in the inshore, with support from Marine Scotland Compliance (MSc). MSc would need to lead management in the offshore sector.

The international community of vivier tank fishing vessels have met each spring to address their own particular sectors' problems and as a result of this have attempted to limit voluntarily their landings throughout the summer months. There is a need to establish pot limits for this fleet also.

The landings figures would suggest that restrictions on the vivier sector would have the most significant effect on the entire industry. On the basis that this fulfils the need to limit effort the SFF would support this voluntary management as an example of self- management, rather than give the responsibility to others.

Generic measures which the SFF would support include bans on landing berried crab, soft crab and claws. There would also be support for escape hatches.

The measures described also need to be aware of any unintended consequences which may occur in terms of limiting access to new starts, and also to those fishers for who crab is only part of the mix of their operation.

**Velvet crab** accounts for a tonnage equal to 33% of Brown crab, but sell for twice the price. As for the brown crab, science is lacking, so it may be appropriate to consider capping effort on this species also.

**Lobster** fisheries are subject to the same data constraints as the other creel fisheries, but continue to be unusually fruitful. Rather than wait until the boom peaks, the SFF would support a cap on effort in this fishery, to try and avoid a bust.

Problems in marketing have become apparent, no doubt exacerbated by cheap imports. In the foreseeable future it would be hoped that the proposals being made on Crab Management will have a positive impact on the Lobster fishery and this stock may be managed at the local regional level.

### **Summary**

- Regional management areas with appropriate scientific backing.
- Pot limits on inshore grounds; Pot limits & Landings cap for offshore.
- Support well designed data collection system.
- Oppose introduction of CFP style quota management.
- Gear Marking compulsory, as far as practical and safe.
- Bans on landing berried crabs, soft crab, claws.
- Support for escape hatches and other selectivity measures.

### **Other Stocks**

These include Velvet crabs, Queen Scallops and “Others” with a value of £15.2 million in 2010, although it is not possible to deduce the number of boats or fishers involved, it is safe to say that Orkney is the main landing area. (Squid although classified as other shellfish are mostly prosecuted as a diversification for Whitefish/ Nephrops trawlers and were worth £8.9 million in 2010)

### **Summary**

- Velvet crab and Lobster fisheries, adopt a similar approach to Crabs.
- Seek more research into the benefit of leaving berried lobsters in the water.
- Support V-notching of berried Lobsters
- Support Maximum Landing Size for female lobster.
- Support status quo on Minimum Landing size for Velvet crab.

## Scallops

The second largest single component of the Shellfish value table, with 2010 Scottish vessels landings of 8838.61T valued at £16.777million in Scotland and 9921.53T worth £15.147m throughout the rest of the UK. This compares favourably with combined landings by English, Welsh, Irish, Manx and others of 12.670T valued at £18.887m and underlines the importance of Scallops to the Scottish fleet.

This was caught by approximately 90 boats employing about 400 crewmen, the bulk of which are the nomadic fleets of Kirkcudbright (which remains a major processing centre) and Oban, but it must be remembered that the fleet also includes a spread of smaller vessels around the coast. (It is also estimated that 2% of production is attributable to divers.)

The main scallop grounds are found west of Kintyre, the North West, Shetland, the Moray Firth and on the East coast, which produce in excess of 80% of Scottish landings. The SFF would seek to take this geographical diversity into account, especially when considering appropriate local management measures.

When compared to historical values, the spawning stock biomass (SSB) in the West of Kintyre and the North West management areas is at low levels. In the North West it is estimated to be one of the lowest observed. In the North East, the SSB has also declined from relatively high values in the mid 1990s, but in common with the situation in Shetland, it has been relatively stable in recent years.

Estimates for the West of Kintyre, North West, North East and Shetland management areas indicate recent year's recruitment has declined compared to historical values.

These patterns are mirrored by trends in the survey catch rate data of commercially sized scallops (those above 100mm), and is borne out by survey catch rate data of scallops below 100 mm, which have declined in all areas, including the East Coast.

Current advice from Marine Scotland Science is that given the low SSB and reduced recruitment, advice is for no increase in fishing effort and to consider measures aimed at increasing the SSB. One such measure worth considering is an increase in the minimum landing size. The survival rate of discarded scallops is high and therefore most undersized scallops returned to the sea have the potential to continue their growth, increase the SSB and future reproduction of the stock, contributing to future recruitment.

The SFF ISC with input from Policy Officers and Association Secretaries will seek to assist the scallop industry in dealing with Marine Scotland and DEFRA. Due to the cross-boundary activity of this fleet, support will be sought through the Shellfish Association of Great Britain (SAGB) and the Seafish administered National Scallop Group.

Environmental concerns concerning the fishing method are high on the agenda, indeed Scallop dredging and Beam trawling are often singled out by NGO's for special attention. As part of the response to this pressure the SFT has helped finance an innovative competition attempting to find fishing gear with a smaller environmental impact. This project was run through Seafish and has currently led to 2 designs being concentrated on to ensure that they provide the necessary protection of grounds whilst still catching clams.

The Scallop sector has also helped setting up Codes of Conduct (COC) in various areas around the coast in order to address any possibility of gear conflict as the "nomadic" fleet moves around.

SFF Members in the Scallop Sector are encouraged to sign up to the Good Practice Guide (GPG) which it is hoped will be a pre-requisite for attaining membership of the Responsible Fishing Scheme (RFS). Work is on-going to roll this out through the catching and processing industry to strengthen the stance of a proactive association co-operating with other stakeholders in wider terms.

### **Summary**

- SFF support for the GPG and CoC's.
- Support for innovation in gear technology.
- As far as possible maintain current fishing grounds.
- Ban on French dredge

## General Management

1. Every effort should be made to ensure that shellfisheries do not become a quota species or fall further under the control of the European Union. In many cases, inclusion in the annual EU TAC process would disadvantage fishers.
2. Agreed management objectives and reference points should be established for shellfish stocks to guide sensible management regimes. These should include defining the stock area and its biology in terms of a cradle to grave timeline. It would also be appropriate to define the fishing effort on each stock.
3. A responsible approach taking local knowledge into account should be applied to stocks that are information poor and for developing fisheries. This should not, however, stifle diversification and development of new fisheries and operators within such fisheries should be encouraged to share information with scientists in a confidential manner.
4. Restrictive measures should not automatically be considered for stocks that have not previously been commercially exploited. This reduces the incentive for operators to share catch data and has the potential to stifle entrepreneurial enterprise.
5. It is essential that fisheries are considered as a whole, not artificially segmented according to fishing method, fishing area or port of landing.
6. Management measures introduced by IFGs should be negotiated with neighbouring IFGs in recognition of existing regulations applied to inshore and offshore vessels and stocks. This should come under the remit of FMAC. Any introduction of restrictions on the size and power of vessels should consider the possibility of unforeseen consequences such as fishing displacement or safety."
7. There needs to be consideration given to the management of shellfish licenses and other related entitlements to protect flexibility in the fleet, but try and avoid the problem of additional effort entering the shellfish fisheries.
8. A further review of national legislation applicable to shellfishery management should be carried out and recommendations for any amendments or additions should be made.
9. A review of input and output controls should be carried out, specifically in relation to shellfisheries, with the inclusion of case studies and actual impacts of each option.

## **Science**

10. A higher standard of science is needed within the majority of shellfisheries. The collection of biological data and the improvement in statistics relating to fisheries should be encouraged. SFF will continue to lobby Marine Scotland to fund science adequately.
11. Data provision should be a condition of any licence / permit system developed.
12. A review of the science relating to specific shellfish species should be carried out and any gaps in knowledge identified.
13. Specific areas of interest should be identified in order to bid for activity under an Industry-Science Partnership in the UK or any other available avenue of funding.
14. The design and implementation of assessment techniques better suited to shellfisheries should be encouraged.

## **Stock Conservation**

15. V- Notching programmes should be encouraged for defined sections of the lobster population, dependent on the dynamics and needs of that specific fishery.
16. The release of juveniles and other methods of ranching shellfish, particularly lobster, should be supported, although more information on the success of such schemes would support decision making.
17. The return of soft animals should be encouraged, but the return of cripples needs further investigation.
18. Minimum Landing Sizes for all species should be locally tailored, in compliance with national legislation, with sound scientific backing and agreed with stakeholders.
19. A maximum landing size for Lobster should be supported but should be locally tailored and agreed with stakeholders.
20. Consideration could be given to voluntary closed season for individual fisheries when quality and prices are low. Such closures should be area specific, ensuring that areas with high quality landings at that time will receive a premium for their landings.
21. Further area specific investigation into the effects of escape hatches for shellfish creels should be supported, as an unintended consequence of such hatches could mean that in some areas valuable by-catches could be lost.

### **Gear Conflict**

22. In areas where gear conflict exists, inter and intra-sectoral communication and agreement are essential.
23. The SFF will facilitate the development of area-specific Codes of Conduct to help eliminate gear conflict

### **Post Landing and Market Related Issues**

24. Initiatives that improve traceability in the shellfish sector should be supported.
25. The provision of species specific training to improve quality and care of the catch should be encouraged and participation in such courses will be promoted by the SFF where possible.
26. Fishery accreditation is supported, in principle, while acknowledging that it may not be possible for all stocks to attain such certification.
27. The SFF will actively support shellfish-specific, market related initiatives led by Marine Scotland, Seafood Scotland, Seafish and, where appropriate, other agencies by contributing sectoral expertise to such processes.
28. The SFF will support efforts to enhance and improve the supply of information to the public on fishing practices and the health benefits of seafood.