SEAFISH
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Second Interim Report

Profitable Futures for Fishing

Second Interim Report

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1 Introduction and background

This is the Second Interim Report of the Profitable Futures for Fishing project conducted for the Scottish Government Marine Division (SGMD).

This report is intended give a preliminary overview of the last five consultation events held for nephrops, crab and lobster, demersal (Shetland) and pelagic sectors of the fleet.

An overview of the consultations events is given in Table 1.1. An additional small meeting was held in Lerwick to enable some of the Shetland skippers and vessel owners to contributed, since none of them had been able to attend the meeting in Peterhead.

	1	2	3	4	5	6	7	2
Segment:	**Scallops**	**Nephrops – trippers, any length Meeting One**	**Demersal**	**Nephrops – trippers, any length Meeting Two**	**Nephrops - Day Boats trawl & creel Meeting One**	**Crabbers – any length**	**Pelagic**	**Nephrops - Day Boats trawl & creel Meeting Two**
Consultants:	HC, TR, SM, JA, DO	HC, ME, SM, JA, DO	HC, TR, SM, JA, DO	HC, TR, SM, JA, DO	HC, TR, DO, SM, +1 seafish	HC, TR, SM, JA, DO	HC, KG, SM, JA, DO	HC, AB, SM, JA, DO
Town:	**Edinburgh**	**Fort William**	**Peterhead**	**Fraserburgh**	**Glasgow**	**Inverness**	**Aberdeen**	**Fort William**
Venue:	Marriot Hotel Glasgow Road	Moorings Hotel	Waterside Hotel	Fraserburgh Leisure Centre	SECC Crowne Plaza Hotel	Thistle Hotel	Airport Thistle Hotel	Moorings Hotel
Friday	**Friday**	**Friday**	**Friday**	**Saturday**	**Friday**	**Thursday**	**Friday**	**Friday**
Date:	**16th Jan**	**23rd Jan ***	**30th Jan**	**31st Jan**	**20th Feb**	**5th March**	**6th March**	**23rd Jan ***
Time	1030 - 1530	1030 - 1530	1030 - 1530	0900 - 1200	1030 - 1530	1030 - 1530	1030 - 1530	1030 - 1530

Table 1.1 List of consultation events for the project

1.1 Research activity to date

Desk-based research and analysis undertaken by study team to characterise the Scottish fleet sectors was conducted using information from Seafish, Sea food Scotland and SGMD.

Information presented in this report, along with some further analysis, will be used while evaluating the impacts, feasibility etc of proposed actions and selecting the final priority actions to recommend in the final report of this study.

1.2 The fleet and fish stocks

Fleet segment characterisation was conducted by Seafish based on survey and official data. This process continued and further refinements were made with input from attendees at the consultation events, in particular at the Fraserburgh nephrops event.

For the purposes of analyses in this study, Scottish boats are defined as those whose port of administration is in Scotland.

The port of administration is a good indicator of where a vessel is based. Should a boat with Scottish port of administration land its catch overseas (or in another part of the UK), the vessel's port of administration would still deal with collecting the relevant landings data, which would then be entered onto the management information system(s) used by the Scottish Government (SG). The annual statistics published by the SG define the nationality of a fishing boat by its port of administration. A vessel's port of administration can be changed.

There are other indications of a vessel's nationality, such as its Port Letter Number (PLN) or its home port, or a combination of these. The home port of a vessel is regarded as the port at which the vessel most commonly lands.

It was noted in some of the events however that there are vessels which habitually operate in Scottish waters and from Scottish ports which contribute to the Scottish economy but are not categorised at Scottish.

The Fishery Research Service (FRS) in Aberdeen provided up-to-date comment on the most recently available stock analysis from ICES and ensured that the most recent data were used on presentations to the events. Susan Lusseau from FRS attended the crab and lobster event and presented stock overviews during the presentations at the start of the event.

1.3 Financial performance of the fleet and drivers of profit

Analysis of the financial performance of the fleet is based on data from vessel accounts, collected by Seafish and on data relating to activity and landings, submitted by vessels to SGMD. Seafish relies on data from SGMD and MFA to complete these analyses.

Many of these tables show average per vessel figures for the fleet segment and for the top and bottom quarter of the segment by earnings figure, or the average figures for the most and least profitable quart of vessels in the segment.

These ways of splitting the vessels into quarters gives an indication of the variation within the segment which is important to consider when considering any potential actions. The characteristics of the most and least profitable (profit as percentage of sales) vessels can give some indication of the drivers of profitable operation.

During the second half of the events, it became apparent that the techniques used to estimate performance of the whole sector (based on the sample of accounts collected) might over-estimate the operating costs of some of the less profitable vessels. Seafish considered that in fact when vessels are trading close to break-even situation (low profit) the vessel owner or operator will avoid all but essential costs in order to avoid operating at a loss. The less profitable vessels therefore appear to operate with a different cost structure to more profitable vessels.

Seafish intends to adjust its estimation methods for the top and bottom quartiles of each segment but considers that its estimates of average performance for the segment are robust. The results presented in this report for lower quartile by profit probably over-estimate total costs and therefore under-estimate profit. Many of the segments show vessels making a loss on average in the lower quartile and it is felt that in 2007, losses are unlikely to have been so severe even in the least profitable quartile of vessels.

1.4 Markets for the catch

Market information was collected from Seafood Scotland and Seafish and key elements were included in the presentations to attendees at the start of each event. Several attendees commented that the information presented triggered and influenced their thinking during the events and this comment is reflected in the priority areas and actions that arose during the events. In some events, the attendees queried some of the market figures and Seafish undertook to look into these and confirm or update the figures presented.

1.5 Outputs from events

After each event, facilitators produced PowerPoint slides or documents of the flip charts from each break-out table. These were then reviewed by one author for each event who combined outputs into one report which reflects the outputs of the whole event. Initial comment, analysis on impacts and prioritisation is included in this section.

1.6 Structure of this report

This report is split into four main sections:

1 Introduction and Background
2 Nephrops sector
3 Crab and lobster sector
4 Pelagic sector

The outputs from the various segments will be considered together during the final analysis and evaluation phase of the project and the outcomes of that work will be included in the final report.

Although an additional small demersal event was held in Lerwick during the second half of the events, this event will not be reported separately, except to participants. The outputs from the event will be incorporated into the detailed analysis phase of the project and therefore will be included in the final report.

2 Nephrops Sector

The nephrops sector consultation events was held on 31 January 2009 in Fraserburgh for offshore vessels and on 20 February in Glasgow for smaller or day trip vessels. Much of the information contained in this interim report was presented to the attendees at the start of the events.

2.1 The Fleet and Fish Stocks

FRS kindly supplied up-to-date comments on the most recent ICES advice. The main point seems to be that they have no reason to expect dramatic changes in the available stock in the next few years.

For nephrops, a more likely source of change in opportunity is regulations aimed at protecting whitefish species which are caught as by-catch by nephrops trawl gear.

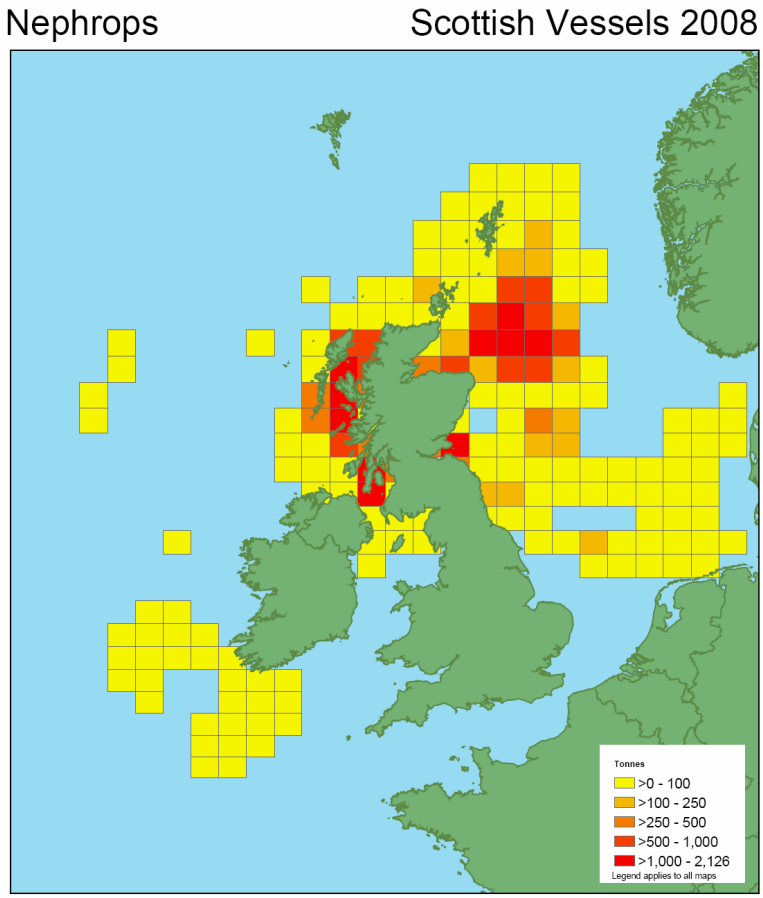


Figure 2.1 Location of nephrops caught by Scottish vessels, 2008.
Source: SGMD Management Information

The following items were extracted from the 2008 ICES report to the EU and were supplied to event attendees at the Fraserburgh.

Nephrops Area IV

State of the stocks

Most stocks appear to be fairly stable in terms of abundance and size composition. Noted exceptions are the Fladen Ground (FU 7) stock which showed a marked increase in abundance and the Farn Deeps (FU 6) stock where the population size dropped in 2007 and unusual changes in the seasonal sex-ratio pattern occurred. Trends in landings of different functional units are shown in Figure 6.4.14.2. Trends according to the North Sea fishers' survey are shown in Figure 6.4.14.3.

Figure 2.2 Nephrops Area IV State of the stocks, from ICES report 2008

Nephrops Area IV – Landings

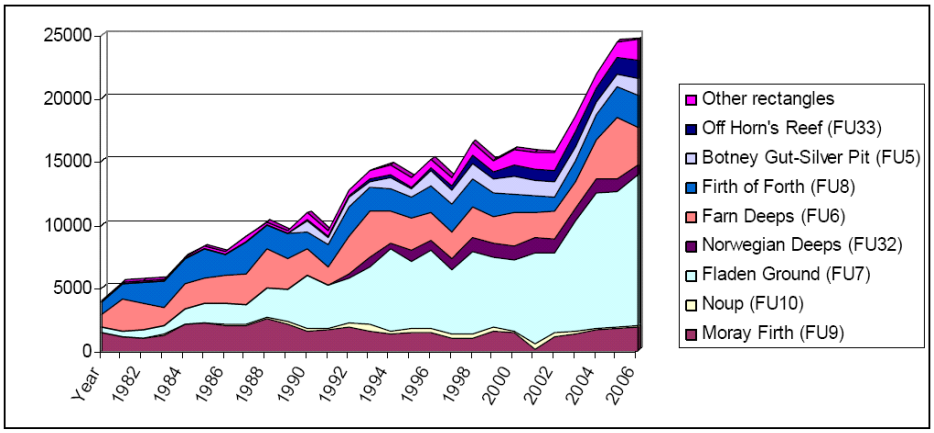


Figure 6.4.14.2 *Nephrops* in Subarea IV. Total landings divided into Functional Units and Other rectangles (tonnes).

Figure 2.3 Nephrops Area IV - Landings from ICES report 2008

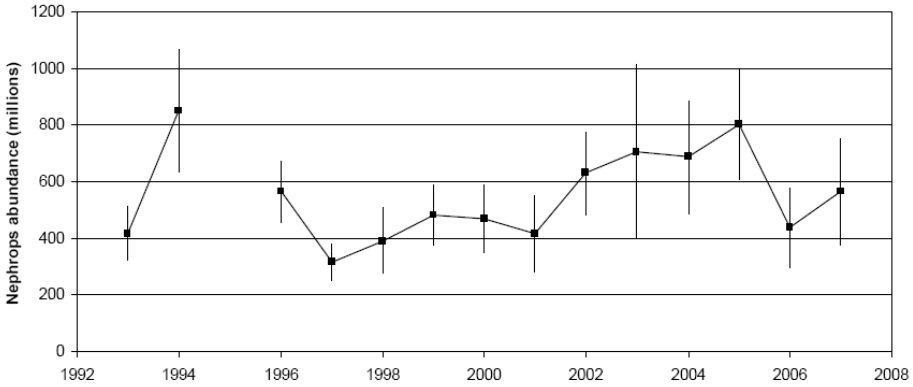


Figure 6.4.14.1.2 *Nephrops*, Moray Firth (FU 9). Time-series of TV survey abundance estimates, with 95% confidence intervals, 1993–2007. Abundance is expressed in number of individuals, but advice is based on interpretation of UWTV surveys indicative of relative abundance.

Figure 2.4 Nephrops Moray Firth TV survey from ICES report 2008

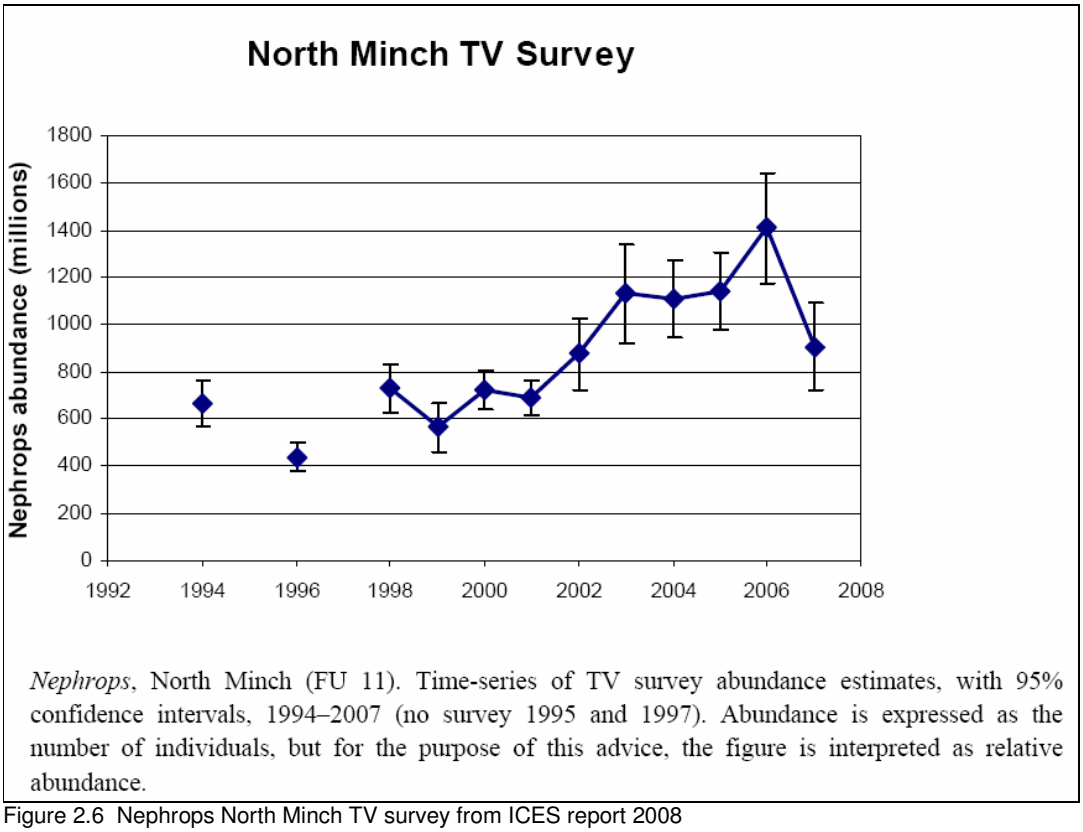
The following items were extracted from the 2008 ICES report to the EU and were supplied to event attendees at the Glasgow event.

Nephrops in North Minch (FU 11). Single stock exploitation boundaries (advice), management and landings.

Year	ICES advice	Advice for North Minch (FU11)	Recommended landings for VIa	Agreed TAC[1)]	ICES Landings (FU11)
1989					3.2
1990					2.5
1991					2.8
1992	maintain current effort		~11.4	12.0	3.6
1993	maintain current effort		~11.3	12.0	3.2
1994	maintain current effort		11.3	12.6	3.6
1995	maintain current effort		11.3	12.6	3.7
1996	maintain current effort		11.3	12.6	2.9
1997	as for 1996		11.3	12.6	3.0
1998	maintain current effort		11.3	12.6	2.4
1999	as for 1998		11.3	12.6	3.3
2000	maintain current effort		11.3	12.6	3.2
2001	as for 2000		11.3	11.34	3.3
2002	maintain current effort		11.3	11.34	3.4
2003	as for 2002		11.3	11.34	3.3
2004	maintain current effort		11.3	11.3	3.1
2005	as for 2004		11.3	12.7	3.0
2006	No increase in effort		-	17.7	4.2
2007	No increase effort and harvest rate of 15%	3.2	15.0	19.9	4.0
2008	As for 2007	3.2	15.0	19.9	
2009	No increase effort and recent average catch	< 4.1	15.1		

Weights in '000 t.
[1)] Subarea VI and EC waters of Division Vb.

Figure 2.5 Nephrops North Minch TACs from ICES report 2008



Nephrops, North Minch (FU 11). Time-series of TV survey abundance estimates, with 95% confidence intervals, 1994–2007 (no survey 1995 and 1997). Abundance is expressed as the number of individuals, but for the purpose of this advice, the figure is interpreted as relative abundance.

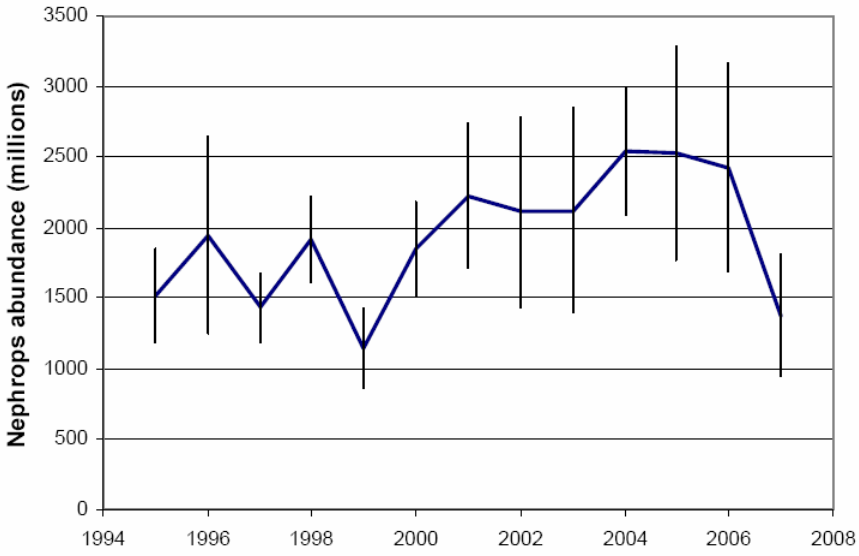
Figure 2.6 Nephrops North Minch TV survey from ICES report 2008

Nephrops in the South Minch (FU 12). Single stock exploitation boundaries (advice), management and landings.

Year	ICES advice	ICES Advice for South Minch (FU12)	Recommended landings for VIa	Agreed TAC [1)]	ICES landings (FU12)
1989					4.7
1990					4.4
1991					4.4
1992	maintain current effort		~11.4	12.0	4.2
1993	maintain current effort		~11.3	12.0	4.5
1994	maintain current effort		11.3	12.6	4.4
1995	maintain current effort		11.3	12.6	4.7
1996	maintain current effort		11.3	12.6	4.0
1997	as for 1996		11.3	12.6	4.3
1998	maintain current effort		11.3	12.6	3.7
1999	as for 1998		11.3	12.6	4.1
2000	maintain current effort		11.3	12.6	4.0
2001	as for 2000		11.3	11.34	4.0
2002	maintain current effort		11.3	11.34	3.3
2003	as for 2002		11.3	11.34	3.9
2004	maintain current effort		11.3	11.3	3.9
2005	as for 2004		11.3	12.7	3.8
2006	No increase in effort		-	17.7	4.6
2007	No increase in effort and harvest rate of 15%	7.2	15.0	19.9	5.5
2008	as for 2007	7.2	15.0	19.9	
2009	No increase effort and recent average catch	< 5.0	15.1		

Weights in '000 t.
[1)] Subarea VI and EC waters of Division Vb.

Figure 2.7 Nephrops South Minch TACs from ICES report 2008



Nephrops, South Minch (FU 12). Time-series of TV survey abundance estimates, with 95% confidence intervals, 1995–2007. Abundance is expressed as the number of individuals, but for the purpose of this advice, the figure is interpreted as relative abundance.

Figure 2.8 Nephrops South Minch TV survey from ICES report 2008

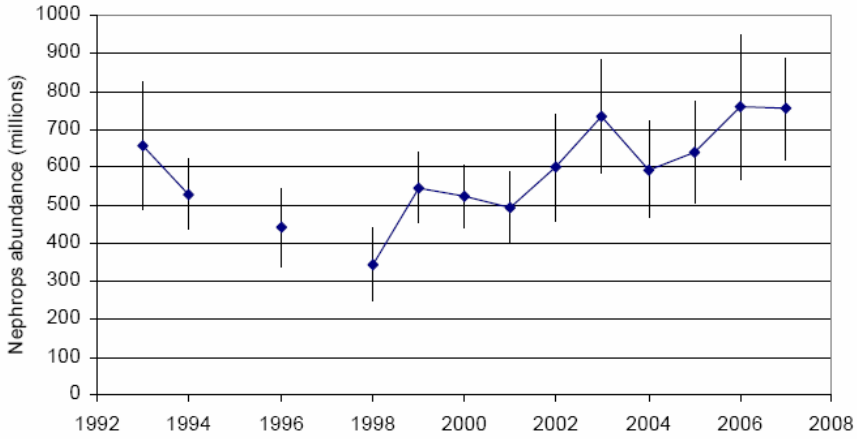


Figure 6.4.14.6.2 *Nephrops*, Firth of Forth (FU 8). Time-series of TV survey abundance estimates (in millions), with 95% confidence intervals, 1993–2005. Abundance is expressed in number of individuals, but advice is based on interpretation of UWTV surveys indicative of relative abundance.

Figure 2.9 Nephrops Firth of Forth TV survey from ICES report 2008

5.4.33.3 *Nephrops* in the Firth of Clyde (FU 13)

State of the stock

The UWTV survey indicates that the population increased steadily between 1999 and 2006, but declined in the most recent year (2007) to a level more typical of the period 1996 to 2002. Overall the stock is perceived to be stable.

Single-stock exploitation boundaries

Exploitation boundaries in relation to precautionary considerations

The current fishery appears sustainable. Therefore, ICES recommends that the *Nephrops* fisheries should not be allowed to increase relative to the past two years (2006–2007). This corresponds to landings of no more than 5700 tonnes for the Firth of Forth stock.

Figure 2.10 Nephrops Firth of Clyde, State of the stock from ICES report 2008

The following information relates to the sector vessels, their characteristics, activity and financial performance. Since the Fraserburgh event, on the advice of attendees, changes have been made to the allocation of vessels between the single rig and twin segments. The figures presented here are based on the reallocated segments and should give a better reflection of these fleet segments.

NS nephrops single rig trawl over 10m	Segment Total	Average Per Vessel
Number of Active Vessels	50	
Length (m)		14.4
Power (kW)	9,327	187
VCU	7,902	158
Registered Tonnage (GT)	2,225	44
Days at Sea	7,163	143
Volume of Landings (Tonnes)	3,987	80
Value of Landings (£)	£9,124,000	£182,000
Vessel Age (years)		28

Table 2.1 Segment characteristics, 2007 - NS nephrops single rig trawl over 10m (Scottish vessels)

NS nephrops twin rig trawl over 10m	Segment Total	Average Per Vessel
Number of Active Vessels	100	
Length (m)		19.9
Power (kW)	39,224	392
VCU	30,975	310
Registered Tonnage (GT)	14,002	140
Days at Sea	18,934	189
Volume of Landings (Tonnes)	21,803	218
Value of Landings (£)	£53,146,000	£531,000
Vessel Age (years)		18

Table 2.2 Segment characteristics, 2007 – NS nephrops twin rig trawl over 10m (Scottish vessels)

WoS nephrops single rig trawl over 10m	Segment Total	Average Per Vessel
Number of Active Vessels	112	
Length (m)		14.5
Power (kW)	17,913	160
VCU	16,386	146
Registered Tonnage (GT)	4,252	38
Days at Sea	18,396	164
Volume of Landings (Tonnes)	7,305	65
Value of Landings (£)	£17,489,000	£156,000
Vessel Age (years)		31

Table 2.3 Segment characteristics, 2007 – WoS nephrops single rig trawl over 10m (Scottish vessels)

WoS nephrops twin rig trawl over 10m	Segment Total	Average Per Vessel
Number of Active Vessels	32	
Length (m)		16.7
Power (kW)	7,967	249
VCU	6,629	207
Registered Tonnage (GT)	1,985	62
Days at Sea	5,938	186
Volume of Landings (Tonnes)	3,999	125
Value of Landings (£)	£9,442,000	£295,000
Vessel Age (years)		28

Table 2.4 Segment characteristics, 2007 – WoS nephrops twin rig trawl over 10m (Scottish vessels)

Demersal trawl between 9 and 9.99m	Segment Total	Average Per Vessel
Number of Active Vessels	69	
Length (m)		9.8
Power (kW)	7,596	110
VCU	6,180	90
Registered Tonnage (GT)	784	11
Days at Sea	8,577	124
Volume of Landings (Tonnes)	2,088	30
Value of Landings (£)	£5,740,000	£83,195
Vessel Age (years)		19

Table 2.5 Segment characteristics, 2007 – Demersal trawl between 9 and 9.99m (Scottish vessels)

Pots and traps under 10m	Segment Total	Average Per Vessel
Number of Active Vessels	169	
Length (m)		9.6
Power (kW)	20,049	119
VCU	15,011	89
Registered Tonnage (GT)	1,264	7
Days at Sea	22,645	134
Volume of Landings (Tonnes)	4,853	29
Value of Landings (£)	£12,386,000	£73,000
Vessel Age (years)		19

Table 2.6 Segment characteristics, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

	Average Per Vessel
Total Crew	6
Full Time Crew	4
Part Time Crew	2
Foreign Crew (as % of total crew)	51%

Table 2.7 Crew characteristics, 2007 – NS nephrops single rig trawl over 10m (Scottish vessels)

	Average Per Vessel
Total Crew	3
Full Time Crew	3
Part Time Crew	
Foreign Crew (as % of total crew)	45%

Table 2.8 Crew characteristics, 2007 – NS nephrops twin rig trawl over 10m (Scottish vessels)

	Average Per Vessel
Total Crew	5
Full Time Crew	3
Part Time Crew	2
Foreign Crew (as % of total crew)	36%

Table 2.9 Crew characteristics, 2007 – WoS nephrops single rig trawl over 10m (Scottish vessels)

	Average Per Vessel
Total Crew	4
Full Time Crew	4
Part Time Crew	
Foreign Crew (as % of total crew)	55%

Table 2.10 Crew characteristics, 2007 – WoS nephrops twin rig trawl over 10m (Scottish vessels)

	Average Per Vessel
Total Crew	3.6
Full Time Crew	2.0
Part Time Crew	1.6
Foreign Crew (as % of total crew)	47%

Table 2.11 Crew characteristics, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

	No. of vessels	Sum of days at sea	Sum of landings (Tonnes)	No. of vessels required if all did max days at sea	No. of vessels required if all did 80% of max days at sea
NS nephrops single rig trawl > 10m	50	7,163	3,987	33	41
NS nephrops twin rig trawl > 10m	100	18,934	21,803	64	80
WoS nephrops single rig trawl > 10m	112	18,396	7,305	66	83
WoS nephrops twin rig trawl > 10m	32	5,938	3,999	20	25
Pots and traps under 10m	169	22,645	4,853	69	87

Table 2.12 Capacity utilisation in the Nephrops sector, 2007

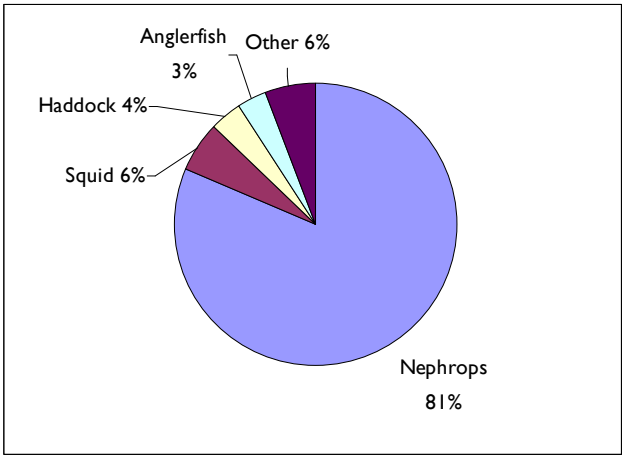


Figure 2.11 Catch composition, 2007 (in value) - NS nephrops single rig trawl over 10m (Scottish vessels)

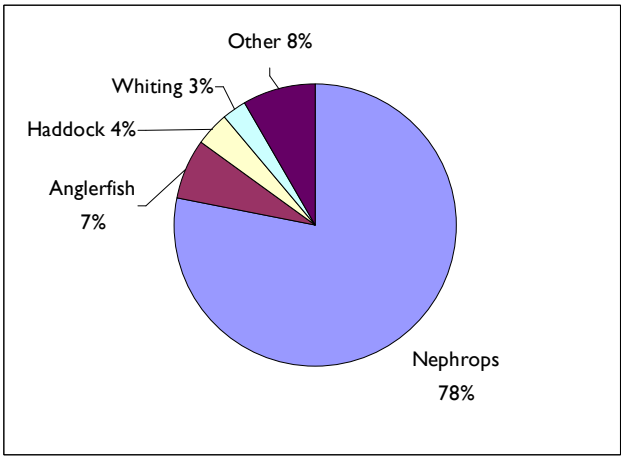


Figure 2.12 Catch composition, 2007 (in value) - NS nephrops twin rig trawl over 10m (Scottish vessels)

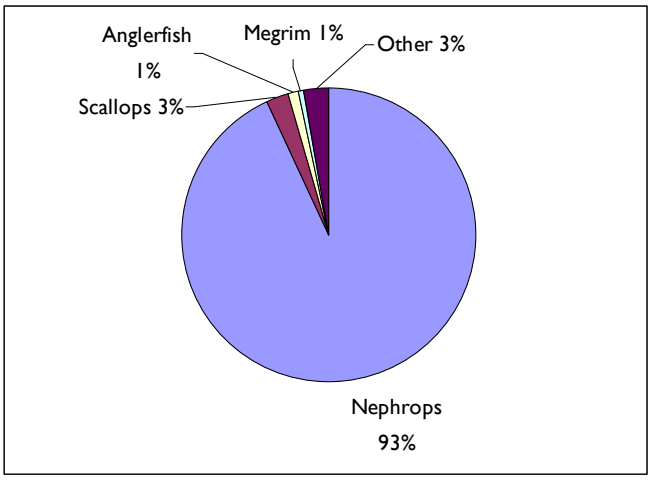


Figure 2.13 Catch composition, 2007 (in value) - WoS nephrops single rig trawl over 10m (Scottish vessels)

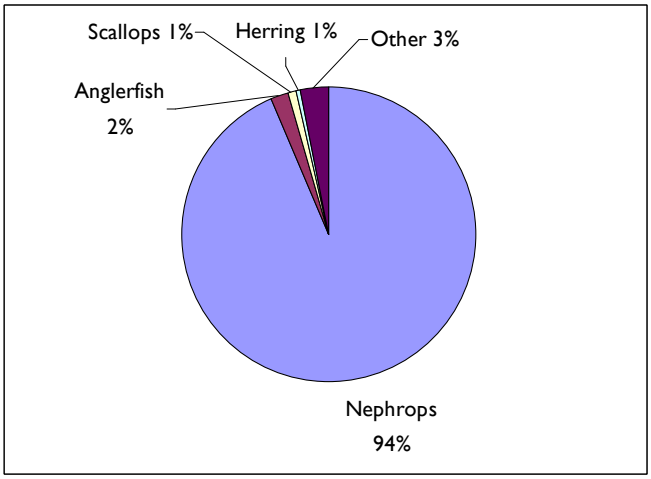


Figure 2.14 Catch composition, 2007 (in value) - WoS nephrops twin rig trawl over 10m (Scottish vessels)

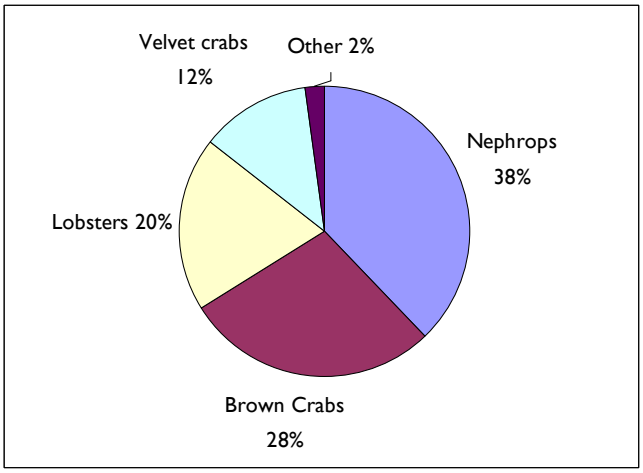


Figure 2.15 Catch composition, 2007 (in value) – Pots and traps between 9 and 9.99m (Scottish vessels)

2.2 Financial Performance of the Fleet and Drivers of Profit

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£370,000	£183,000	£71,000
Fuel & Oil cost	£47,000	£26,000	£11,000
Crew share	£113,000	£56,000	£22,000
Operating Profit	£96,000	£28,000	-£7,000
Net Profit	£73,000	£19,000	-£10,000
Days at Sea	188	143	110

Table 2.13 Average vessel performance, 2007 - NS nephrops single rig trawl over 10m (Scottish vessels)

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£874,000	£532,000	£263,000
Fuel & Oil cost	£137,000	£90,000	£57,000
Crew share	£244,000	£148,000	£73,000
Operating Profit	£226,000	£99,000	-£3,000
Net Profit	£179,000	£77,000	-£9,000
Days at Sea	240	189	147

Table 2.14 Average vessel performance, 2007 - NS nephrops twin rig trawl over 10m (Scottish vessels)

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£271,000	£156,000	£68,000
Fuel & Oil cost	£32,000	£21,000	£11,000
Crew share	£85,000	£49,000	£21,000
Operating Profit	£65,000	£23,000	-£7,000
Net Profit	£41,000	£14,000	-£9,000
Days at Sea	198	164	127

Table 2.15 Average vessel performance, 2007 - WoS nephrops single rig trawl over 10m (Scottish vessels)

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£499,000	£295,000	£153,000
Fuel & Oil cost	£86,000	£60,000	£42,000
Crew share	£141,000	£83,000	£43,000
Operating Profit	£106,000	£28,000	-£25,000
Net Profit	£70,000	£15,000	-£29,000
Days at Sea	213	186	156

Table 2.16 Average vessel performance, 2007 - WoS nephrops twin rig trawl over 10m (Scottish vessels)

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£156,816	£83,195	£20,729
Fuel & Oil	£16,142	£10,568	£4,036
Crew share	£41,086	£21,797	£5,431
Operating Profit	£53,005	£18,020	-£5,538
Net Profit	£37,326	£10,776	-£7,493
Days at Sea	166	124	63

Table 2.17 Average vessel performance, 2007 – Demersal trawl between 9 and 9.99m (Scottish vessels)

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£126,000	£73,000	£25,000
Fuel & Oil	£9,000	£6,000	£3,000
Crew share	£30,000	£17,000	£6,000
Operating Profit	£50,000	£21,000	-£3,000
Net Profit	£35,000	£13,000	-£5,000
Days at Sea	172	134	79

Table 2.18 Average vessel performance, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

Average per boat for:	Most profitable quarter	Least profitable quarter
Fishing income	£356,200	£76,800
Net Profit	£73,400	-£20,600
Vessel length (m)	17.3	13.2
Power (kW)	268	164
Volume landed (Tonnes)	150	34
Days at Sea	176	115
Volume per day at sea (Tonnes per day)	0.86	0.30

Table 2.19 Characteristics of the most profitable quarter and the least profitable quarter, 2007 NS nephrops single rig trawl over 10m (Scottish vessels)

The definition of profitable is operational profit as a percentage of gross fishing income

Average per boat for:	Most profitable quarter	Least profitable quarter
Fishing income	£784,800	£262,500
Net Profit	£176,700	-£15,000
Vessel length (m)	19.8	19.2
Power (kW)	416	326
Volume landed (Tonnes)	301	113
Days at Sea	218	151
Volume per day at sea (Tonnes per day)	1.38	0.75

Table 2.20 Characteristics of the most profitable quarter and the least profitable quarter, 2007 NS nephrops twin rig trawl over 10m (Scottish vessels)

Average per boat for:	Most profitable quarter	Least profitable quarter
Fishing income	£254,000	£72,000
Net Profit	£44,000	-£15,000
Vessel length (m)	16	14
Power (kW)	191	137
Volume landed (Tonnes)	101	29
Days at Sea	184	137
Volume per day at sea (Tonnes per day)	0.55	0.21

Table 2.21 Characteristics of the most profitable quarter and the least profitable quarter, 2007 WoS nephrops single rig trawl over 10m (Scottish vessels)

Average per boat for:	Most profitable quarter	Least profitable quarter
Fishing income	£503,000	£158,000
Net Profit	£82,000	-£39,000
Vessel length (m)	18	16
Power (kW)	307	214
Volume landed (Tonnes)	186	70
Days at Sea	201	172
Volume per day at sea (Tonnes per day)	0.92	0.41

Table 2.22 Characteristics of the most profitable quarter and the least profitable quarter, 2007 WoS nephrops twin rig trawl over 10m (Scottish vessels)

	Most profitable quarter		Segment		Least profitable quarter	
	Average (£)	% of Earnings	Average (£)	% of Earnings	Average (£)	% of Earnings
Fishing Income	356,200		182,500	96%	76,800	
Non-Fishing Income	13,500		6,900	4%	2,900	
Total Earnings	**369,700**		**189,400**	**100%**	**79,700**	
Fishing Expenses						
Commission	15,300		7,900	4%	3,300	
Harbour Dues	13,100		6,700	4%	2,800	
Subscriptions & Levies	6,700		2,700	1%	900	
Shore Labour	1,200		600	0%	300	
Fuel and Oil	43,400	12%	26,000	14%	17,300	22%
Boxes	3,000		1,600	1%	700	
Ice	2,700		1,400	1%	600	
Crew Travel	2,200		1,800	1%	1,500	
Food Stores	6,100		3,700	2%	2,400	
Quota Leasing	3,200	1%	2,600	1%	2,100	3%
Days Purchase	0		n/a	n/a	0	
Other Expenses	3,100		2,600	1%	2,100	
Crew Share	108,600	29%	55,700	29%	23,400	29%
Total Fishing Expenses	**208,800**	**56%**	**113,300**	**60%**	**57,400**	**72%**
Vessel Owner Expenses						
Insurance	10,700		7,800	4%	6,800	
Repairs	22,200		18,100	10%	14,500	
Gear	12,900		10,500	6%	8,400	
Hire and Maintenance	9,100		5,500	3%	3,600	
Other Vessel Owner Expenses	8,900		6,400	3%	5,600	
Total Vessel Owner Expenses	**63,800**	**17%**	**48,300**	**26%**	**38,900**	**49%**
Total Expenses	**272,600**	**74%**	**161,600**	**85%**	**96,300**	**121%**
Profit (operating)	**97,100**	**26%**	**27,800**	**15%**	**-16,500**	**-21%**
Depreciation	10,400		3,900	2%	1,800	
Interest	13,300		5,000	3%	2,300	
Net Profit	**73,400**	**20%**	**18,900**	**10%**	**-20,600**	**-26%**

Table 2.23 Average cost structure - NS nephrops single rig trawl over 10m (Scottish vessels)

	Most profitable quarter		Segment		Least profitable quarter	
	Average (£)	% of Earnings	Average (£)	% of Earnings	Average (£)	% of Earnings
Fishing Income	784,800		531,500	97%	262,500	
Non-Fishing Income	21,000		14,300	3%	7,000	
Total Earnings	**805,900**		**545,700**	**100%**	**269,500**	
Fishing Expenses						
Commission	38,300		25,900	5%	12,800	
Harbour Dues	28,100		19,000	3%	9,400	
Subscriptions & Levies	9,300		6,400	1%	2,700	
Shore Labour	2,700		2,000	0%	1,000	
Fuel and Oil	107,200	13%	90,400	17%	60,900	23%
Boxes	8,900		6,400	1%	3,300	
Ice	8,800		6,300	1%	3,300	
Crew Travel	3,700		3,200	1%	2,600	
Food Stores	8,900		7,500	1%	5,100	
Quota Leasing	8,400	1%	7,300	1%	5,800	2%
Days Purchase	0		n/a	n/a	0	
Other Expenses	8,800		7,600	1%	6,100	
Crew Share	219,100	27%	148,400	27%	73,300	27%
Total Fishing Expenses	**452,200**	**56%**	**330,500**	**61%**	**186,300**	**69%**
Vessel Owner Expenses						
Insurance	23,400		22,400	4%	19,400	
Repairs	56,700		49,200	9%	39,200	
Gear	24,900		21,700	4%	17,200	
Hire and Maintenance	8,600		7,300	1%	4,900	
Other Vessel Owner Expenses	16,200		15,500	3%	13,500	
Total Vessel Owner Expenses	**129,900**	**16%**	**116,200**	**21%**	**94,200**	**35%**
Total Expenses	**582,200**	**72%**	**446,700**	**82%**	**280,400**	**104%**
Profit (operating)	**223,700**	**28%**	**99,000**	**18%**	**-10,900**	**-4%**
Depreciation	29,800		14,200	3%	2,600	
Interest	17,200		8,200	2%	1,500	
Net Profit	**176,700**	**22%**	**76,600**	**14%**	**-15,000**	**-6%**

Table 2.24 Average cost structure, 2007 - NS nephrops twin rig trawl over 10m (Scottish vessels)

	Most profitable quarter		Segment		Least profitable quarter	
	Average (£)	% of Earnings	Average (£)	% of Earnings	Average (£)	% of Earnings
Fishing Income	253,500		156,200	99%	72,000	
Non-Fishing Income	2,500		1,600	1%	700	
Total Earnings	**256,100**		**157,700**	**100%**	**72,700**	
Fishing Expenses						
Commission	9,100		5,600	4%	2,600	
Harbour Dues	5,100		3,100	2%	1,400	
Subscriptions & Levies	3,300		1,800	1%	700	
Shore Labour	900		600	0%	300	
Fuel and Oil	26,800	10%	20,700	13%	14,500	20%
Boxes	2,000		1,300	1%	600	
Ice	2,100		1,300	1%	600	
Crew Travel	1,300		1,200	1%	1,000	
Food Stores	5,400		4,200	3%	2,900	
Quota Leasing	1,000	0%	900	1%	800	1%
Days Purchase	0		0	0%	0	
Other Expenses	3,400		3,000	2%	2,500	
Crew Share	79,600	31%	49,000	31%	22,600	31%
Total Fishing Expenses	**140,100**	**55%**	**92,700**	**59%**	**50,400**	**69%**
Vessel Owner Expenses						
Insurance	7,300		6,300	4%	5,400	
Repairs	17,600		15,700	10%	13,100	
Gear	12,300		11,000	7%	9,100	
Hire and Maintenance	6,300		4,900	3%	3,400	
Other Vessel Owner Expenses	5,200		4,400	3%	3,900	
Total Vessel Owner Expenses	**48,700**	**19%**	**42,200**	**27%**	**34,900**	**48%**
Total Expenses	**188,800**	**74%**	**135,000**	**86%**	**85,300**	**117%**
Profit (operating)	**67,300**	**26%**	**22,700**	**14%**	**-12,600**	**-17%**
Depreciation	15,100		5,900	4%	1,800	
Interest	8,400		3,300	2%	1,000	
Net Profit	**43,800**	**17%**	**13,500**	**9%**	**-15,400**	**-21%**

Table 2.25 Average cost structure, 2007 - WoS nephrops single rig trawl over 10m (Scottish vessels)

	Most profitable quarter		Segment		Least profitable quarter	
	Average (£)	% of Earnings	Average (£)	% of Earnings	Average (£)	% of Earnings
Fishing Income	503,000		295,100	98%	157,900	
Non-Fishing Income	9,600		5,600	2%	3,000	
Total Earnings	**512,500**		**300,700**	**100%**	**160,900**	
Fishing Expenses						
Commission	21,100		12,400	4%	6,600	
Harbour Dues	11,600		6,800	2%	3,600	
Subscriptions & Levies	9,000		4,100	1%	1,600	
Shore Labour	1,700		1,200	0%	700	
Fuel and Oil	81,600	16%	59,700	20%	47,100	29%
Boxes	7,100		4,700	2%	2,700	
Ice	6,500		4,300	1%	2,400	
Crew Travel	0		n/a	n/a	0	
Food Stores	10,400		7,600	3%	6,000	
Quota Leasing	6,900	1%	6,300	2%	5,900	4%
Days Purchase	0		0	0%	0	
Other Expenses	9,300		8,600	3%	7,900	
Crew Share	141,800	28%	83,200	28%	44,500	28%
Total Fishing Expenses	**306,900**	**60%**	**199,000**	**66%**	**129,000**	**80%**
Vessel Owner Expenses						
Insurance	12,800		10,700	4%	9,300	
Repairs	33,100		30,600	10%	28,300	
Gear	10,400		9,600	3%	8,900	
Hire and Maintenance	17,300		12,600	4%	10,000	
Other Vessel Owner Expenses	12,200		10,200	3%	8,900	
Total Vessel Owner Expenses	**85,800**	**17%**	**73,700**	**25%**	**65,500**	**41%**
Total Expenses	**392,700**	**77%**	**272,700**	**91%**	**194,500**	**121%**
Profit (operating)	**119,800**	**23%**	**28,000**	**9%**	**-33,600**	**-21%**
Depreciation	21,000		7,200	2%	3,000	
Interest	17,100		5,900	2%	2,400	
Net Profit	**81,800**	**16%**	**14,900**	**5%**	**-39,000**	**-24%**

Table 2.26 Average cost structure, 2007 - WoS nephrops twin rig trawl over 10m (Scottish vessels)

	Most profitable quarter		Segment		Least profitable quarter	
	Average (£)	% of Earnings	Average (£)	% of Earnings	Average (£)	% of Earnings
Fishing Income	157,400		83,200	97%	23,700	
Non-Fishing Income	5,700		3,000	3%	900	
Total Earnings	**163,100**		**86,200**	**100%**	**24,600**	
Fishing Expenses						
Commission	3,900		2,100	2%	600	
Harbour Dues	3,500		1,800	2%	500	
Subscriptions & Levies	1,000		500	1%	100	
Shore Labour	2,000		1,100	1%	400	
Fuel and Oil	13,300	8%	10,600	12%	6,700	27%
Boxes	700		400	0%	100	
Ice	2,100		1,200	1%	400	
Crew Travel	600		500	1%	400	
Food Stores	2,800		2,200	3%	1,400	
Quota Leasing	100	0%	100	0%	0	0%
Days Purchase	0		n/a	n/a	0	
Other Expenses	5,000		4,300	5%	2,900	
Crew Share	41,200	25%	21,800	25%	6,200	25%
Total Fishing Expenses	**76,300**	**47%**	**46,600**	**54%**	**19,800**	**80%**
Vessel Owner Expenses						
Insurance	3,800		3,400	4%	3,200	
Repairs	8,000		6,900	8%	4,700	
Gear	5,500		4,700	5%	3,200	
Hire and Maintenance	4,300		3,400	4%	2,200	
Other Vessel Owner Expenses	3,400		3,100	4%	2,900	
Total Vessel Owner Expenses	**25,000**	**15%**	**21,600**	**25%**	**16,300**	**66%**
Total Expenses	**101,300**	**62%**	**68,200**	**79%**	**36,100**	**147%**
Profit (operating)	**61,700**	**38%**	**18,000**	**21%**	**-11,600**	**-47%**
Depreciation	13,800		5,500	6%	2,600	
Interest	4,400		1,800	2%	800	
Net Profit	**43,500**	**27%**	**10,800**	**13%**	**-15,000**	**-61%**

Table 2.27 Average cost structure, 2007 – Demersal trawl between 9 and 9.99m (Scottish vessels)

	Segment	
	Average (£)	% of Earnings
Fishing Income	73,300	99%
Non-Fishing Income	1,000	1%
Total Earnings	**74,200**	**100%**
Fishing Expenses		
Commission	100	0%
Harbour Dues	500	1%
Subscriptions & Levies	200	0%
Shore Labour	100	0%
Fuel and Oil	6,200	8%
Boxes	n/a	n/a
Ice	400	1%
Crew Travel	500	1%
Food Stores	1,500	2%
Quota Leasing	0	0%
Days Purchase	n/a	n/a
Other Expenses	6,500	9%
Crew Share	17,400	23%
Total Fishing Expenses	**33,500**	**45%**
Vessel Owner Expenses		
Insurance	2,200	3%
Repairs	5,700	8%
Gear	4,200	6%
Hire and Maintenance	2,400	3%
Other Vessel Owner Expenses	5,700	8%
Total Vessel Owner Expenses	**20,200**	**27%**
Total Expenses	**53,700**	**72%**
Profit (operating)	**20,600**	**28%**
Depreciation	6,100	8%
Interest	1,700	2%
Net Profit	**12,800**	**17%**

Table 2.28 Average cost structure, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

2.3 Markets for the Catch

The following information from Seafood Scotland and Seafish was presented to attendees at the Fraserburgh and Glasgow events.

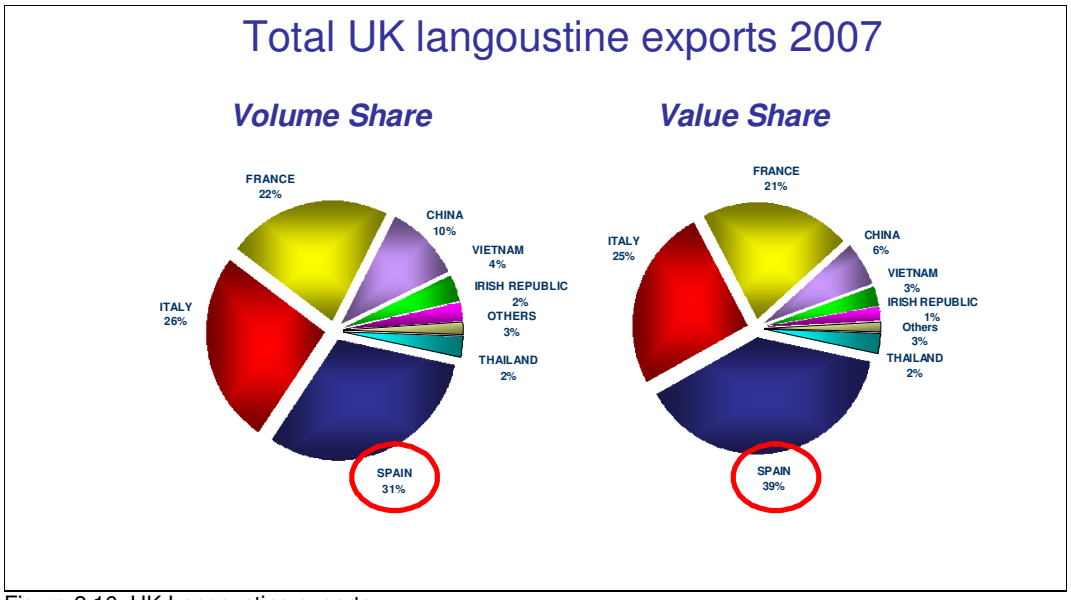


Figure 2.16 UK Langoustine exports

Figure 2.17 Markets for products from nephrops

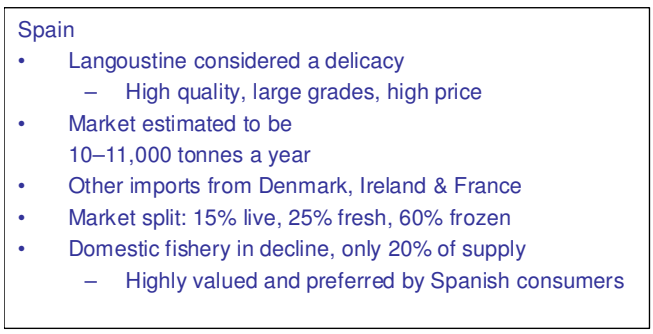


Figure 2.18 Spanish market for nephrops

Italy
- Market estimated to be 13,000 – 14,000 T per year
  - 5,000 tonnes fresh/live
  - No differentiation between live and "extra-fresh"
  - 9,000 tonnes frozen
  - Market predominantly satisfied through imports
    - 4,000 T landed from domestic fishery in Adriatic
    - Paler colour langoustine, verging on white
  - Local is seen as best
  - 69% consumers eat fish/shellfish once or twice a week

Figure 2.19 Italian market for nephrops

France
- Market estimated to be 16,000 tonnes per annum
  - 3,500 tonnes live
  - 1,000 frozen
  - 12,500 fresh (including cooked chilled)
- Brittany fishery for "live"
  - Located on West Coast
  - Seasonal: April-August
  - Trawled
  - Land 3,000 T of "live" from total French catch of c.7,000 T
  - Local markets and Paris
  - Starting to develop new techniques and markets

Figure 2.20 French market for nephrops

Emerging markets
- Russia
- Far East
- Middle East

Figure 2.21 Emerging markets for nephrops

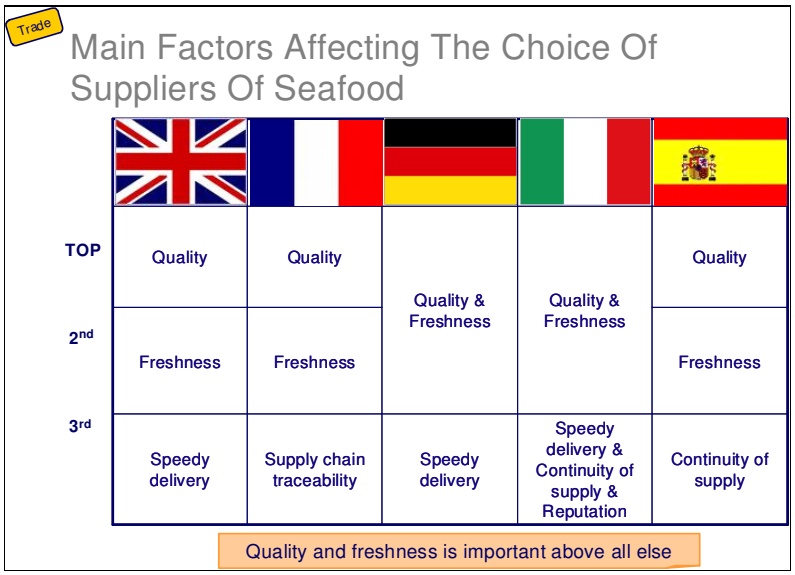


Figure 2.22 Factors affecting buyers' choice of supplier

2.4 Fraserburgh Nephrops, event findings and analysis

This section sets out the findings from the consultation event held on 31st January 2009. The results reported here are from an event which included participants from the north east of Scotland representing over 10m vessels and included a nephrops processor.

2.4.1 Current Conditions, Opportunities and Challenges

Table 2.29 and table 2.30 provide a summary of current conditions, opportunities and challenges identified by attendees at the event.

Following analysis, the findings have been grouped under the following headings:

- Markets, Product and Prices
- People
- Onshore Sector – Processing and support
- Fisheries Management, access to fishery, stocks
- Fleet Operation

What works well? **What are our Opportunities?**	**What doesn't work well?** **What challenges do we face?**
Markets, Product and Prices	
• Good links to market • Quality premium product, much of the catch iced. • OP: streamline the route to market – too many stages in the chain.	• Over supply of the market • Helping vessel owners to adopt more market-focused outlook and practices • Too many stages / people in the supply chain
People	
• Working conditions have improved on board, especially communication between families ashore and men at sea • Family-owned vessel businesses • Way of life – fishermen are motivated and enthusiastic about the sector	• Competing for local crew against high wages in the offshore oil sector. • A bit of a dog-eat-dog atmosphere among the sector – every person / boat for themselves
Onshore sector	
• Quick payments to vessels, don't have to wait long time to get income • Backup onshore • Support services and engineers readily available [nb. contrast to comments from west coast]	

Table 2.29 SWOT analysis output from Fraserburgh event (section a)

What works well? What are our Opportunities?	What doesn't work well? What challenges do we face?
Fisheries Management, Access to Fishery and Stocks	
• Most North Sea quota is UK owned. • Scottish fisheries science is better than EU science. Opportunity for closer integration and more inclusion of fishermen's knowledge to improve faith of fishermen in scientific approach to stock assessment.	• No cap to number of licensed vessels which can enter the nephrops fishery. Since not all TAC is caught, there is legally scope for more vessels to catch nephrops • the stock and the marketplace cannot absorb these without loss of profit. • Too many vessels in the nephrops sector, restrict access – go back to number of boats 3 years ago • Too much pressure the stock (not illegal over fishing) – risks to the sustainability of the stock • Large volume of complex paperwork to deal with for management compliance • Quota system • Days at scheme not working – too rigid, not enough flexibility for different vessels • Lack of long term approach to management, lack of multi-year stability in management regime. No stability in terms of managing businesses • Scientific stock assessments use inappropriate towing methods – might be good for data continuity but no good for actually finding out what the state of the stock really is now. • Nephrops sector is being threatened by management of other fish stocks, especially cod.
Fleet Operation	
• OP: newer boats, better able to handle product and improve quality • OP: Freezing at sea • Some improvement in understanding among skippers that profit is more important than gross earnings – but need to improve this • Scottish nephrops sector very innovative new gears and ideas (have been very willing to try and trial new nets etc; very keen to implement suggested approaches for sustainable fishing and management • Vessel businesses are generally successful • Safety aspects have improved over last 10 years and are good now	• Want less time at sea, but keep fleet profit levels • Cost of leasing quota • Lack of credit from banks for investment in vessels • High grading and discards

Table 2.30 SWOT analysis output from Fraserburgh event (section b)

2.4.2 Priority Areas and Proposed Actions

The consultation event raised a large number of issues on which attendees had strong opinions. They were invited to vote on which of these they considered to be a priority,

covering both opportunities that could be built on and challenges for which solutions need to be found. Because many of the issues were inter-linked, analysis has grouped the results under three overarching priority areas:

1 Fleet renewal;

2 Marketing issues; and

3 Fisheries Management, Access to Fishery and Stocks;

The remainder of this section describes each of these priority areas in turn. Within each priority area the actions proposed during the event are listed.

2.4.2.1 Fleet renewal

There was agreement that many boats in the sector are too old, and are therefore expensive in terms of maintenance and have lower fuel efficiency than newer boats, all of which reduce operating profit. There was a suggestion that vessels over 10 years old should be removed or renewed, although there was also acceptance that this view might be considered extreme by others in the sector.

This issue links in with the issue of perceived excessive pressure on the fish stocks. In previous decommissioning schemes there was some displacement of effort from catching whitefish to catching prawns. Some owners who decommissioned a whitefish vessel then purchased another licence and moved into the prawn fishery. It is important to correct this shift of effort into the nephrops sector.

There is a desire to see modern vessels which are well equipped to handle the product well and improve quality of the landed product in order to improve prices and operating profit and ultimately, the return on capital invested in the business. There was also some mention of poor crew conditions on board some of the older vessels and how difficult it is to retain good quality crew members who will maximise the value of the product and improve profit if the crew accommodation is of a poor standard.

Action One: Decommissioning scheme – better planned than previous schemes

This should aim to remove the older, poorer quality vessels from the fleet to improve the overall quality of the remaining fleet. The scheme should be designed to ensure that there are no issues of slipper skippers and quota being sold or leased out by previous owners of decommissioned vessels. It is possible that some of the money given out for decommissioning would find its way into improving the standard of vessels fishing against the remaining licences in the fleet. This effect would not necessarily in itself improve profit as measured by return on investment if there is suddenly more investment requiring a return.

If the quota allocation issue is resolved, partly by decommissioning, then there will be less cost of leasing quota and therefore immediately more profit per vessel which would enable them to renew their vessels and modernise the fleet, thus further improving profit and putting it on a sustainable footing.

This action could have a significant positive impact on safety at sea, crew retention and profit of the remaining vessels.

Action Two: Reform EFF grants system to include vessels under 5 years old

There was no acceptance of the rationale for excluding younger and new vessels from being awarded grants to improve the quality and therefore the price of the catch. There is a desire that the fleet should be modern and well-equipped to deliver the appropriate quality products

to maximise value of the catch and those with the acumen to invest in newer vessels feel penalised by the current restriction to grants which prevents them from benefiting.

The impact of this action is expected to be to encourage investment in newer vessels, reducing the overall average age of the fleet and enabling vessel owners to improve quality and therefore sales prices and profit margin.

2.4.2.2 Marketing issues

The second priority area identified for the nephrops offshore sector is product and market development. There is a general feeling that more value could be achieved from the stock available to the fleet if the vessels can find ways to ensure that the product landed is of maximum value to the market.

The need to balance supply with market demand was identified and was seen to be something that both vessels and processing businesses should be involved with and could benefit from.

The following action was identified in support of this area.

Action Three: Adopt a minimum landing size for nephrops

There is a clear market preference for larger size nephrops reflected in the higher prices available for large size animals. One way to increase the average size and therefore the average price per tonne landed would be to exclude the smaller specimens by legislation.

The business thinking behind this action was that for the same fishing costs, if the average price per tonne is higher, due to larger average size nephrops, then the profit margin should be greater. Attendees felt that it was important to help their sector move away from a focus on volume toward a focus on suiting market preferences to maximise price per tonne.

It was noted that it would be necessary to find a solution to ensure that this action does not lead to an increase in discards of smaller size nephrops.

Although it was recognised that this action might have some negative impacts, particularly on the west coast of Scotland, it was felt to be an important step towards improving the value of the catch by ensuring that nephrops are taken from the sea only after they have reached their most valuable size for the market place.

2.4.2.3 Fisheries Management, Access to Fishery and Stocks

It was understood that there are difficulties in managing this nephrops fishery, given the range of circumstances and factors involved. However, it was felt that various aspects of the management regime were making it harder to make a profit in a sustainable way. There was strong desire to see some amendments which would reduce pressure on the stocks and make it easier to plan businesses.

There was also a range of views about the quality and usefulness of the stock assessments which form the basis for many fisheries management decisions. Although some appreciation was shown of the Scottish stock assessment scientists, there was call for further improvements to the overall quality and accuracy of stock assessments, because this lack of accuracy is perceived as a significant impediment to long term profitability of the fleet.

Action Four: Adopt a days at sea scheme fixed per boat

There was some desire to regulate quite strongly in order to limit effort and pressure on the stock. Overall it seems that there was a feeling that there is more activity than would be

ideal in the North Sea nephrops fishery. It was proposed that nephrops vessels should be given a days at sea allowance that is not tradable with other vessels and that could not be circumvented through derogations. The allowance could be fixed for a multi-year period in order to promote business stability.

The expected benefits would include business stability but also, and primarily, stock sustainability and maintaining higher prices by not over-supplying the market.

This action is fairly directly opposite to the views of some at the meeting who felt that a fixed days scheme would not be appropriate since one approach would not be suitable for everybody.

Action Five: Plan in a time lag between agreeing new management rules and implementing them

Emphasised in particular by the EU agreements for fisheries management in 2009, which are not clearly understood and which member states have not yet decided how to implement, there was a heart-felt plea for business owners to be given some chance to prepare for the implementation of new rules. Having to adapt with no notice makes it impossible to plan business changes, investments, improvements and so on. In some cases there is a need to purchase new equipment to comply with new regulations and having to do so at short notice can make the adjustment more costly than it otherwise would be.

The benefits of this action would be that business owners could consider their options for complying with new regulations and have time to cost out their choices and select the most profitable way of complying. Other benefits relate to removing the stress involved in making significant business changes, annually at short notice.

Action Six: Introduce a scheme to better integrate knowledge and experience of fishermen into fisheries science

There was a view that in the longer run, better quality, more accurate stock assessments and better understanding of fisheries biological science would help to improve profit. There is a feeling not restricted to this group, that the fishing opportunities are unnecessarily restricted because stock assessments are over-cautious. There is therefore a corresponding desire to help to improve the stock assessments.

Under this action heading the following proposals were made:

- FRS scientists and observers on monitoring trips seem sometimes to want to look for fish in places where the fishermen know they won't be at that time of year. There needs to be a better exchange of information about fish, where and when they are, and how the stock assessment process should best progress to find out the picture each year, not just in relation to the previous year. Improved transparency on both sides would improve the quality of stock assessments and possibly the understanding of and faith in stock assessments.
- To further the science-industry partnership there should be more small group meetings with scientists and fishermen, similar to this consultation event, in addition to usual association meetings.
- The higher echelons of ICES would benefit from going "back to the shop floor". Those planning programmes and communicating at a high level with the Commission have lost touch with reality and should be invited to go on some fishing trips.

- Continuity or length of service of civil servants who often interface between scientists and fishermen should be increased, so that more trust and understanding can be established.
- A facilitator to work between fishermen and scientists, who might help ensure understanding between both groups when use of language and concepts might otherwise block understanding.

Action Seven: Adopt a long term management plan for the North Sea nephrops fishery

This action ties in with others aimed to reduce business uncertainty and reduce the costs of having to react to major changes at short notice. Suggestions were for a plan for 5 or more years.

The impact is expected to be more stable business environment, fewer major changes to business operations and market strategies having to be made at short notice, with improved profits in the longer run.

Long term management plans are seen as the alternative to the crisis management feel to the current situation.

Action Eight: Find a way to exclude nephrops vessels from the impacts of the cod recovery plan.

There was a feeling that the nephrops sector as a whole is being penalised and restricted because of the need to recover cod, even though many nephrops vessels can demonstrate very low (<5%) cod bycatch. It was felt that the SFF Nephrops committee might be well placed to work with the government to take this action forward.

The benefits of this action were seen as removing some of the restrictions on days at sea which penalise those businesses wishing to work their vessel hard throughout the year, perhaps with rotating crews.

Action Nine: Ensure that any vessel fishing in Scottish waters has to abide by Scottish legislation.

There was a feeling that perhaps there are some nations who have a competitive advantage over the Scottish fleet because their own governments are not as strict as the Scottish government at enforcing compliance with regulations. Moreover, if Scotland was to impose some regulation in its own EEZ on the Scottish fleet (real time closure…), there was a concern that other European fleets would not have to follow these restrictions.

This action was expected to remove some of that unfair competitive advantage.

Action Ten: Continue to develop ways to reward conservation innovations with improved fishing opportunities

There was admiration for the way the Scottish government and industry bodies have worked together to bring the innovations of fishermen into fisheries management so that while the fleet is in a situation of adjustment to a lower discards fishery and in a stock recovery situation, there are possibilities to innovate in order to maintain sustainable fishing opportunities while not encroaching on those which are in a recovery situation.

The benefits of this were expected to be increased profit from increased fishing opportunities.

2.4.3 Preliminary Priority Actions

- From the ten actions identified above, four were prioritised above the others. The following actions reflect the highest priority actions identified by attendees at the event:
    - Action One: Decommissioning scheme;
    - Action Five: Time lag between agreeing new management rules and implementing them;
    - Action Seven: Adopt a long term management plan for the North Sea nephrops fishery; and
    - Action Three: Find a way to exclude nephrops vessels from the impacts of the cod recovery plan.

2.4.4 Summary of the Event Findings

2.4.4.1 Priority Issues

The discussions in the two breakout groups within the event followed the same structure and this allowed different views to be aired. In some cases there were contradictory views but there was also a great deal of concurrence between the two groups. These issues for the offshore nephrops sector can be summarised under the headings:

- Access to Fish Stocks and Fishing Effort, in particular
    - too many vessels have access to the fishery which limits the potential to achieve long-term sustainability and profitability for the fleet;
    - this hinders long-term investment in the sector;
- Fisheries Management issues, in particular
    - the quality of stock assessments needs to be improved to avoid unnecessary restrictions to fishing opportunities
    - lack of business stability and ability to plan ahead
- Vessel age and suitability to deliver an appropriate product to market. These issues are seen as the result of long term low profit levels so there is insufficient investment in new vessels and equipment.
- Oversupply of the market, in some cases with the wrong product (especially too many smaller nephrops)

2.4.4.2 Proposed Actions

Table 2.31 summarises all of the actions identified under each of the three priority areas. The table also splits the actions into High, Medium and Low priority in line with the discussions held at the event. It is expected that, in order to assist decision-making, further consultation will be required to assess potential value to the sector and Scotland against likely cost of implementation of the various actions.

Priority Area	Action	Description	Priority
Fleet renewal	1	Decommissioning scheme – better planned than previous schemes	High
	2	Reform EFF grants system to include vessels under 5 years old	Medium
Marketing issues	3	Adopt a minimum landing size for nephrops	Medium
Fisheries Management, Access to Fishery and Stocks	4	Adopt a days at sea scheme fixed per boat	Low / medium
	5	Plan in a time lag between agreeing new management rules and implementing them	High
	6	Introduce a scheme to better integrate knowledge and experience of fishermen into fisheries science	Medium
	7	Adopt a long term management plan for the North Sea nephrops fishery	High
	8	Find a way to exclude nephrops vessels from the impacts of the cod recovery plan	High
	9	Ensure that any vessel fishing in Scottish waters has to abide by Scottish legislation	Low
	10	Continue to develop ways to reward conservation innovations with improved fishing opportunities	Medium / High

Table 2.31 Summary of Actions Arising from the Fraserburgh Nephrops Sector Event

2.5 Fraserburgh nephrops sector event list of attendees

Attendees at the Fraserburgh meeting were slightly fewer than anticipated. It was noted that some people who had intended to be present were unavoidably engaged on vessel repairs. The project team also noted that despite the low numbers, the event was extremely productive.

John Watt Snr	SFF
Derek Watt	Excel
Sandy McRobbie	Laeso Fish
James West Snr	Fruitful Bough
Peter Gatt	Press On
Alexander MacLean	Ocean Harvest III

2.6 Glasgow Nephrops event findings and analysis

2.6.1 Current Conditions, Opportunities and Challenges

Table 2.32, table 2.33 and table 2.34 provide a summary of current conditions, opportunities and challenges identified by attendees at the event.

Following analysis, the findings have been grouped under the following headings:

- Markets, Product and Prices
- People
- Onshore Sector
- Fisheries Management, access to fishery, stocks
- Fleet Operation

What works well? What are our Opportunities?	What doesn't work well? What challenges do we face?
Markets, Product and Prices	
• Creelers are able to catch for the market • Trawlers supply good quality nephrops • Trawled live nephrops get good response from market • A premium brand for Scottish langoustine – should build on this, possibly create regional brands • Need to push hard to build on emerging market opportunities, e.g. Russia, Far East and China. • Maintain market share in face of competition • Good continuity of supply for fresh, frozen and live. Needs to be maintained as / if the fleet contracts. • Parts of catch are traceable and accredited – need more of this	• Need to develop UK market, no-one eats whole or live langoustines in UK • Spanish market is collapsing during economic crisis • Market is not big enough – want to generate more demand at same price (recent) price • Oversupply of market and hence low prices • Scottish exporters can't get insurance for customers in some overseas markets so can't compete in those regions. • Mismatch between MLS and MMS. MLS should reflect the end market demands. • Import of low cost product from overseas pushing down prices, e.g. Norwegian catch, lifted import tariffs; farmed products from Asia • Increasing dominance of supermarkets which could take control of the industry away from local communities
People	
• Able to get group of fishermen together as co-op to improve quality • Need to continue to sustain communities such as Western Isles	• Foreign crew members produce poorer quality product as they are paid piece rate, bonus on quantity not quality. • Foreign crew not paid well • Port facilities need to improve to accommodate foreign crews living aboard vessels (shore power, toilets & showers) • Lack of young people entering the industry • Fishermen are not trusted by the authorities

Table 2.32 SWOT analysis output from the Glasgow event (section a)

What works well? What are our Opportunities?	What doesn't work well? What challenges do we face?
Onshore sector	
• Continue to build on improving relationship between catching and processing sectors *(nb. other meetings suggested lack of transparency re: price paid)* • Continue to use technology to advantage of industry e.g. communications, IT infrastructure, marketing, electronic auctions (don't restrict it with legislation) • Have lots of small ports along the west coast – need to keep these and the communities around them	• Factories and other buyers mix up the good and bad quality. People in factories don't differentiate so removes reward for good quality and penalty for poor quality. • People not skilled enough to assess quality – done by truck drivers!
Fisheries Management, Access to Fishery	
• Stocks are sustainably exploited and this needs to continue	• Concern that IFGs will make too many restrictions, spatial, catching opportunities • Annual changes in regulations – can't plan business • Decision making is too removed from source • Rules are made without the rule makers really knowing the consequences of their rules • Poor continuity of people in fisheries management – gives an issue of knowledge and competence of staff from time to time (at Scottish, UK and EU level). • Enforcement should be more helpful and less confrontational. Assumption should be of innocence of intentional wrong doing. No need to be nasty about it. • Nephrops sector being unduly influenced by rules in other fisheries (i.e. cod recovery). No justification for West coast prawn fleet to take so much pain for the cod recovery given that they very rarely if ever catch any cod • There is too much effort in the static gear sector with no cap (24/7 creeling needs to be controlled – appears to be a stock management issue) • No more TV surveys for stock assessment • Discarding • Too much paperwork

Table 2.33 SWOT analysis output from the Glasgow event (section b)

Fleet Operation	
• OP: use selective trawl gear to sort nephrops on the fishing grounds • There is innovation within the fleet • There is some (limited) flexibility to move around and catch a mix of species seasonally – this needs to be preserved • OP: improve access to flaked ice & refrigeration onboard to improve ability to land good quality product	• Some creelers landing too many berried females – risk to stocks in future • Some trawlers tow too long, reducing quality and price • High cost of fuel in remote fishing communities – Western Isles supplier essentially has a monopoly • The prawn fleet continues to be the dumping ground for all the redundant effort from the whitefish industry. No potential for traffic to go in the other direction. • Old vessels (average age of vessels ~30 years) and there is no attraction for new investment • Perception that financial risk is not shared fairly across the industry, fishermen have to take bigger risks than others in the supply chain. • Overly dependent of fossil fuels as single source of fuel • Not fuel efficient enough • Not as profitable as should be – need to improve

Table 2.34 SWOT analysis output from the Glasgow event (section c)

2.6.2 Priority Areas and Proposed Actions

The consultation event raised a large number of issues on which attendees were invited to vote. Votes highlighted those areas which attendees considered to be a priority, covering both opportunities that could be built on and challenges which need to be addressed. Because many of the issues were inter-linked, analysis has grouped the results of the voting under three overarching priority areas:

1 Fleet operation and people;

2 Marketing issues; and

3 Fisheries Management, Access to Fishery and Stocks;

The remainder of this section describes each of these priority areas in turn. Within each priority area the actions proposed during the event are listed.

2.6.2.1 Fleet operation and people

There was agreement that many boats in the sector are too old, with the current average age of around 30 years and fears that if steps are not taken to address profit issues then in 10 year's time, the average age of vessels will be 40 years. Older vessels are expensive to maintain and have lower fuel efficiency than newer boats, all of which reduce operating profit.

This issue links in with the issue of attracting young people to the industry and taking care of foreign crew members currently essential because of low profits and an inability to pay wages that would attract local crew.

As found in other meetings, there is a desire to see modern vessels which are well equipped to handle the product well and improve quality of the landed product in order to improve prices and operating profit and ultimately, the return on capital invested in the business.

Also related to fleet operation were a range of concerns about fuel efficiency and the cost of fuel in remote areas, which is higher than in other areas. Concerns were raised about over-dependence on fossil fuels alongside hopes that technology could be used to overcome this and develop alternative power sources.

Also included in fleet operations, but with clear links to marketing, were issues of poor quality caused by excessive tow time or use of foreign crew paid according to volume only and not quality.

Linking to stock conservation was the issue of some creel operators landing too high a volume of berried female nephrops.

Action One: Increase fuel supply options in remote areas of west Scotland

This heading covered a number of ideas that were put forward, some of which may be partially underway:

- Try to encourage other management options (local) and / or other suppliers into the market
- Set up local bulk storage facilities with EFF funding
- Produce clear guidance on fuel duty and VAT implications

There appears to have been at least one application for EFF funding to set up bulk fuel storage facility in the Western Isles, but there may be scope for more.

It is also understood that some guidance on fuel duty and VAT implications has been produced but this guidance could perhaps be more widely distributed and publicised.

The benefits of these actions are expected to be cheaper fuel available to vessels in more remote locations, which would improve profit margins, and potential improvement to cash flow, which could reduce borrowing costs and improve profit.

Action Two: Promote best practice in fuel efficient fishing

This action is intended to ensure that any advances in knowledge are effectively shared with vessel owners who might be able to benefit from new knowledge and innovation.

The benefits are expected to be that vessel owners will have access to information which could lead them to more fuel efficient fishing and thereby improve their profit.

Action Three: Restructure the fleet into a profitable sector

This action reflected the understanding of the participants that the sector appears to be caught in an ongoing long term cycle of low profitability, inability to pay good wages, old vessels with poor crew conditions, emphasis on quantity not quality of catch coupled with poor crew skills (adverse impact on quality of landed nephrops and lower prices), and so on. This action was also related to the need to bring younger people into the sector and also that the attractiveness to investors needs to be increased (i.e. able to deliver an acceptable rate of return).

There was an expectation that reducing the number of vessels in the fleet would enable the remainder to operate more profitably which would enable vessel owners to naturally solve some of the other issues which were raised during the event. Throughout all the workshops, non pelagic industry members acknowledged that whilst the fleet structure of the pelagic

sector has some drawbacks, the benefits outweighed the negatives and their sector would be better placed if it more closely resembled the small but profitable pelagic sector.

Action Four: Improve port facilities to accommodate foreign crews

There is a recognition that with current low profit levels, it is difficult to attract local crew and often necessary to operate with foreign crew on an agency basis. There is equal recognition that suitable living conditions must be provided for foreign crew who must live aboard smaller vessels. It was suggested that local councils and fishermen could encourage harbour authorities to apply for EFF funding to improve local facilities, especially suitable shower and bathroom facilities.

The benefits of this action are expected to be improved welfare of foreign crew and greater ability to attract and retain foreign crew, giving chance to help them improve their product handling skills and ultimately improve profit for vessels.

Action Five: Attract young people into the industry

Although it was recognised that good pay levels would be required to back up any other efforts, there was a feeling that there are some vessels able to achieve that and therefore that some specific actions should be taken to aid recruitment of local young crew members and potential skippers. Suggestions included:

- Promote good case studies of successful young skippers
- Promote fishing careers beyond fishing communities and maybe in inner cities (may become more viable as unemployment rises in other industries, but would need to be sustainable so that people didn't leave when economy picks up)
- Look at innovative ways of opening up entry into industry, through encouraging investment more broadly, and specifically helping young people to prepare and finance their business plans

There was mention of a successful lending scheme operated by a fishermen's association to encourage investment in the fleet which might be a model that could be repeated elsewhere. Such a scheme might be able to make money available to vessel businesses which seek to further the career prospects of younger crew members and skippers.

Fishermen's organisations (associations or federations) might collaborate to promote case studies of successful young skippers and promote the industry as a career options in city areas. Both of these might be able to attract funding from sources aimed at getting young people into employment.

The benefits of these actions are expected to be that the fishing industry would be renewed with new energy and innovation brought in by successful young people joining the industry. Longer term this is essential for the profitability of the industry and the health of communities linked to the fishing industry.

2.6.2.2 Marketing Issues

There were a number of concerns about aspects of industry which relate to marketing, some of which related to a desire to ensure that currents successes are built on so that Scotland maintains or improves its competitive position in lucrative export markets. All of these concerns ultimately revolve around the issue of maximising the value of the catch in relation to the costs of catching and thereby maximising profit margin.

Some of the issues related to communications, understanding and practices relating to processors and exporters based in Scotland. Other concerns related to ensuring that the products are appropriate for markets and trying to expand markets by increasing the quantity demanded at current (or recent) prices.

Action Six: Share and promote market information among vessel owners

There was a feeling that vessel owners could benefit from having more frequent access to up-to-date information about market demand, preferences and developments. There was also a call for more transparency and improved communication to improve trust and understanding between the catching and processing / exporting sector.

A specific suggestion to achieve this was:

- The Langoustine Action Group (of IFG) could include at each meeting a market update, and this information should be distributed to more vessel owners. This information should include indicators of volumes demanded in different markets and prices

The benefits of this action are expected to be that vessel owners will be more inclined to tailor their activities (catching and product handling) to suit market needs if they are more aware of market needs. This effect could improve profit across the fleet.

Action Seven: Illustrate the practice and benefits of matching catch rate to suit seasonal market demand

It was noted that across the fleet, individual vessel owners did not time their catching activity to ensure that the volumes landed matched market demand. This type of co-ordinated landing activity to maximise value would require a collective approach to ensure success. In order to convince groups of vessel owners that it might be worth trying however, there would need to be evidence of the financial benefits that could be expected. This could be done via a study to produce suitable analysis which would illustrate the difference between co-ordinated, timed activity and the uncoordinated approach to landings volumes. It was noted that the pelagic sector had recently managed to co-ordinate their landings to suit processing capacity.

The benefits of conducting this study and producing the illustration is that fishermen's associations or groups could then estimate the potential total benefit of co-ordinating landings to suit seasonal demand and invite their members to participate in such a scheme.

Action Eight: Investigate the possibility of increasing the minimum landing size

There is concern that the value of the stock in the sea is not being maximised due to the landing of nephrops which are too small for market preference. If the same number or weight of nephrops were landed with a larger average size, then the total value of the catch would be greater.

A working group consisting of FRS, Scottish Government, Fishermen, Processors and Seafood Scotland and Seafish should be convened specifically to investigate the potential market and economic impacts of increasing the minimum landing size. It will also be necessary to consider potential conflicts with EU or UK legislation and, if the change were to be made, to ensure effective implementation and enforcement of the new regulation.

The benefits of this action are expected to be that the option of increasing the MLS could be either accepted or rejected based on good evidence, with the potential to improve overall fleet profit in the longer run.

Action Nine: Promote nephrops products to improve demand

There was a strong feeling that promotion was a key way to improve demand for Scottish caught nephrops. There was a raft of different suggestions which might be employed to achieve this:

- Get celebrity chefs on the case – TV, books, raise awareness
- Schools activities / campaign – education, trying them – handling + cooking – England & UK wide
- Kids TV to include cooking langoustine
- Promotion campaign – grab the langoustine before they go to Spain!
- Healthy eating campaign
- Promote Scottish langoustine in emerging markets (threat of competition – e.g. Denmark – if we don't move quickly

Promoting nephrops products in the UK was seen as a top priority.

The benefits of this promotion activity are expected to be that prices will hold up even if volume supplied increases to satisfy the expanding market, thus improving profit margins for vessels.

Action Ten: Investigate lack of skills in onshore buyers

Vessel owners were concerned that many processors and exporters were using staff without the required skills to receive their catch, with the result that better quality product was mixed in with poorer quality product. This means that there can only be an average price for all vessels which removes the incentive to invest in quality or the penalty for not delivering good quality product.

Attendees felt that rather than jump in with a proposed solution, it would be best first to see if onshore businesses were willing to participate in an investigation into the issue to determine whether the issue is real, what causes it and what the implications are. Then it would be possible to consider solutions which would maximise business benefits to all concerned.

2.6.2.3 Fisheries Management, Access to Fishery and Stocks

Discussions at the event included several aspects of fisheries management which were felt to be problematic and potentially reducing the opportunity to operate profitably. Some of these issues relate to the operations of the fisheries management element of the Scottish Government and some were more specific to the actually rules themselves or elements of the way fisheries are managed at EU level.

Many of the concerns were reflected in other consultation events for other fleet segments.

Action Eleven: Improve the level of knowledge and competence among fisheries management staff within the Scottish Government

There was a belief that some of least successful decisions or outcomes relating to fisheries management may be avoided if the civil service staff involved had greater knowledge and understanding of the industry and were better able to foresee the potential consequences of policy options. It was felt that one of the key causes of inadequate knowledge and understanding was the short period of time for which most civil servants are involved in the fishing industry. Specific ideas to help promote this were:

- Provide incentives to remain with the fisheries section of the civil service
- Use the marine agencies / departments in Scotland and England to make better career structures to retain expertise, knowledge and understanding

The benefits of these actions are expected to be fewer inappropriate decisions on fisheries management in the future and more decisions that will favour the profitable operation of the fleet.

Action Twelve: Improve the decision making processes at Scottish, UK and EU levels

In addition to other factors, attendees felt that the decision making processes relating to fisheries management regulations were poorly designed such that many inappropriate or unhelpful regulations were implemented to the detriment of the fleet. Specific suggestions to improve the situation included:

- Improve the transparency of the decision making process. Then industry people might be able to comment specifically where they see a lack of understanding about unintended or negative consequences.
- Have a shorter route to the final decision
- Require that new rules should only be agreed and implemented after the practical consequences have been identified and considered and shown to be in line with government intentions to have a sustainable and profitable fleet. The government must understand their own rules.
- There must be a reasonable time lag, perhaps three months, between agreeing new regulations and implementing them. This will allow extra time to check that a rule is feasible and for businesses to adjust the new rules, possibly involving new purchases of equipment and changing practices.

Action Thirteen: Remove the west coast nephrops fleet from the impacts of the cod recovery plan by adopting a by-catch limit of 1.5% cod

This is a specific suggestion relating to the feeling that many of the nephrops vessels can demonstrate that they do not have a large impact on cod stocks and should not be penalised in order to protect a stock that they do not catch.

The benefit is expected to be increased fishing opportunities for nephrops vessels.

Action Fourteen: Limit effort on static gear

There were concerns about the volume supplied versus market demand, concerns about vessels from other areas coming and laying two thousand traps and concerns about number of berried females being caught which could all potentially be address by some limit of creels / pots per vessel, perhaps in relation to the length of the vessel. It was suggested that gear should be tagged and therefore traceable to the owner. It would be necessary to a deal of care and consideration into how such a regulation should be designed, implemented and enforced.

The benefits of this action are expected to be stock protection and price improvement due to fitting supply better to market demand. Both of these would improve profit.

2.6.3 Preliminary Priority Actions

- From the fourteen actions identified above, five were prioritised above the others. The following actions reflect the highest priority actions identified by attendees at the event:
  - Action One: Increase fuel supply options in remote areas of west Scotland;
  - Action Eight: Investigate the possibility of increasing the minimum landing size;
  - Action Nine: Promote nephrops products to improve demand
  - Action Eleven: Improve the level of knowledge and competence among fisheries management staff within the Scottish Government; and
  - Action Fourteen: Limit effort on static gear

2.6.4 Summary of the Event Findings

2.6.4.1 Priority Issues

The discussions in the two breakout groups within the Glasgow event followed the same structure and this allowed different views to be aired. These two groups came up many different issues with not too much overlap or contradiction. These issues for the inshore / smaller vessel nephrops sector can be summarised under the headings:

- Fleet operations and people:
  - Old age of vessels is inhibiting profitable operations;
  - Foreign workers need proper training, incentives and living facilities;
- Marketing issues:
  - Nephrops market is not as big as the catching opportunity
  - The fleet is not well co-ordinated to market demands
- Fisheries management, access to fishery and stocks:
  - Improve the quality of decisions in general in fisheries management
  - The nephrops fishery suffers from the impacts of the cod recovery plan.

2.6.4.2 Proposed Actions

Table 2.35 summarises all of the actions identified under each of the three priority areas. The table also splits the actions into High, Medium and Low priority in line with the discussions held at the event. It is expected that, in order to assist decision-making, further consultation will be required to assess potential value to the sector and Scotland against likely cost of implementation of the various actions.

Priority Area	Action	Description	Priority
Fleet operations and people	1	Increase fuel supply options in remote areas of west Scotland	High
	2	Promote best practice in fuel efficient fishing	Medium
	3	Restructure the fleet into a profitable sector	Medium
	4	Improve port facilities to accommodate foreign crews	Medium / High
	5	Attract young people into the industry	Medium
Marketing issues	6	Share and promote market information among vessel owners	Medium
	7	Illustrate the practice and benefits of matching catch rate to suit seasonal market demand	Medium
	8	Investigate the possibility of increasing the minimum landing size	High
	9	Promote nephrops products to improve demand	High
	10	Investigate lack of skills in onshore buyers	Low / Medium
Fisheries Management, Access to Fishery and Stocks	11	Improve the level of knowledge and competence among fisheries management staff within the Scottish Government	High
	12	Improve the decision making processes at Scottish, UK and EU levels	High / Medium
	13	Remove the west coast nephrops fleet from the impacts of the cod recovery plan by adopting a by-catch limit of 1.5% cod	High / Medium
	14	Limit effort on static gear	High

Table 2.35 Summary of Actions Arising from the Glasgow Nephrops Sector Event

2.7 Glasgow nephrops sector event list of attendees

List of Attendees:

Ian Wightman	Eilidh Anne
Duncan McInnes	Western Isles Fishermen's Association
Angus Campbell	Wave Crest
Angus Campbell	Kilbride Shellfish Ltd (a South Uist fishermen's co-operative
George Jack	Aeolus
Paul McCartney	Scottish Government

3 Crab and lobster Sector

3.1 The Fleet and Fish Stocks

FRS kindly supplied up-to-date comments on the most recent advice. The main point seems to be that they have no reason to expect dramatic changes in the available stocks in the next few years.

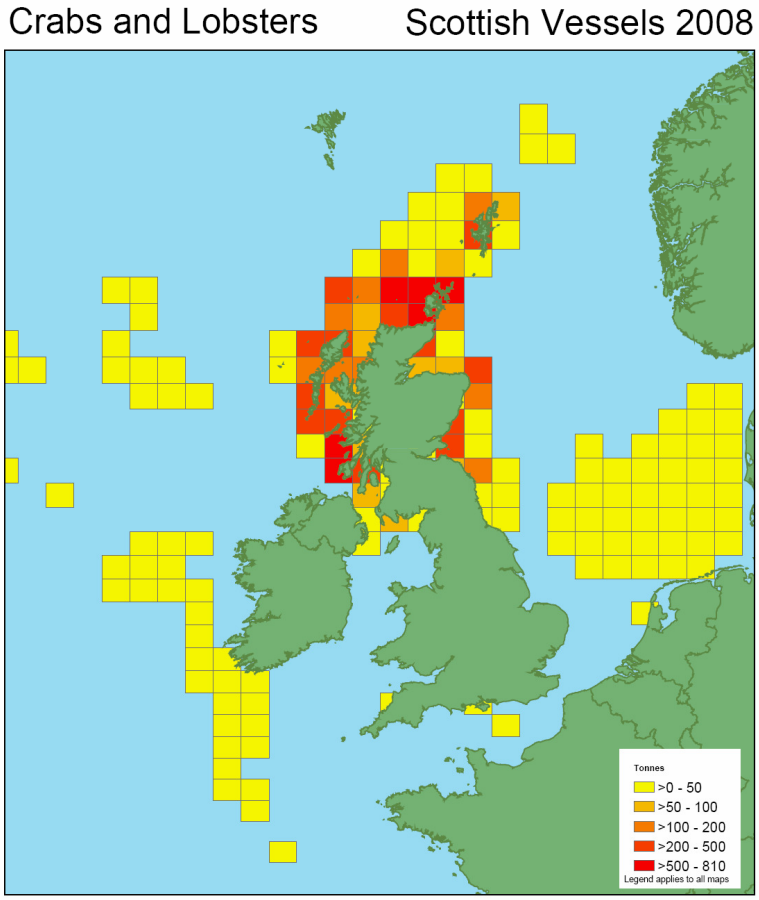


Figure 3.1 Location of crabs and lobster caught by Scottish vessels, 2008.
Source: SGMD Management Information

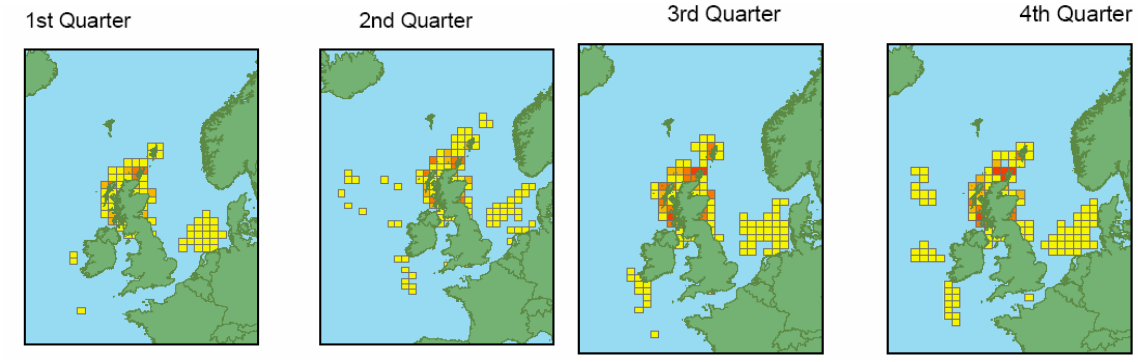


Figure 3.2 Quarterly repartition of crabs and lobster catch by Scottish vessels, 2008.
Source: SGMD Management Information

The following items were extracted from the 2006 Crab and Lobster Stock Assessment and were supplied to event attendees.

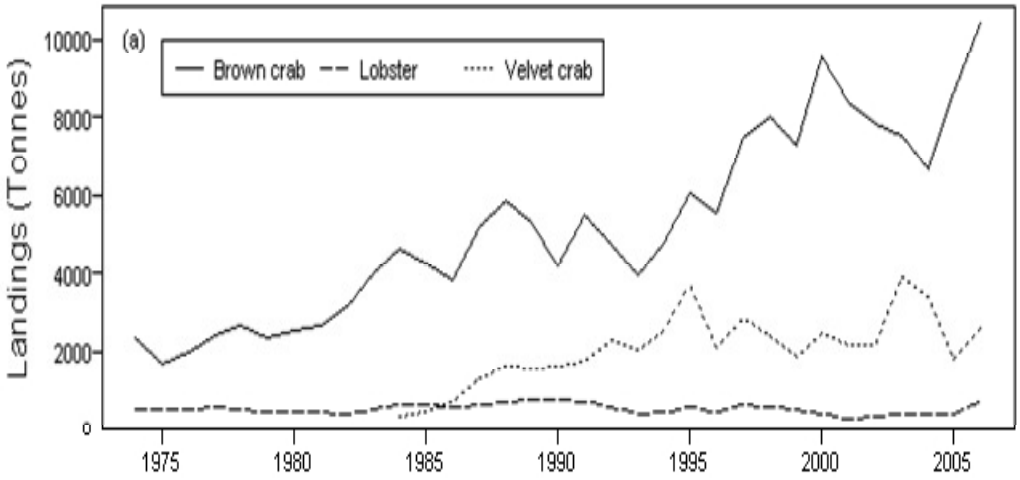


Figure 3.3 Landings trends between 1975 and 2005 for brown crabs, lobster and velvet crabs.

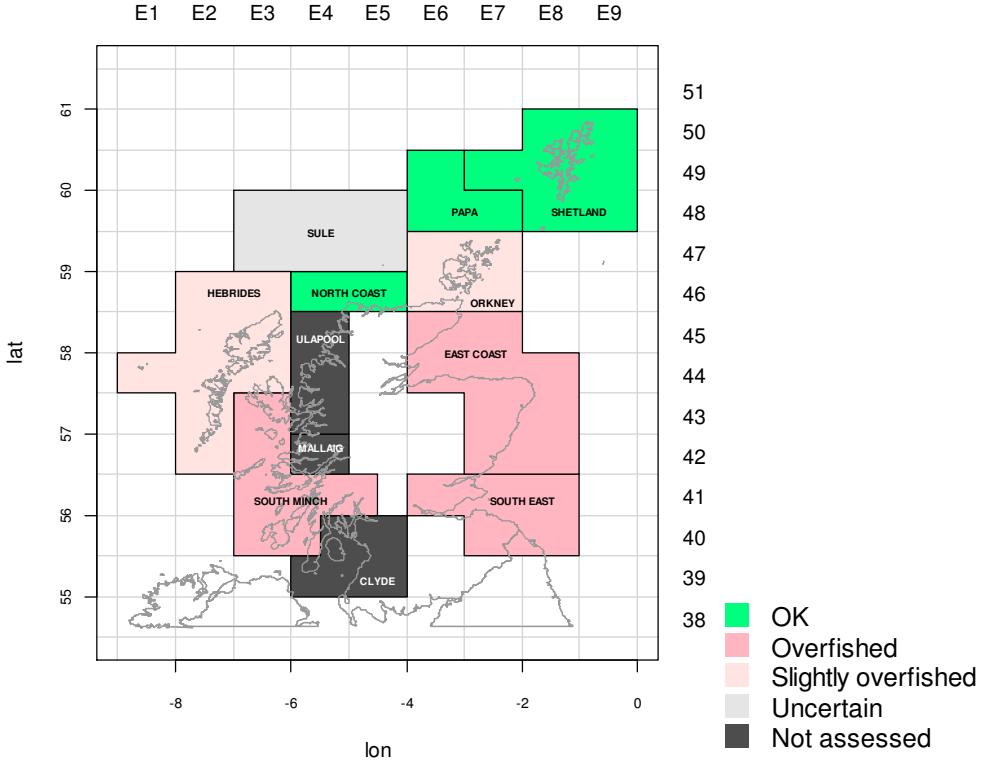


Figure 3.4 Brown crab assessment 2006

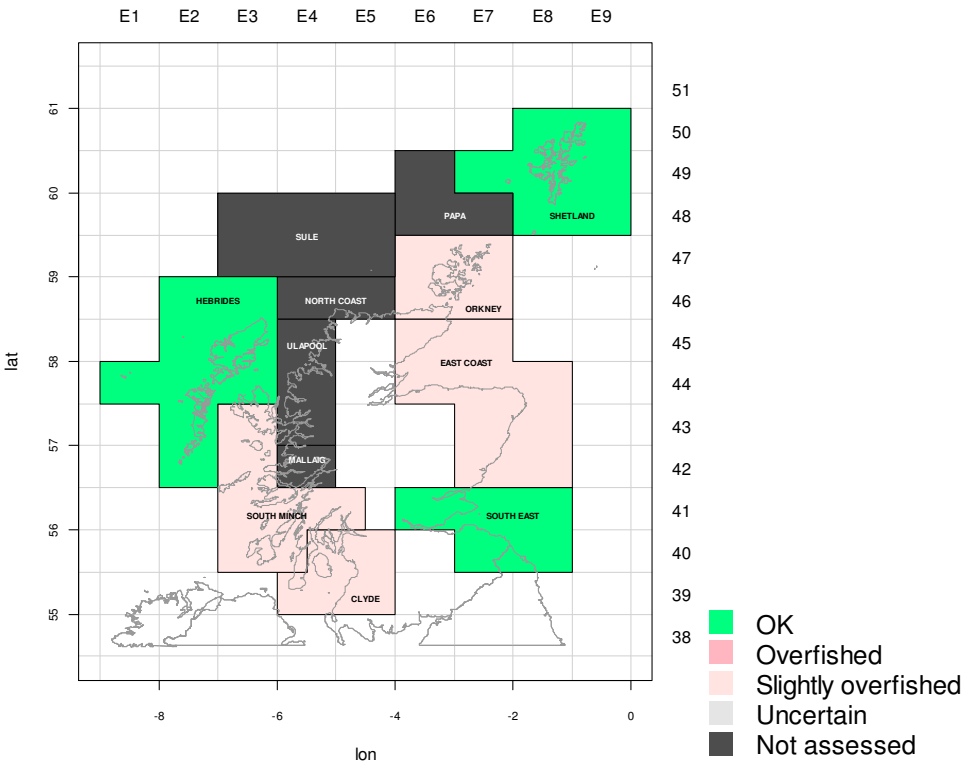


Figure 3.5 Velvet crab assessment 2006

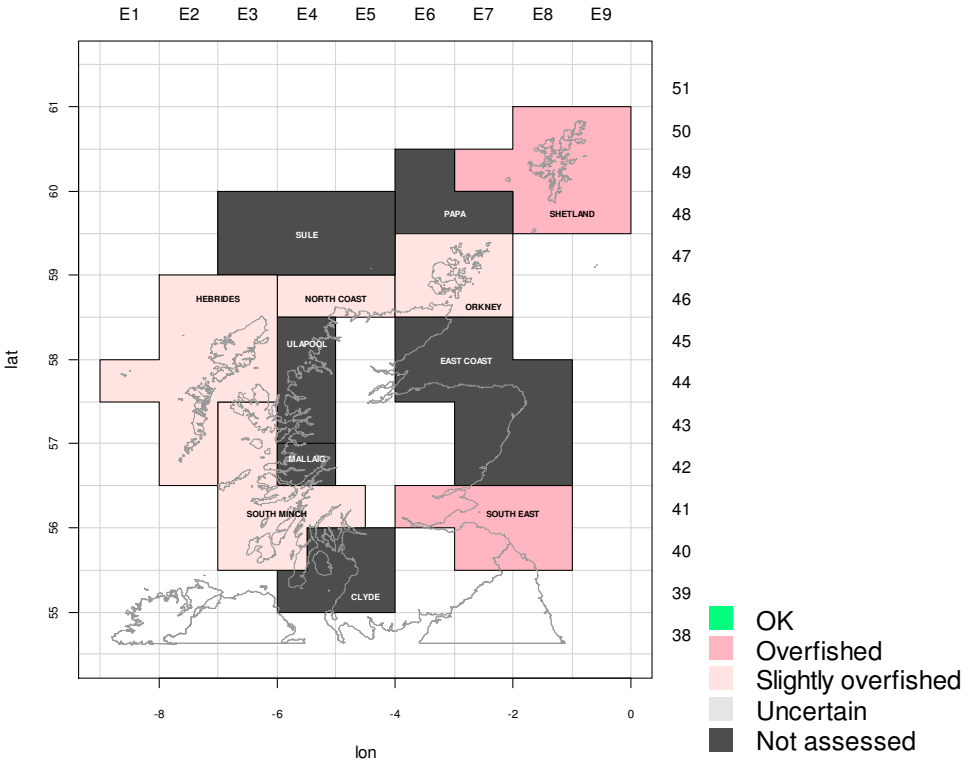


Figure 3.6 Lobster assessment 2006

The following information relates to the sector vessels, their characteristics, activity and financial performance.

	Segment Total	Average Per Vessel
Number of Active Vessels	20	
Length (m)		15.6
Power (kW)	4,501	225
VCU	3,771	189
Registered Tonnage (GT)	1,306	65
Days at Sea	4,358	218
Volume of Landings (Tonnes)	4,010	201
Value of Landings (£)	£6,111,000	£306,000
Vessel Age (years)		21

Table 3.1 Segment characteristics, 2007 – Pots and traps over 12m (Scottish vessels)

	Segment Total	Average Per Vessel
Number of Active Vessels	88	
Length (m)		11.0
Power (kW)	11,262	128
VCU	9,038	103
Registered Tonnage (GT)	1,109	13
Days at Sea	16,095	183
Volume of Landings (Tonnes)	3,253	37
Value of Landings (£)	£8,938,000	£102,000
Vessel Age (years)		22

Table 3.2 Segment characteristics, 2007 – Pots and traps between 10 and 12m (Scottish vessels)

	Segment Total	Average Per Vessel
Number of Active Vessels	169	
Length (m)		9.6
Power (kW)	20,049	119
VCU	15,011	89
Registered Tonnage (GT)	1,264	7
Days at Sea	22,645	134
Volume of Landings (Tonnes)	4,853	29
Value of Landings (£)	£12,386,000	£73,000
Vessel Age (years)		19

Table 3.3 Segment characteristics, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

	Average Per Vessel
Total Crew	2.2
Full Time Crew	2.2
Part Time Crew	
Foreign Crew (as % of total crew)	

Table 3.4 Crew characteristics, 2007 – Pots and traps over 12m (Scottish vessels)

	Average Per Vessel
Total Crew	5.1
Full Time Crew	5.1
Part Time Crew	
Foreign Crew (as % of total crew)	

Table 3.5 Crew characteristics, 2007 – Pots and traps between 10 and 12m (Scottish vessels)

	Average Per Vessel
Total Crew	3.6
Full Time Crew	2.0
Part Time Crew	1.6
Foreign Crew (as % of total crew)	47%

Table 3.6 Crew characteristics, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

	No. of vessels	Sum of days at sea	Sum of landings (Tonnes)	No. of vessels required if all did max days at sea	No. of vessels required if all did 80% of max days at sea
Pots and traps > 12m	20	4,358	4010	14	18
Pots and traps 10 - 12m	88	3,253	16,095	46	57
Pots and traps 9 -9.99m	169	22,645	4,853	69	87

Table 3.7 Capacity utilisation in the crab and lobster sector, 2007

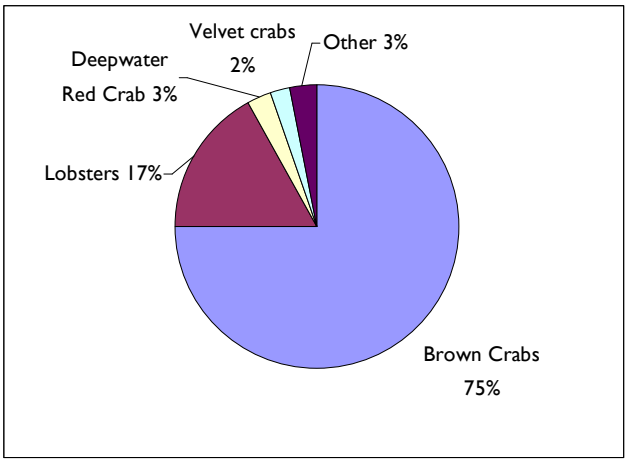


Figure 3.7 Catch composition, 2007 (in value) - Pots and traps > 12m (Scottish vessels)

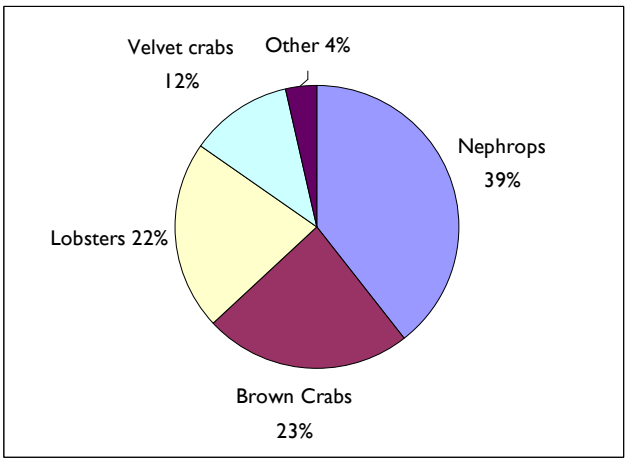


Figure 3.8 Catch composition, 2007 (in value) - Pots and traps 10 - 12m (Scottish vessels)

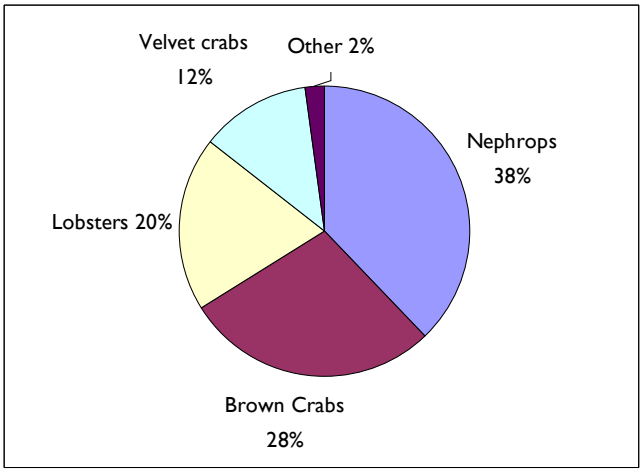


Figure 3.9 Catch composition, 2007 (in value) – Pots and traps between 9 and 9.99m (Scottish vessels)

3.2 Financial Performance of the Fleet and Drivers of Profit

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£724,000	£306,000	£118,000
Fuel & Oil cost	£61,000	£37,000	£21,000
Crew share	£236,000	£100,000	£39,000
Operating Profit	£251,000	£44,000	-£30,000
Net Profit	£151,000	£6,000	-£50,000
Days at Sea	277	218	183

Table 3.8 Average vessel performance, 2007 - Pots and traps over 12m (Scottish vessels)

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£163,000	£102,000	£45,000
Fuel & Oil cost	£10,000	£8,000	£5,000
Crew share	£54,000	£34,000	£15,000
Operating Profit	£47,000	£21,000	-£4,000
Net Profit	£33,000	£12,000	-£8,000
Days at Sea	234	183	137

Table 3.9 Average vessel performance, 2007 - Pots and traps between 10 and 12m (Scottish vessels)

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£126,000	£73,000	£25,000
Fuel & Oil	£9,000	£6,000	£3,000
Crew share	£30,000	£17,000	£6,000
Operating Profit	£50,000	£21,000	-£3,000
Net Profit	£35,000	£13,000	-£5,000
Days at Sea	172	134	79

Table 3.10 Average vessel performance, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

	Segment	
	Average (£)	% of Earnings
Fishing Income	305,500	97%
Non-Fishing Income	8,600	3%
Total Earnings	**314,100**	**100%**
Fishing Expenses		
Commission	5,200	2%
Harbour Dues	9,800	3%
Subscriptions & Levies	2,300	1%
Shore Labour	n/a	n/a
Fuel and Oil	37,400	12%
Boxes	n/a	n/a
Ice	1,200	0%
Crew Travel	1,700	1%
Food Stores	8,500	3%
Quota Leasing	700	0%
Days Purchase	n/a	n/a
Other Expenses	23,300	7%
Crew Share	99,600	32%
Total Fishing Expenses	**189,700**	**60%**
Vessel Owner Expenses		
Insurance	14,800	5%
Repairs	22,700	7%
Gear	18,100	6%
Hire and Maintenance	8,100	3%
Other Vessel Owner Expenses	16,600	5%
Total Vessel Owner Expenses	**80,200**	**26%**
Total Expenses	**269,900**	**86%**
Profit (operating)	**44,200**	**14%**
Depreciation	24,600	8%
Interest	13,700	4%
Net Profit	**5,900**	**2%**

Table 3.11 Average cost structure - Pots and traps over 12m (Scottish vessels)

	Segment	
	Average (£)	% of Earnings
Fishing Income	101,600	98%
Non-Fishing Income	1,900	2%
Total Earnings	**103,400**	**100%**
Fishing Expenses		
Commission	1,000	1%
Harbour Dues	1,400	1%
Subscriptions & Levies	400	0%
Shore Labour	2,600	3%
Fuel and Oil	7,900	8%
Boxes	200	0%
Ice	300	0%
Crew Travel	500	0%
Food Stores	3,500	3%
Quota Leasing	n/a	n/a
Days Purchase	n/a	n/a
Other Expenses	8,100	8%
Crew Share	33,900	33%
Total Fishing Expenses	**59,900**	**58%**
Vessel Owner Expenses		
Insurance	3,400	3%
Repairs	4,800	5%
Gear	5,100	5%
Hire and Maintenance	2,400	2%
Other Vessel Owner Expenses	7,100	7%
Total Vessel Owner Expenses	**22,700**	**22%**
Total Expenses	**82,600**	**80%**
Profit (operating)	**20,800**	**20%**
Depreciation	5,700	6%
Interest	3,600	3%
Net Profit	**11,500**	**11%**

Table 3.12 Average cost structure, 2007 - Pots and traps between 10 and 12m (Scottish vessels)

	Segment	
	Average (£)	% of Earnings
Fishing Income	73,300	99%
Non-Fishing Income	1,000	1%
Total Earnings	**74,200**	**100%**
Fishing Expenses		
Commission	100	0%
Harbour Dues	500	1%
Subscriptions & Levies	200	0%
Shore Labour	100	0%
Fuel and Oil	6,200	8%
Boxes	n/a	n/a
Ice	400	1%
Crew Travel	500	1%
Food Stores	1,500	2%
Quota Leasing	0	0%
Days Purchase	n/a	n/a
Other Expenses	6,500	9%
Crew Share	17,400	23%
Total Fishing Expenses	**33,500**	**45%**
Vessel Owner Expenses		
Insurance	2,200	3%
Repairs	5,700	8%
Gear	4,200	6%
Hire and Maintenance	2,400	3%
Other Vessel Owner Expenses	5,700	8%
Total Vessel Owner Expenses	**20,200**	**27%**
Total Expenses	**53,700**	**72%**
Profit (operating)	**20,600**	**28%**
Depreciation	6,100	8%
Interest	1,700	2%
Net Profit	**12,800**	**17%**

Table 3.13 Average cost structure, 2007 – Pots and traps between 9 and 9.99m (Scottish vessels)

3.3 Markets for the Catch

The following information from Seafood Scotland, Seafish and the Scottish Government Marine Directorate was presented to attendees at the event.

2008 landings by Scottish-based vessels			
Species	Tonnes	Value (£)	Avg Price (£)
Mixed Crabs	0.7	630	904
Crabs (C.P.Mixed Sexes)	7,660	8,600,000	1,123
Green Crab	200	111,000	555
Deepwater Red Crab	85	304,000	3,557
Lobsters	1,000	10,700,000	10,696
Crabs - Velvet (Swim)	2,700	5,770,000	2,137
Lobster - Squat	1.3	2,700	2,115
Spider Crabs	3.1	3,100	990
Total	11,651	25,491,430	22,078

Table 3.14 Landings by Scottish-based vessels, 2008

An update on recent market trends was provided by Seafood Scotland:

- Bulk delivered prices to French vivier companies ranged from €3.10/kg (early January 2008) to €1.70/kg (July-August 2008), averaged prices stood at around €2.20lkg roughly -12% on 2007 prices. Prices were particularly low in July-August due to important landings across Europe (French landings are considered to have increased), a special tie up scheme was put in place in France during August in order to reduce landings and sustain market prices.

- High stock of frozen product across Europe coupled with a decline in consumption and an increasing volume of substitute crab product imported from outside the EU put the European fisheries and processing companies under pressure.

More specifically, concerning the Spanish market:

- The Spanish market is open to a limited products' range which has not evolved in the last three years, except with the growth of cooked claws available in both chilled and frozen forms.

- Whole & cooked brown crab remains the main further processed brown crab article (mainly in a frozen form), but its demand is small and very seasonal (end of the year celebrations mainly), and centred on the retail market. Chilled, whole & cooked brown crab remains in a very minor position, and often limited to avoid losses

- Cooked meat, either white or brown, is basically sold in a frozen form and mainly through the foodservice and the industry (ready meals and preparations) markets

- Filled & cooked whole brown crab (in its shell) seems to have failed in the Spanish market, for being too far from the Spanish tastes.

- Chilled products remain in a very minor position within the seafood department Frozen articles are clearly dominating the market.

- In 2006, a supply shortage of brown crab has happened and penalised the sales of brown crab products as a whole. It also made local processing activities less profitable, due to higher costs.

- New competitors for brown crab in the Spanish market include processed crab products from Asia, at lower prices on the segment of the industry (included in ready meals and preparations).

And concerning the French market:

- Demand and sales of live brown crab have declined to the benefit of cooked crab sold whole or in pieces on both the retail and the catering segments. On the retail segment pre-packed products such as half-cooked crab and cooked claws are enjoying fast increase. Brown crab carry a positive image yet is considered by non traditional seafood eaters as somehow difficult to consume when sold in whole forms. Buyers are looking for more convenient products (partly or fully shelled).

- There is indeed room for further development on the growing segment for pre-packed consumers' portioned convenient products. Clearly the demand is good for cooked products such as: half crab pre-packed, whole crab pre-packed –small size), pre-packed claws, pre-packed assortment of shellfish including crab, nicely packed crab meat.

- Note the recent entry of a product that is perceived as the most direct and probably the most threatening competing product in coming years: cooked and chilled legs of Kamchatka crab from Norway.

- Brown crab comes from France, the UK, Ireland, and Norway. Buyers do not pay attention where brown crabs come from. The low attention paid to the product origin is partly explained by supply difficulties, prices variations, and comparable quality.

- Cooked and pasteurised brown crab from Ireland (Erigal, Donegal), enjoys a very good reputation. Some respondents consider that the Irish crab processing industry is technologically in advance compared to other origins.

	France	Spain	Italy	Portugal
Live crab imports (£m pa)	£16 mill	£17 mill	£4 mill	£5 mill
Scotland's share	50%	60-70%	20%	50%
Main competitor(s)	Ireland	Europe	Europe	Europe
Opportunity for Scotland	**Increase share**	Defend share	**Increase share**	Defend share
Frozen crab imports (£m pa)	£22 mill	£20 mill	£2 mill	£2.5 mill
Scotland's share	15-20%	40-50%	5%	40%
Main competitor(s)	Ireland	Europe	Europe	Europe
Opportunity for Scotland	**Increase share**	Defend share	Defend share	Defend share
Live lobster imports (£m pa)	£35 mill	£35-40 mill	£30 mill	£3.5 mill
Scotland's share	25-30%	20%	1%	25%
Main competitor(s)	USA	US & Canada	US	US & Canada
Opportunity for Scotland	**Increase share**	**Increase share**	**Increase share**	Defend share
Frozen lobster imports (£m pa)	£12 mill	£7 mill	£5 mill	NA
Scotland's share	5%	10%	0	NA
Main competitor(s)	Canada	US & Canada	US & Canada	NA
Opportunity for Scotland	**Increase share**	**Increase share**	**Increase share**	NA

Table 3.15 Export opportunities for Scotland, 2008

3.4 Crab and lobster sector, Inverness, findings and analysis

This section sets out the findings from the consultation event held on 5 March 2009. The chapter begins by setting out attendees views of the current conditions, opportunities and challenges in the demersal sector. The second section describes the priority areas where attendees believe action must be taken and why. This section also identifies what actions may be considered within the sector. The chapter concludes with a summary of the priority areas for action and a summary of the proposed actions.

3.4.1 Current Conditions, Opportunities and Challenges

Table 3.16 and table 3.17 provide a summary of current conditions, opportunities and challenges identified by attendees at the event. Following analysis, the findings have been grouped under the following headings:

- Product,
- People,
- Fleet Operation,
- Access to the Fishery and Stocks,
- Market Demand and
- the On-Shore Sector.

What works well? What are our Opportunities?	What doesn't work well? What challenges do we face?
Product	
• Health benefits • Good quality product	• You can import lobsters smaller than we're allowed to land (Canadian lobster) • In some areas the landings of brown crab is too seasonal • Price has been stagnant for too long • Average size appears to be getting smaller
People	
• Can get (foreign) labour for vessels and processors if necessary	• Politicians saying but not doing – fiddling while Rome burns • The environmental movement is gradually taking away fishermen's rights • Stakeholders are increasingly getting together • Not enough young people coming into the sector
Fleet Operation / Development	
• Closed areas and protected areas (voluntary for creels only) have worked well • IFGs should work well • Good vessels	• Too many licenses exist, many given with no or little track record. Too much latent entitlement which could come back in if market improves • Assets are currently worthless • Unlicensed boats operating • Lack of log-books • Too many part-timers who don't need the income working creels and pots, especially in summer (reduces prices) • Gear conflict when different fisheries overlap. This can result in loss of equipment and damage to grounds • Support for new engines meaning a 20% loss in KW power • Threat from off-shore wind farms • Fishermen have to shoulder most of the risk, the processors protect their margins first and foremost • Work is becoming more dangerous as fishermen take greater risks to stay in business • High cost of bait (especially when good fish for bait are being discarded at sea!) • Fuel price

Table 3.16 SWOT analysis from the Inverness crab and lobster sector event (section a)

Management of Fish Stocks	
• V-notching works well (but not used enough) • Hatchery re-stocking works well • Escape hatches in creels for small lobsters where used. This helps the fishermen as well as stocks • Minimum and maximum (for females only) landing sizes • Low discards – returned live and high survival rate • Local vessels have good conservation approach but threatened by non-local vessels	• There's too much effort (pot numbers) compared to what the resource can sustain • Lack of policing. Fisheries officers are too busy with paperwork and people are getting away with landing under-sized product • Intensive fishing by non-Scottish vessels (increased dramatically over last 18 months) which leads not just to overfishing but also over-supply, poor quality product and depressed prices • Climate change keeping crabs off-shore • Too much trading of fish for political reasons
Market	
• There is top quality and a good volume of processing in the UK • UK market is growing but from a very small base	• Supply and demand poorly matched which seems to lead to highly variable prices. Lack of real-time market and landings knowledge • Canadian lobster is depressing the price for Scottish caught lobster (classed as a different species) • Crab sticks are not crab • Market is constantly undermined by poor quality products • Over-supply from Norway and Ireland • Threat from exchange rate between pound and euro • It's a luxury item in a time of recession
On-shore sector	
• There is an improving relationship between fishermen and processors	• Processors mixing poor and good quality together • The industry is slipping away from local communities as the scale increases. Boats have to move about more • High cost of adhering to regulations on-shore • Transportation costs are high for the islands

Table 3.17 SWOT analysis from the Inverness crab and lobster sector event (section b)

3.4.1.1 Priority Areas and Proposed Actions

The consultation event invited attendees to vote on which of the issues highlighted above are considered to be a priority. Because many of the issues were inter-linked the findings have been grouped under four overarching priority areas:

- Fishery and Stock Management;
- Market development and promotion;
- Modernisation and fleet development; and
- Enhanced role for fishermen in decision-making.

The remainder of this section describes each of these priority areas in turn. Within each priority area the actions proposed during the event are listed.

3.4.1.2 Fishery and Stock Management

Throughout the event there was significant discussion about the lack of control over effort and the diverse practices which are used within the fleet.

A wide range of actions have been proposed in the area of fishery and stock management and where actions appear to have similar goals they have been grouped under an over-riding action description. Other potential actions were one-off suggestions targeting a specific issue and are therefore listed separately. In summary the actions identified under fishery management and control are:

- manage and improve standards and practices;
- limit access to the fishery and its priority grounds;
- improve stock assessments;
- develop re-stocking activities; and
- access to discards for bait.

The remainder of this section discusses the proposed actions in turn.

Action One: Manage and Improve Standards and Practices

Throughout the event there was concern that there was little consistency within the crab and lobster sector. Comments often referred to minimum landing sizes not being adhered to and the existence of different practices within the fleet. These issues are believed to affect the quality of the product, the reputation of the sector and ultimately the profitability of the fleet.

Under this action heading the following proposals were made:

- Enforcement of minimum landing size. There is a desire to see more enforcement of the rules by fishery officers and greater inspection of lorries and factories to ensure standards are being maintained;
- Make escape hatches for small shellfish on pots/creels compulsory. This has the dual benefit of allowing smaller crabs to escape without damage and reduces the amount of effort required from the fishermen to sort out the catch and dispose of those that are too small;

- Introduce a quality standard for raw materials on-shore which goes further than simply size of the product, for example condition of the shell or quality of the meat;
- Introduce a code of practice for fishermen, for example must v-notch one lobster per week or v-notch berried females for a few months of the year and/or only land a certain percentage, or zero, cripples;
- Suspend the license of any vessel caught landing under-size shellfish;
- Provide care of catch seminars and seek to provide continuous education for fishermen;
- Consider certification of the fishery; and
- Could increase minimum landing size but a national scheme wouldn't suit the South East of Scotland where different natural sizes exist. In addition there were fears that increasing the minimum landing size could open up more of the market to the Canadians. This could result in increasing the market penetration of smaller shellfish from elsewhere and subsequently the Scottish fleet would be the only ones who lose.

Action Two: Limit Access to the Fishery and Grounds

Perhaps the area that appeared to cause greatest concern to those attending the consultation event was the lack of control over effort within the static gear sector. Anecdotal comments referred to concerns about: open access to the fishery and over-fishing; vessels having too many creels in comparison to their ability to manage the creels; a disregard for the health of the stocks by landing shellfish that would be better left in the sea, for example under-sized shellfish or berried female lobsters; and problems caused by other fishing vessels damaging grounds and gear. There was also concern about vessels from non-Scottish fleets having over-fished in their own area now targeting Scotland's stocks. The response of those who attended the event to these issues, and more, are set-out below as potential actions which would limit access to the fishery.

- Manage effort by limiting the maximum number of pots to a vessel, potentially based on the capacity of the vessel and there should be no transfer of pot allowance if not used. Alternative suggestions included days-at-sea limitations or quotas but the preferred option appeared to be pot restrictions;
- Eliminate licenses that haven't been used for a period of time, for example three years to reduce the risk of latent entitlement becoming active again when conditions improve;
- Extend UK exclusive zone to 20nm;
- Introduce compulsory closed areas. It is recognised that this requires independent enforcement and it is hoped that IFGs could have a role to play in protecting areas from over-fishing;
- Identify the most valuable areas for crabs and restrict activity to fixed gear so as to discourage damage to equipment and grounds and enable marketing and price advantages for the static gear sector;
- Restrict mobile gear to beyond 12nm;
- Encourage Irish decommissioning; and

- Control recreational crab and lobster fishery by enforcing the licensing scheme.
- The problem needs to be addressed from a international perspective and the Trans-nation crustacean group is well position to fill this role if given the power and remit.

It is hoped that the actions to manage effort would reduce the need for any additional measures. However, it was suggested that if necessary one action to reduce over-fishing could be to enforce tie-ups and provide financial compensation through EFF.

Action Three: Improve Stock Assessments

There was concern about the adequacy of the current stock assessments. However, it was recognised that there are efforts currently being made by FRS in conjunction with industry to improve the information available. Potential actions highlighted under this action include:

- Ensure climate change is taken into account when considering stock assessments;
- Understand and acknowledge the natural potential sizes of crabs and lobsters by region in order to ensure optimum minimum landing size in each region;
- Improve the quality of the information on stocks by collecting reliable and recent data from the fishery. This would require improvements to the log book design and its completion; and
- Undertake more research in the south east of Scotland to explore why there is a smaller landing size.

Action Four: Continue/Develop Re-Stocking Activities

The fourth area of action under the heading fishery and stock management was to improve, or at least maintain, restocking activities. Hatcheries were considered to provide an essential service in stock management. Re-stocking activities are seen as one crucial measure in ensuring a sustainable and stable static gear fleet. Attendees were happy to see such efforts extended.

Action Five: Access to Discards for Bait

Profitability within the fleet would be immediately improved if some of the fish that is currently discarded by other fleets was brought ashore and used for bait.

3.4.1.3 Market Development and Promotion

The most significant opportunity for the sector identified during the discussions was market growth within the UK and several ideas emerged about how this could be achieved. Other market development initiatives also proposed were concerned with reducing current threats, in particular from inferior and cheaper imports.

The actions identified under market development and promotion are listed below.

Action Six: Stimulate UK Market Growth

Potential ideas under this action include:

- PR activities to promote omega 3 and good cholesterol benefits of crab;
- Target the public sector for funding assistance to support promotion;
- Emphasise the environmental friendly credentials of crab fishing;

- Promote the product as a value for money source of protein, not a luxury product;
- Get a hero/real people to promote the product at different stages of the value chain;
- Undertake more work in schools to educate children about shellfish; and
- Encourage supermarkets to promote shellfish.

Action Seven: Create a Central Marketing Board

One of the groups at the event believed that a centralised marketing organisation was the best route to achieve market development and it is presumed could undertake some, or all, of the actions listed above. In addition it was suggested that such a board could control quality and supply to the market, thus helping to maintain good prices for fishermen.

Action Eight: Set a Minimum Landing Price

One idea promoted by attendees was the introduction of a minimum landing price which would share risk more evenly between fishermen and processors. Currently it is perceived that fishermen have to take all the risk as processors protect their margins. The need to achieve a higher price or maintain margins could promote market development and encourage product innovation.

Action Nine: Restrict Under-Size Imports / Differentiate Product

Attendees expressed concern that there is little or no differentiation in the market place between under-sized, according to UK controls, shellfish from Canada and the larger Scottish or UK caught shellfish. Differentiation is believed to be necessary as the product is considered to be very different in terms of quality, taste and size. In addition, the dominance of the smaller Canadian imports in many markets within the UK means the price for the higher quality UK or Scottish caught product is depressed. One suggestion for how to deal with this included an import tax but there was recognition that this would require significant political will. Alternative routes to address this issue may incorporate the certification and promotional actions identified earlier.

3.4.1.4 Modernisation and Diversification

A lack of profitability caused by challenges in the current environment means that investment in the sector is low. A number of actions were identified which could ease this restriction and enable investment and modernisation within the fleet.

Action Ten: Scrap and Build / Decommissioning

Linked to concerns about over-fishing there was a call for funded decommissioning and a scrap and build scheme. The main benefit would be an improved balance of effort to stocks and markets.

Action Eleven: Invest in Fuel Efficiency Measures

Discussion at the event raised the issue that current investment in research on fuel efficiency never seems to consider solutions for smaller boats. This was an issue which was to be explored further with Seafish.

Action Twelve: Funding for Diversification

Another proposal for action was funding support to encourage successful diversification into alternative economic activities. Similar schemes in agriculture were referred to and comparisons drawn between the nature of activity of fishermen and farmers and the similarity between the challenges they face.

Action Thirteen: Access to Finance

Perhaps the most direct route to encourage investment and modernisation was the proposal to create government backed low cost loans for the sector. The benefits included more efficient vessels, capacity to replace old vessels and improvements in safety.

3.4.1.5 Enhanced Role for Fishermen in Decision Making

Similar to many of the other sectors consulted during this study there was significant concern raised about the power that environmental lobbyists have over fisheries management. Comments included 'the environmental movement is taking away fishermen's rights'.

Attendees expressed a strong desire for the knowledge and experience of fishermen to be more highly valued by all parties. The current situation where fishermen are repeatedly told what to do by others who are not active in the sector must be turned around. Potential actions are listed below.

Action Fourteen: More Value Attributed to Knowledge of Fishermen

Fishermen need to be at heart of decision-making and recognised for the wealth of knowledge and experience that they can bring to the decision-making process, including their knowledge of the environment and stock behaviour. Fishermen should not only be asked for their views and experiences but most importantly they should also be listened to and engaged throughout the decision-making process.

Action Fifteen: Empower Inshore Fisheries Groups

There was a significant amount of hope surrounding the development of Inshore Fisheries Groups. The potential actions highlighted under this theme include:

- Introduce a locally managed conservation scheme;
- Encourage Government to extend inshore remit beyond 12nm to 20nm or 25nm;
- Ensure each IFG has an unbiased Chair;
- Fishermen should be recognised within these Groups for their environmental knowledge;
- IFGs should work to give fishermen a strong voice, both within the Group and elsewhere;

Action Sixteen: More Consideration of Socio-Economic Impacts in Decision-Making

Linked to comments about the excessive power of environmental lobbyists there was a desire to see the threats to livelihoods and communities considered alongside environmental concerns, often referred to as socio-economic impacts. Attendees were keen that these wider considerations are more visible in decision-making processes.

Action Seventeen: Stop Trading Fish for Political Purposes

Attendees recognised that fish and fishing rights are often traded for political purposes at a European level. Concern was expressed that this custom was perhaps being replicated within the UK with fisheries used as a political tool. Attendees were of a view that this was not a productive way forward and that the management of this sector required cooperation and a shared understanding between different regions within the UK.

3.4.2 Preliminary Priority Actions

- From the seventeen actions identified above, six were prioritised above the others. The following actions reflect the highest priority actions identified by attendees at the event:
    - Action One: Manage and improve standards and practices;
    - Action Two: Limit access to the fishery and grounds;
    - Action Six: Stimulate UK market growth
    - Action Nine: Restrict under-size imports / differentiate product
    - Action Fourteen: More value attributed to the knowledge of fishermen; and
    - Action Fifteen: Empower Inshore Fisheries Groups

3.4.3 Summary of the Event Findings

3.4.3.1 Priority Issues

The discussions in the four breakout groups within the event followed the same structure and this allowed different views to be aired. However, overall there was little contradictory information and the same priority areas were identified across the four groups. The issues raised for the static gear sector were summarised under the headings:

- Fishery and stock management;
- Market development and promotion;
- Modernisation and fleet development; and
- Enhanced role for fishermen in decision-making.

3.4.3.2 Proposed Actions

Table 3.18 summarises the actions identified under each of the four priority areas. The table also splits the actions into High, Medium and Low priority in line with the discussions held at the event and the frequency with which different issues were raised. It is expected that, in order to assist decision-making, further consultation will be required to assess priorities and the potential value to the sector and Scotland against the likely cost of implementation of the various actions.

Priority Area	Action	Description	Priority
Fishery and stock management	1	Manage and improve standards and practices	High
	2	Limit access to the fishery and grounds	High
	3	Improve stock assessments	Medium
	4	Continue/develop re-stocking activities	Medium
	5	Access to discards for bait	Low
Market development and promotion	6	Stimulate UK market growth	High
	7	Create a central marketing board	Low
	8	Set a minimum landing price	Medium
	9	Restrict under-size imports / differentiate product	High
Modernisation and fleet development	10	Scrap and build / decommissioning	Medium
	11	Invest in fuel efficiency measures	Medium
	12	Funding for diversification	Low
	13	Access to finance	Medium
Enhanced role for fishermen in decision-making	14	More value attributed to the knowledge of fishermen	High
	15	Empower Inshore Fisheries Groups	High
	16	More consideration of socio-economic impacts in decision-making	Medium
	17	Stop trading fish for political purposes	Medium

Table 3.18 Summary of actions arising from the Inverness crab and lobster sector event

3.5 Crab and lobster sector event list of attendees

Name	**Organisation / Vessel**
John Alexander	Chloe May
Douglas Craigie	
Stewart Crichton	Orkney Fishermen's Society
Susan Lusseau	
Colin MacFarlane	
Jay MacKay	
Hugh MacPherson	
Heddle Costie	Heather K
Ruaridh MacRae	
Don McKay	Thor Fishing
Anne Moseley	Seafood Scotland
Lachie Murray	
Ronnie Norquoy	
Albert Ritchie	

Graham Sinclair	Burgons of Eyemouth
Thomas Staig	
Brian Sutherland	Moray Seafoods
Alec Watt	
Alan Coghill	Orkney Fishermen Association
Duncan McInnes	Western Isles Fishermen's Association

4 Pelagic Sector

4.1 The Fleet and Fish Stocks

FRS kindly ensured that the study team were aware of the most recent ICES advice.

Figure 4.1 to 4.5 show the location distribution of pelagic catches by Scottish vessels.

Mackerel Scottish Vessels 2008

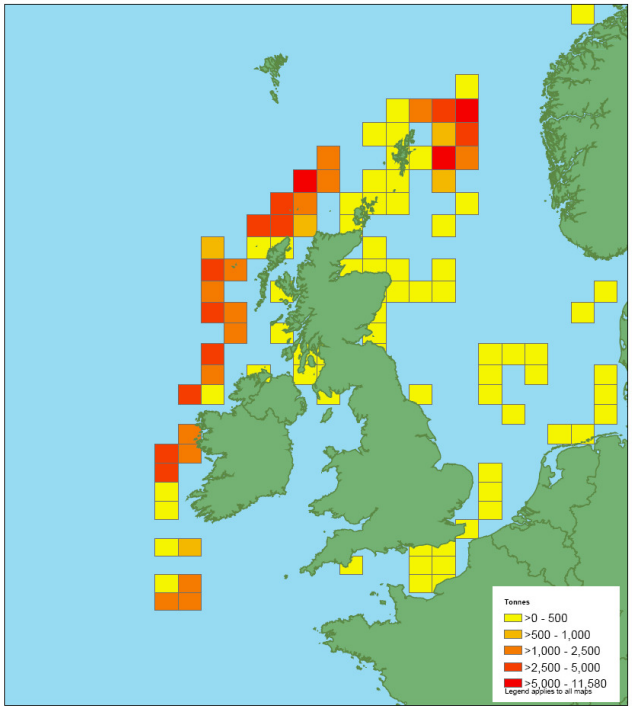


Figure 4.1 Location of mackerel caught by Scottish vessels, 2008

Source: SGMD management information.

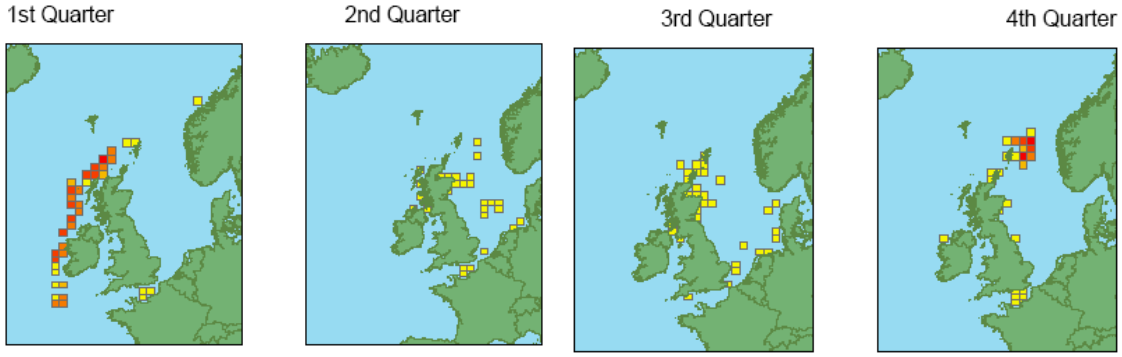


Figure 4.2 Quarterly repartition of mackerel catch by Scottish vessels, 2008.

Source: SGMD Management Information

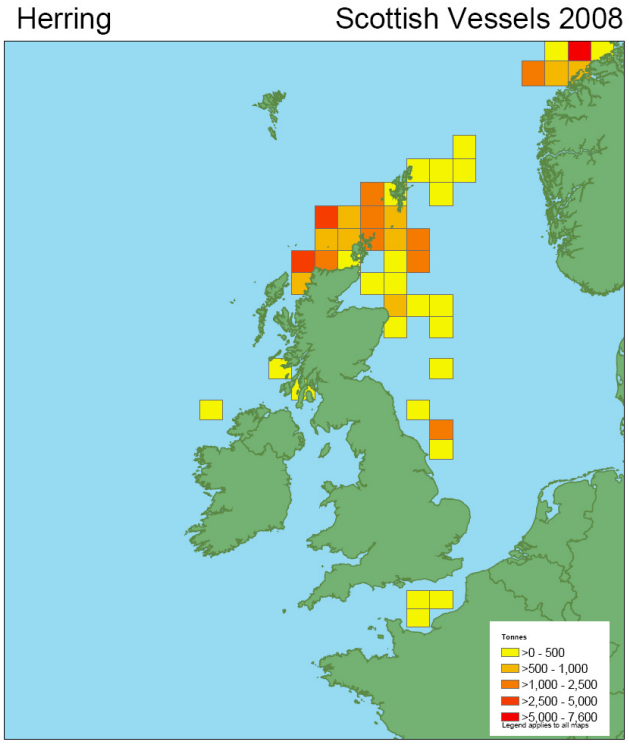


Figure 4.3 Location of herring caught by Scottish vessels, 2008
Source: SGMD management information.

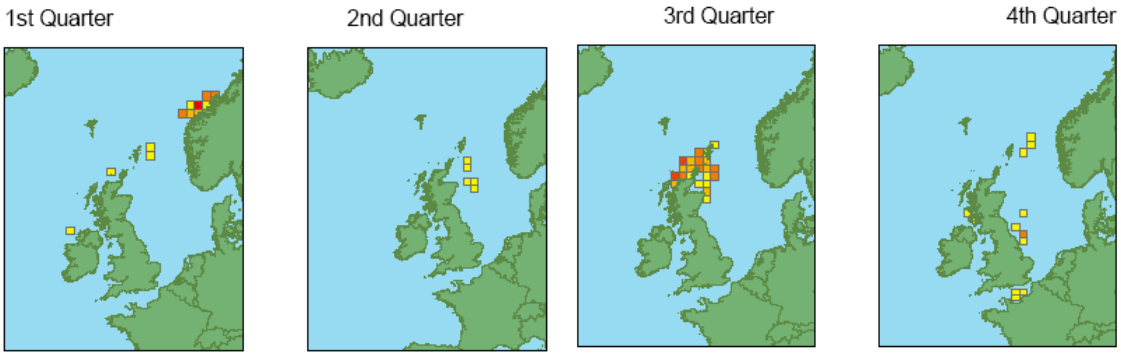


Figure 4.4 Quarterly repartition of herring catch by Scottish vessels, 2008.
Source: SGMD Management Information

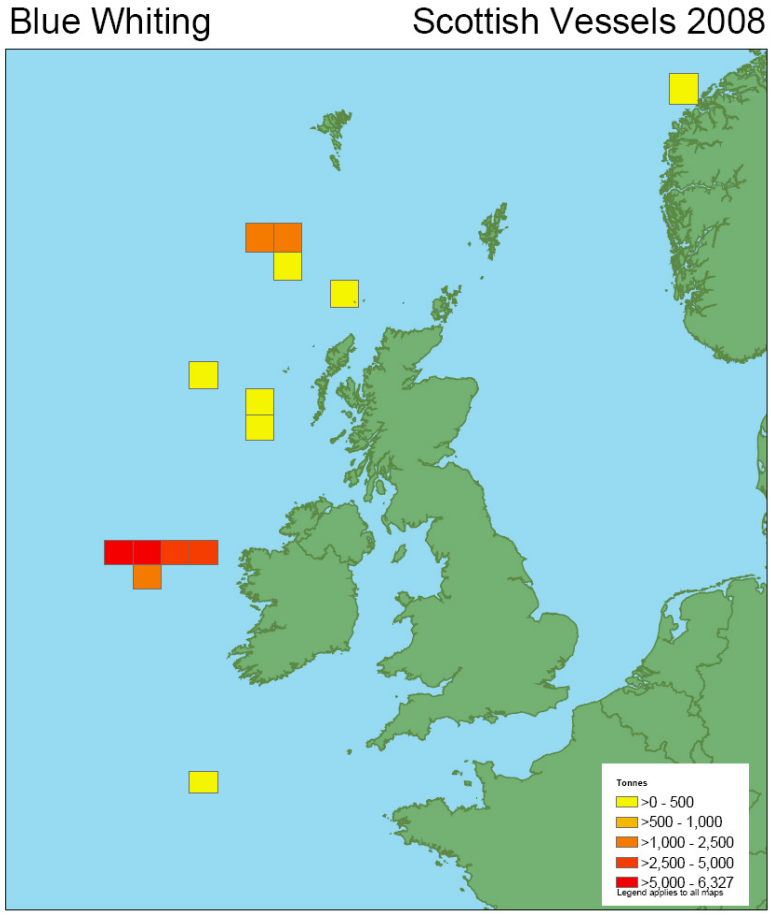


Figure 4.5 Location of blue whiting caught by Scottish vessels, 2008
Source: SGMD management information.

The following items were extracted from the 2008 ICES report to the EU and were supplied to event attendees.

9.4.2 Northeast Atlantic mackerel (combined Southern, Western, and North Sea spawning components)

State of the stock

Spawning biomass in relation to precautionary limits	Fishing mortality in relation to precautionary limits	Fishing mortality in relation to highest yield	Fishing mortality in relation to target fishing mortality	Comment
Full reproductive capacity	Increased risk	Overfished	Above target	

Based on the most recent estimates of fishing mortality, ICES classifies the stock as being harvested at increased risk. Fishing mortality in 2007 is estimated to be just above F_{pa}. SSB has increased by 40% since 2002 and is now above B_{pa}. The 2002 year class is well above average. The subsequent year classes to 2005 are estimated close to the mean of the time-series. There is insufficient information to confirm the sizes of the 2006 and 2007 year classes.

Figure 4.6 Mackerel stock information from ICES report 2008

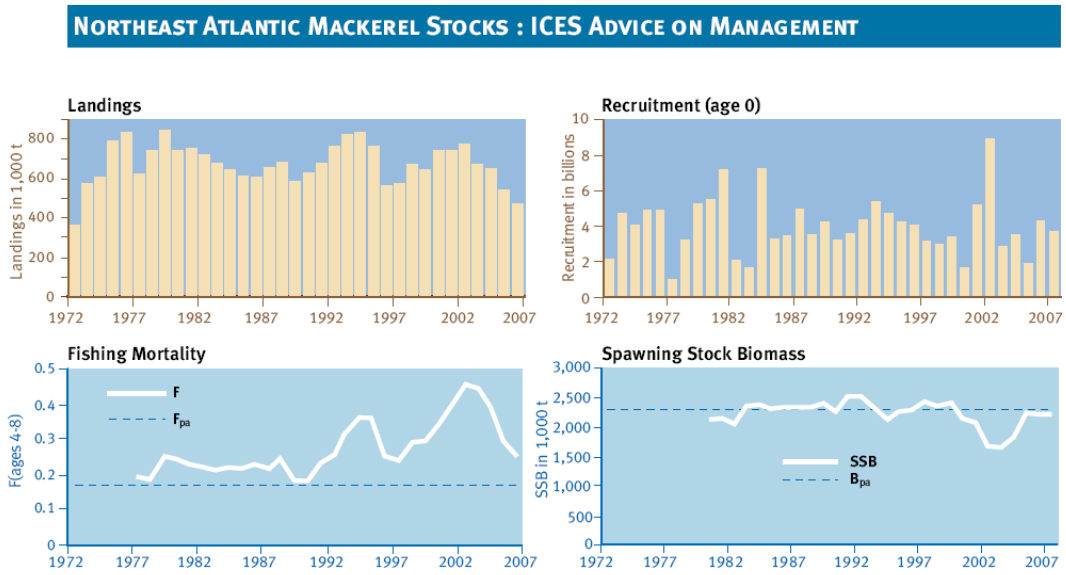


Figure 4.7 Mackerel stock trends from ICES report 2008

6.4.18 Herring in Subarea IV, Division VIId, and Division IIIa (autumn spawners)

State of the stock

Spawning biomass in relation to precautionary limits	Fishing mortality in relation to precautionary limits	Fishing mortality in relation to highest yield	Fishing mortality in relation to agreed target	Comment
Increased risk	Increased risk	Overfished	Above target	

Based on the most recent estimates of SSB and fishing mortality, ICES classifies the stock as being at risk of having reduced reproductive capacity and at risk of being harvested unsustainably. SSB in autumn 2007 was estimated at 0.98 million t, and is expected to remain below B_{pa} (1.3 million t) in 2008. F_{2-6} was estimated at 0.33, well above the target. All year classes since 2002 are estimated to be among the weakest since the late 1970s.

Figure 4.8 Herring stock assessment information for subarea IV, VIId and IIIa from ICES report 2008

5.4.30 Herring in Division VIa (North)

State of the stock

Spawning biomass in relation to precautionary limits	Fishing mortality in relation to precautionary limits	Fishing mortality in relation to highest yield	Fishing mortality in relation to agreed target	Comment
Undefined	Undefined	Overfished	NA	

Based on the most recent estimates of SSB and fishing mortality, ICES considers that the stock is currently fluctuating at a low level and is being exploited above F_{msy}. Recruitment has been low since 1998, and the 2001 and 2002 year classes are very weak.

Figure 4.9 Herring stock information from ICES report 2008

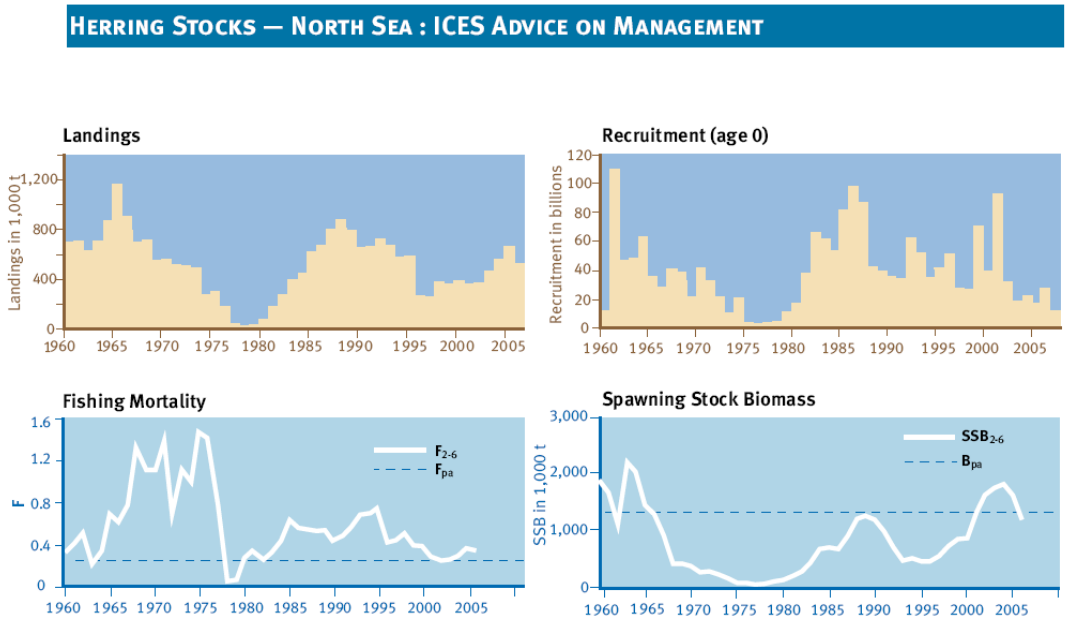


Figure 4.10 Herring stock trends in the North Sea from ICES report 2008

The following information relates to the sector vessels, their characteristics, activity and financial performance.

	Segment Totals	Average Per Vessel
Number of Active Vessels (Scottish)	20	
Length (m)	1,272	64
Power (kW)	91,607	4,580
VCU	58,294	2,915
Registered Tonnage (GT)	36,370	1,819
Days at Sea	1,107	55
Volume of Landings (Tonnes)	204,814	10,241
Value of Landings (£)	£84,445,305	£4,222,265
Vessel Age (years)		6

Table 4.1 Segment characteristics, 2007 - Pelagic 40m+ (Scottish vessels)

	Average Per Vessel
Total Crew	12.4
Full Time Crew	12.4
Part Time Crew	
Foreign Crew (non UK, as % of total crew)	0%

Table 4.2 Crew characteristics, 2007 – Pelagic 40m+ (Scottish vessels)

	No of active vessels	Sum of days at sea	Sum of landings (Tonnes)	No. of vessels required if all did max days at sea	No. of vessels required if all did 80% of max days at sea
Pelagic 40m+	20	1,107	204,814	11	14

Table 4.3 Capacity utilisation in the pelagic sector, 2007

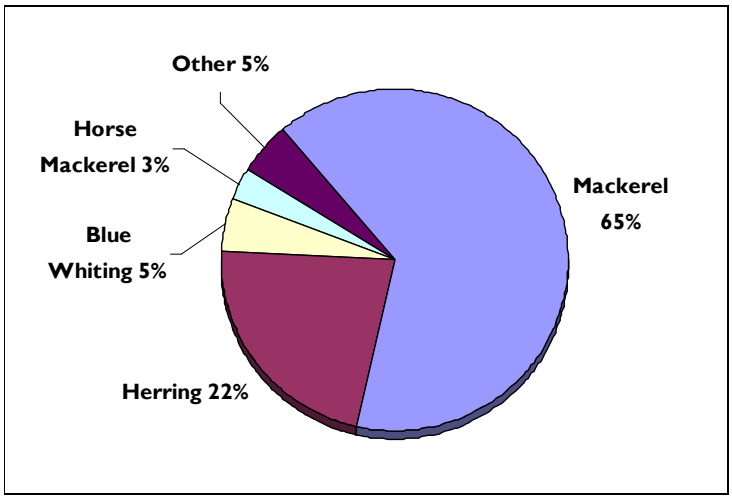


Figure 4.11 Catch composition, 2007 (in value) – Pelagic 40m+ (Scottish vessels)

4.2 Financial Performance of the Fleet and Drivers of Profit

Average per boat for:	Top quarter of earners	Segment average	Lower quarter of earners
Fishing income	£5,933,000	£4,106,000	£2,475,000
Fuel & Oil cost	£383,000	£286,000	£94,000
Crew share	£1,234,000	£854,000	£515,000
Tonnes per day at sea	213	190	177
Income per day at sea	£85,000	£75,000	£98,000
Days at Sea	72	54	25

Table 4.4 Average vessel performance, 2006 - Pelagic 40m+ (Scottish vessels)

4.3 Markets for the catch

The following information was presented to attendees at the event and influenced the discussions at the break-out tables.

2008 landings by Scottish-based vessels			
Species	Tonnes	Value (£)	Avg Price (£)
Herring	46,000	10,200,000	220
Mackerel	109,000	86,000,000	790
Blue Whiting	24,000	2,600,000	110
Total	179,000	98,800,000	1,120

Table 4.5 Pelagic landings by Scottish-based vessels, 2008.
Source: SGMD, not yet published rounded figures

Export trends were presented to the attendees. They are based on UK Customs and Revenue data and account for the first destination country only. Within these data it is impossible to isolate Scotland only.

Market information for the UK is based on information on retail sales obtained from Nielsen. At the pelagic event, doubt was expressed by attendees about the accuracy of the picture presented because it did not tally with their experience of their sales into the UK market. However, the data is considered to be a good reflection of retail sales since much of it is collected at source from electronic point of sale. It is possible that the apparent difference is due to adjustments in the volume and proportion of UK retail sales which are from imported goods or sources.

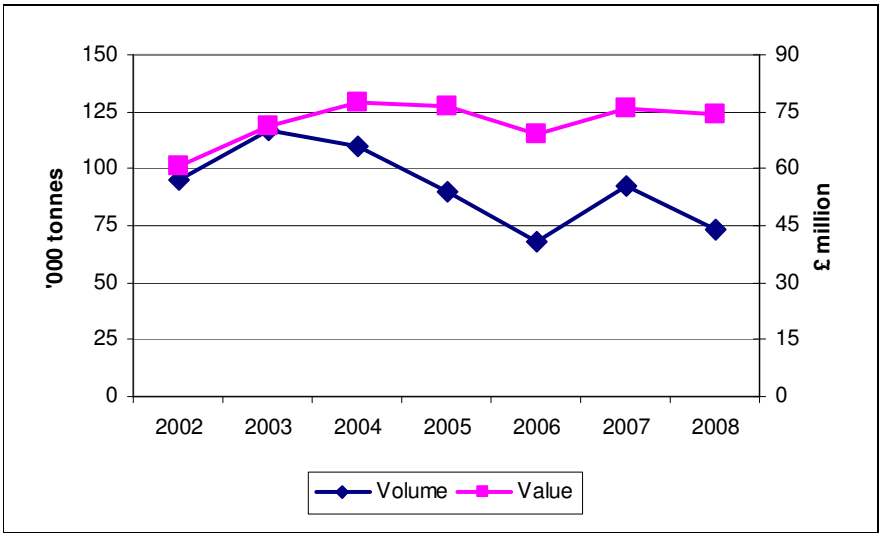


Figure 4.12 UK Export of mackerel, 2002-2008. Source: HMC&R

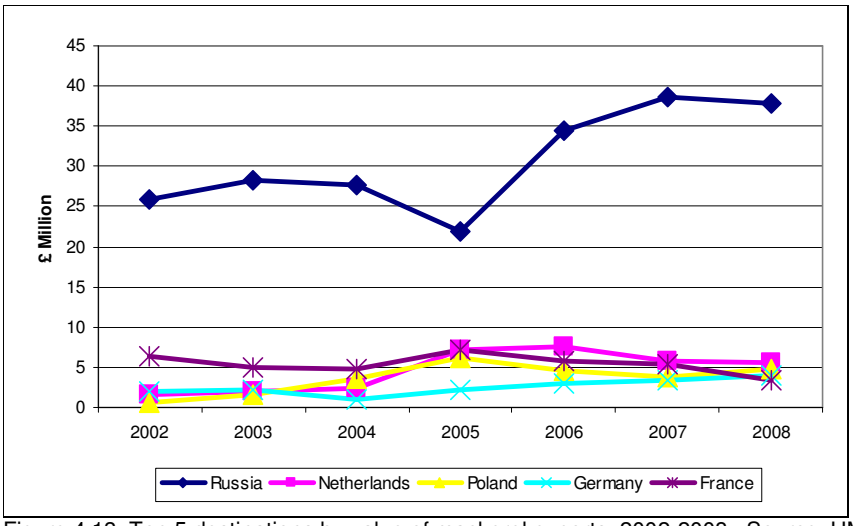


Figure 4.13 Top 5 destinations by value of mackerel exports, 2002-2008. Source: HMC&R

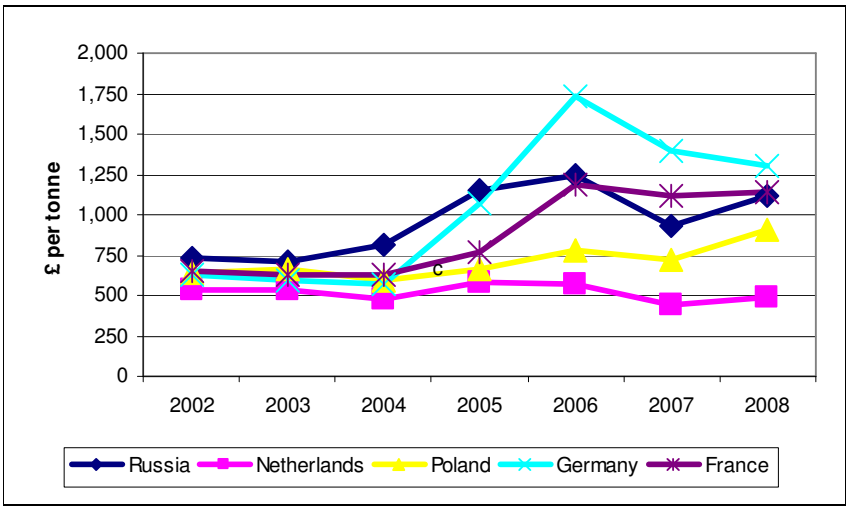


Figure 4.14 Average price of mackerel exports for the top 5 destination countries, 2002-2008

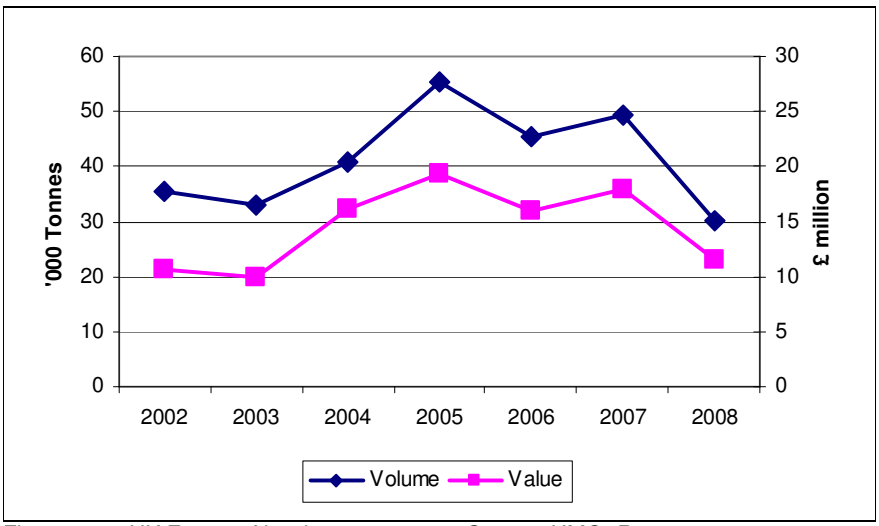


Figure 4.15 UK Export of herring, 2002-2008. Source: HMC&R

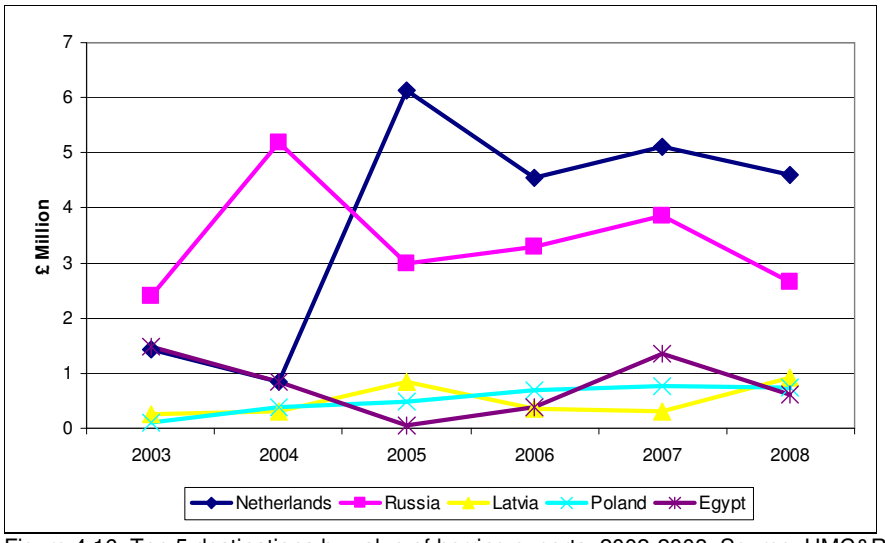


Figure 4.16 Top 5 destinations by value of herring exports, 2002-2008. Source: HMC&R

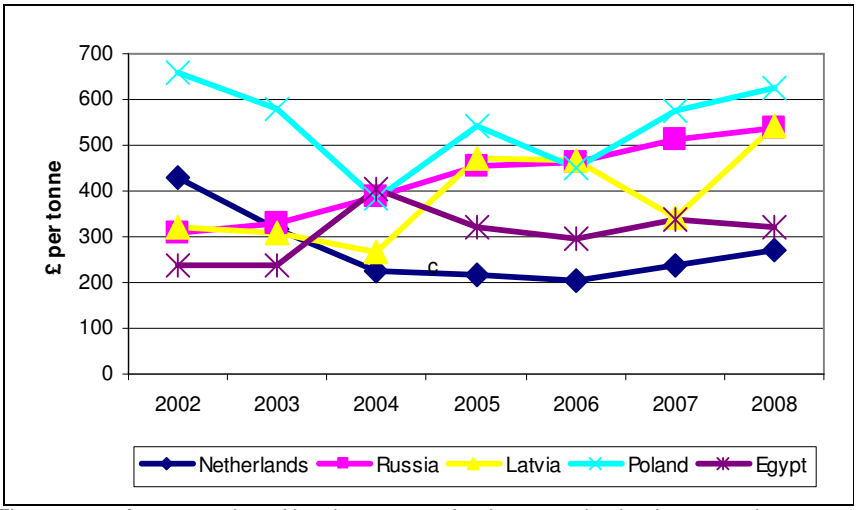


Figure 4.17 Average price of herring exports for the top 5 destination countries, 2002-2008

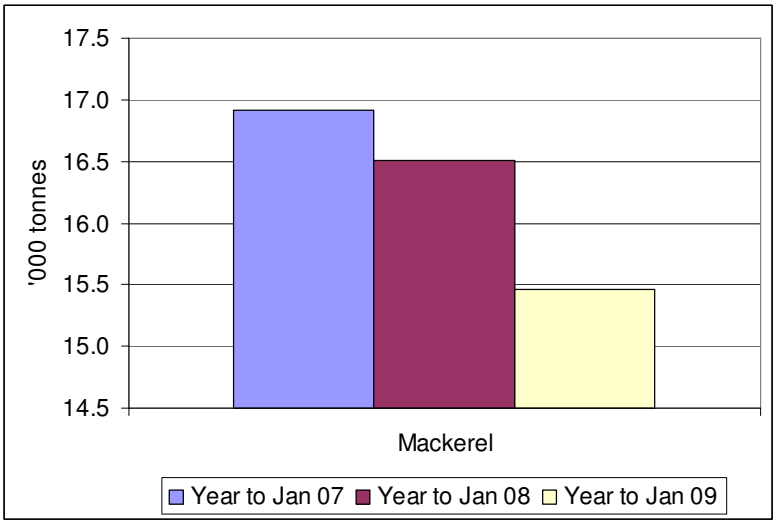


Figure 4.18 Volume sales of mackerel in UK, 2007-2009

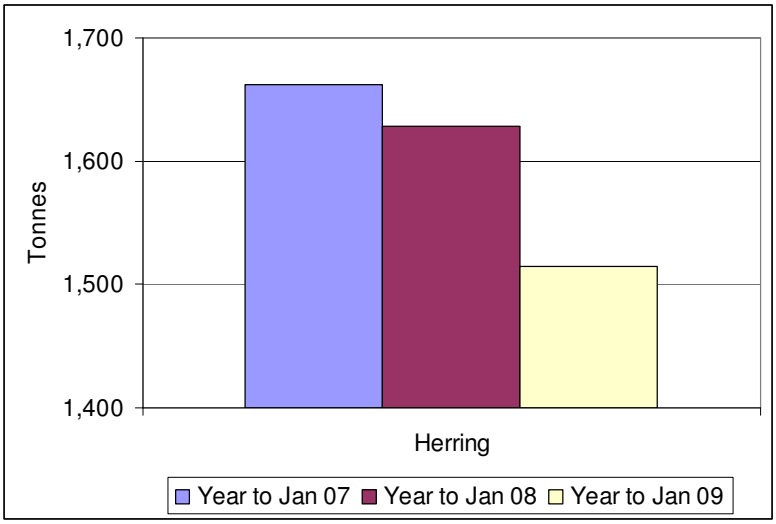


Figure 4.19 Volume sales of herring in UK, 2007-2009

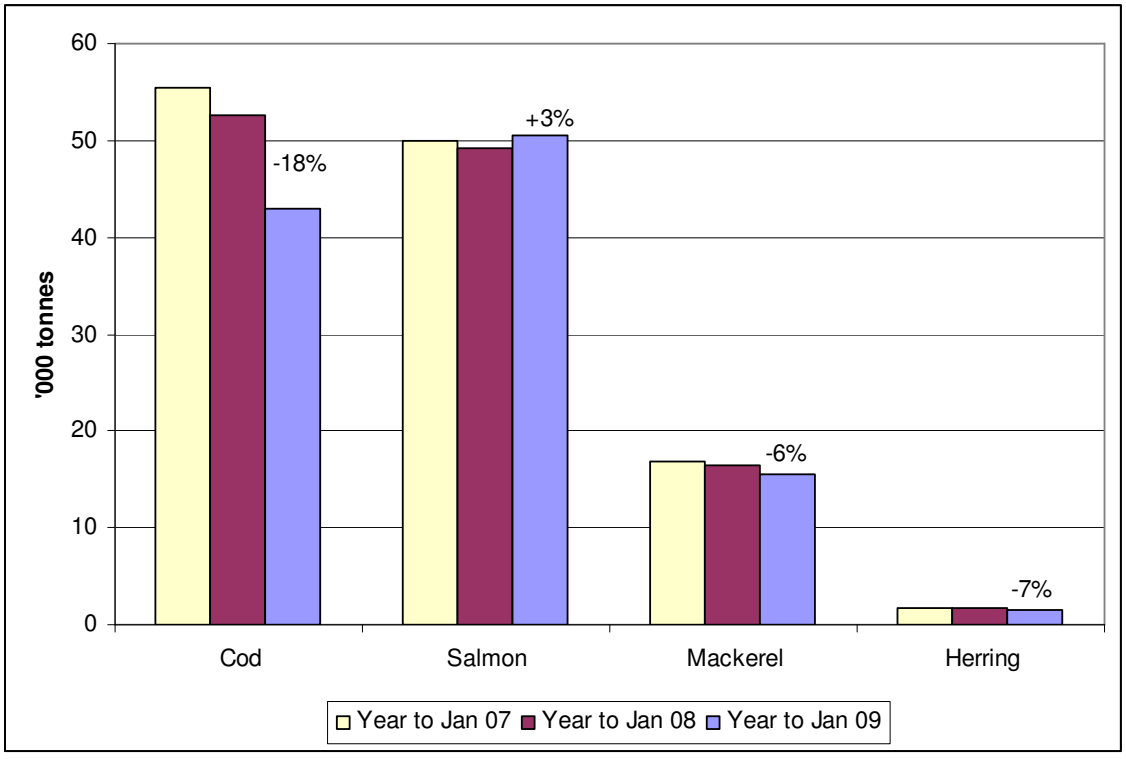


Figure 4.20 Volume sales of mackerel & herring compared with salmon and cod in UK, 2007-2009

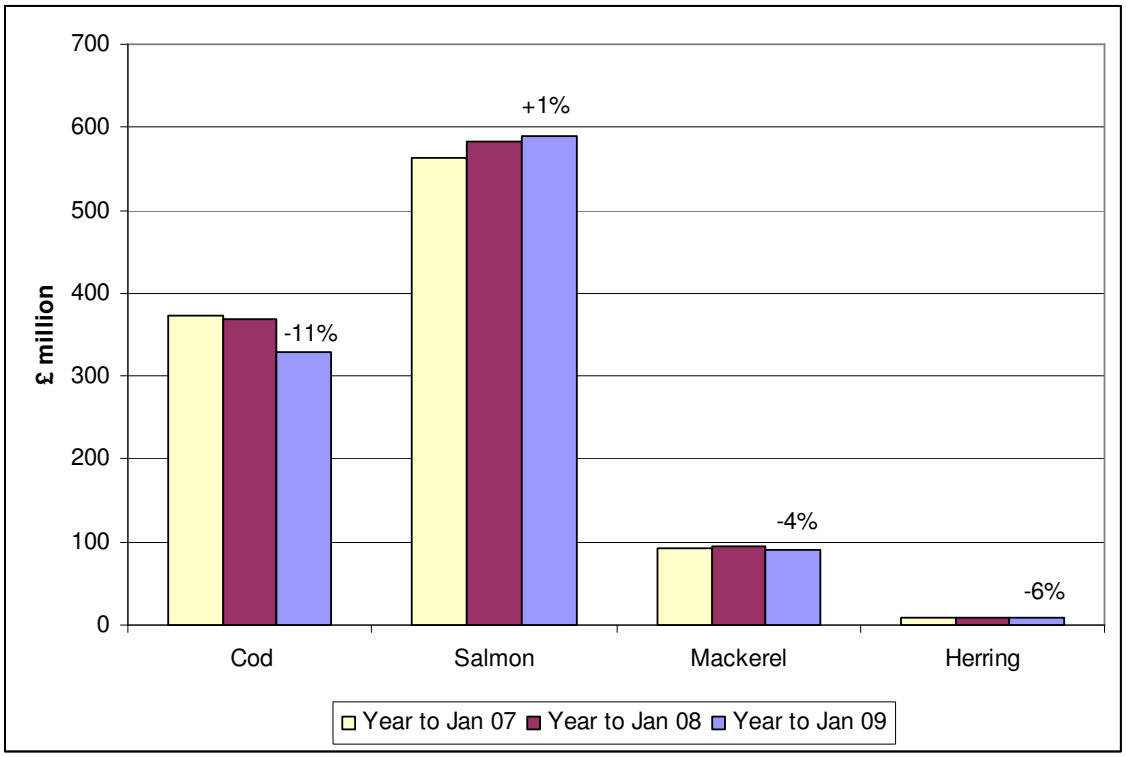


Figure 4.21 Value sales of mackerel & herring compared with salmon and cod in UK, 2007-2009

4.4 Pelagic Event Findings and Analysis

This section sets out the findings from the consultation event held on 6 March 2009. The chapter begins by setting out attendees' views of the current conditions, opportunities and challenges in the pelagic sector. The second section describes the priority areas where attendees believe action must be taken and why. This section also identifies what actions may be considered within the sector. The chapter concludes with a summary of the priority areas for action and a summary of the proposed actions.

4.4.1 Current Conditions, Opportunities and Challenges

Table 4.6 and table 4.7 provide a summary of current conditions, opportunities and challenges identified by attendees at the event. Following analysis, the findings have been grouped under the following headings:

- Product,
- People,
- Fleet Operation,
- Fisheries Management,
- Market issues; and
- the On-shore Sector.

What works well? What are our Opportunities?	What doesn't work well? What challenges do we face?
Product	
• Landing good quality of fish • Vessel operators have good understanding of relationship between onboard practices and quality of fish landed • Quality product - due to areas being fished and care of the catch • Healthy product - oily fish, omega 3, 'organic' • Opportunity – potential for diversification to other species e.g. more Blue Whiting (possibly for human consumption in the future; anchovies)	
People	
• Fishermen get a good reward for their catch - good vessels that care for the catch • Shetland – crew ownership in boats • Highly skilled and efficient crews on all Scottish pelagic boats. No foreign crew members employed; can attract local / Scottish crew due to high earnings • Profitable sector with high investment has led to modern fleet with extremely good living quarters and working conditions • Sector includes some very strong families, spread of quota among fewer vessels	• Scottish and UK government don't help us as much as Norwegian government helps their fleet • Succession for quota ownership and new entrants: how will the new generation be able access to quota?
Fleet Operation	
• Individual quota rights per boat – enables business planning • Fleet is modern, efficient and technically advanced; can compete well with Europe – much better than Norwegian ships • Willing to embrace new technology (e.g. gear, jigging, sonar and sounding equipment) • Fuel-efficient fishery • Opportunity for non-fishing activities (potential for making use of the vessels during the majority of the year when they are tied up alongside) • Seasonal fishery – greater chance of success • Most (all?) boats are profitable	• Discards • More to be done in gear technology to reduce discards • Vessels are purpose built for the pelagic sector therefore may not be possible or desirable to diversify into other fishing / non-fishing activities

Table 4.6 SWOT analysis from the pelagic sector event (section a)

Fisheries Management	
• Stocks are in good condition • Sustainably exploited mackerel stock • Long Term Management Plan • MSC certification • Jiggers for sampling a school of fish before catching - especially good in autumn less effective with less daylight in winter • Scottish Pelagic Sustainability Group sets the standard for other sectors of the Scottish fishing industry in terms of their achievements in promoting and increasing the overall sustainability of the sector • Opportunity for the sector to move towards a self regulatory system at the European level • Opportunity: If Iceland join EU "trade mackerel against Atlanto-Scandinavian herring"	• Level of agreement on stock assessment between fleet and scientists is not good. Under estimates of North Sea stocks. • Not enough funding in fisheries science (scientists themselves are doing the best they can) • Management plans need to be more robust – at present it is not possible to develop long term plans due to instability and crises (dramatic year on year quota changes, stock recovery actions, short notice closure of fishing grounds) • International issues around 'poor' fisheries management (low level of monitoring, poor enforcement, countries less stringent with their own fleet) e.g. Norway, Iceland, Spain (different issues); need for a level playing field • Fear that the introduction of ITQ might lead to a more concentrated sector • Concern that UK might lose fishing opportunity to other countries (under pressure from Norway and Iceland or during the CFP reform)
Market	
• Good product to the value chain/market • Opportunity to promote and grow the market for oily species as oily fish currently has a low market share compared to that seen in other European countries (it might be possible to change preferences during the recession as these are a lower price fish option)	• Oily fish (particularly fresh / frozen) not as known or visible to the consumer as the more commonly sold white fish species (not as fashionable and appealing as white fish) • Market challenges - short catching season and long selling season • Low financial stability in export markets (e.g. Eastern Europe and Russia) – high risk of not being paid, particularly during period of recession • Need to increase UK demand for pelagic species
On-shore sector	
• Good quality factory facilities • Processing sector has good seasonal workers (high level of flexibility and no shortage of workers for the short season) • Immigrant labour essential and doing a good job in factories	• UK processing sector is at a strong disadvantage compared to those in other countries due to e.g. Norwegian government payment / credit guarantees • Temporal disconnect between fleet activity and processors - capacity issues • Proportion of Scottish fleet landings which are landed in Norway • Seasonality for processors – staff shortage for the short season • Low credit availability for processors (less for the boats)

Table 4.7 SWOT analysis from the pelagic sector event (section b)

4.4.2 Priority Areas and Proposed Actions

The consultation event invited attendees to vote on which issues they considered to be a priority. However, because many of the issues were inter-linked the findings have been grouped under three priority areas:

1 Product, markets and on-shore sector
2 Fleet operations and people; and
3 Fisheries Management.

The remainder of this section describes each of these priority areas in turn. Within each priority area the actions proposed during the event are listed.

4.4.2.1 Product and markets

Attendees at the pelagic event had a good view of the quality of their product and their concerns there were to ensure that those advantages were put to good use to better market their product in order to increase consumption and demand for pelagic fish products. On the market side, there were concerns about some of the challenges facing the sector to achieve those ambitions of wider and greater consumption of pelagic fish.

Action One: Create a system of UK credit supply or guarantee for exports

The current difficulties faced by processors in getting export guarantees affect the fleet indirectly. The situation means the Scottish processors are operating in a riskier way or have fewer potential customers. This is may mean that they cannot offer top prices to Scottish vessels, which in turn may encourage their owners to consider landing in Norway.

Since it seems unlikely that the previous UK government scheme will be resurrected, it might be more appropriate for the industry to work with banks or insurance companies to devise an innovative scheme that could possibly be industry funded. Government could assist in this process by asking financial businesses to cooperate with industry efforts to solve the problem.

The benefits of this action could be improved marketing ability for Scottish processors especially for export markets, which could lead to improved prices and improved profit for vessels.

Action Two: Extend the catching season or implement "bank and borrow" scheme for quotas

These are two specific actions intended to alleviate some of the pressure on processors due to the concentrate catching period. They are to alter the quota period, or to permit transfer of quota allowance from one quota year to the next, so that the catching season can better reflect the presence of the fish in EU waters during their migration.

Benefits of these actions are that extended catching periods might enable processors to reduce costs and pass on some price benefits to the fleet.

Action Three: Promotion programme to increase demand and consumption

With a particular emphasis on trying to increase demand for pelagic fish products in the UK market, the following specific suggestions were made:

- Promote the message of quality, healthy, convenient, inexpensive food
- Ensure tastings available at regional shows and supermarkets

- Promote specific cooking ideas to emphasise convenience
- Work with regional suppliers to develop geographically differentiated products
- Engage TV chefs and other personalities to promote oily fish and how to cook it
- Work with restaurants to promote oily fish

The benefits of such a campaign are expected to be increase sales in the UK, which are safer and less costly to make than export sales, thus leaving more margin in the value chain for the Scottish fleet.

Action Four: Evaluate possibility of a Scottish auction for pelagic fish

There is an auction in Norway for pelagic fish and there are several identified advantages and disadvantages of setting up such an auction in Scotland. It would be worth carrying out a detailed study with costs and benefits to the fleet and processors in Scotland.

The benefit of this action is that then a decision whether to proceed with a proposed auction could be made on the basis of a detailed consideration of the advantages and disadvantages and expected costs and benefits.

4.4.2.2 Fleet operations and people

Consideration of issues relating to the operation of vessels and collaboration within the sector lead to the following proposed actions.

Action Five: Maintain and improve cooperation within the pelagic sector

The Scottish Pelagic Sustainability Group is a good step forward illustrating the benefits to all parties of successful collaboration within the sector. Working together will enable the vessels in the fleet to face threats more successfully

Action Six: Establish shore-based power connections for vessels

While pelagic vessels are tied up at the quayside, they must keep their engines running. A shore-side power supply could potentially be a much cheaper way to ensure continuity of power to essential onboard systems. This would reduce operating costs and improve profits

Action Seven: Use pelagic vessels for research and survey work

During the long closed seasons, pelagic vessels could possibly be used by FRS for research and stock surveys under a contract basis.

This could give some extra income to vessels and improve stock assessments, both of which would improve vessel profits.

4.4.2.3 Fisheries Management

Fisheries management and stock assessment were the areas that caused most concern to the pelagic event attendees, with focus on international relations occurring in all break-out groups. The following actions were identified:

Action Eight: Strengthen involvement of vessel owners in stock assessment

As well as taking input from PO chief executives and the association officers, it was felt that stock assessments could possibly be improved if there was more contribution made by individual skippers and vessel owners. FRS could consider ways to make this easier and an effective way to take account of the experiences and knowledge of those at sea.

It was also suggested that there should be a structured, externally facilitated discussion between FRS and the fleet on stock assessment methods, aims and objectives.

This action would be expected to improve stock assessments and in the longer run, improve catching opportunities or reduce the risk of exceeding a sustainable TAC.

Action Nine: Improve stock assessments

There were expressions of concern that the mackerel stock assessment was not reliable and some suggestions of how it could be improved:

- At minimum, continue current level of mackerel egg survey
- Use vessel catch data – in parallel to other data if it does not fit stock assessment models
- Ensure that discard sampling is representative of the whole year's catch – don't sample during a period when there are many small fish caught and then apply that discard rate to whole year's activity.
- FRS should come to sea more often when the fleet invite them.
- Continue to improve transparency of ICES, inviting experts and fleet to meetings together. FRS and STECF should follow this too.
- Acknowledge the general northerly drift of stocks, update the survey systems, calibrate against old system to get continuity of data if appropriate.
- Continue to develop the collaborative (scientists / fleet) approach to long term management plans.

Action Ten: Reduce conflict between SGMD and Defra

As the Scottish pelagic sector is dependent on the activities of UK officials and minister for international negotiations, it is important that those individuals have a good working relationship with their Scottish colleagues.

Action Eleven: Maximise advantage through better international negotiations

All of the discussion groups touched on actions related to ensuring that there would be no disadvantage compared to other nations' fleet and that the most was made of negotiations with and relationships with other nations such as Norway and Iceland. The actions suggested were:

- Pressurise Norway to be visibly on the same terms as Scotland on matters such as accuracy of scales, percent water tolerance, etc.
- Address issue of small mackerel not being counted against quota in Norway
- Icelandic landings to be sampled. Need to prevent them destroying the mackerel stock to build up track record for EU entry.
- Create a level playing field EU/Norway for reporting in and out of each others' waters. Put these rules onto Norwegian vessels
- Same focus on support to industry they get in Norway
- Remove the government export guarantee scheme from Norway as part of EU/Norway agreement

- SFPA – do more spot checks on Norwegian vessels at EU/Norway line
- Scotland / UK / EU should be more vigorous with Norwegians not landing over quota (e.g. 8% water tolerance)
- EU should take action in consistent way against member states in breach of catch restrictions. Apply pressure on the EU to ensure that MS strengthen their monitoring and enforcement in line with existing agreements.
- Involve the Pelagic RAC in pressurising other MS to practice strong enforcement of catch limits.
- There must be the right people in international negotiations. It is vitally important for the foreign office to understand fishery issues.
- Undertake a detailed study / assessment of the threat to UK mackerel relative stability from non-EU countries.

These actions would be expected to reduce or remove any unfair advantage held by other nations competing to sell into the international markets for pelagic products.

Action Twelve: Continue and improve an effective enforcement regime

Staff from SFPA must have effective practices, procedures, and protocols to enable them to do a successful job. Staff must be thoroughly trained to conduct appropriate checks and tests throughout factories, including weighing scales. Staff must have the confidence to ask searching and pertinent questions.

There were also suggestions relating to self regulation in the longer term, using the Pelagic RAC as the appropriate body.

This action would be expected to protect prices by continuing the protection against over quota landings that the sector has enjoyed in recent years.

Action Thirteen: Preserve access rights similar to current situation and avoid the introduction of ITQs

There was a desire to ensure the stability of the segment overall by avoiding any drastic changes to access rights and quota units. There was opposition to a legally transferable title to quota units. Some attendees had the feeling that the current management regime presented the right balance between individual ownership of the quota and the necessity to adjust to exceptional circumstances. The introduction of an ITQ system would lead to further concentration which could be detrimental for the Scottish pelagic sector. There was also the concern to see the quota units transferred to non-UK interests. The actions suggested were:

- Scotland should continue to defend the argument that “quota is a national asset” and not create legal entitlement to quota.
- Maintain the link between quota and licence as well as the link between licence and boat (with some flexibility e.g. sunk boat), to avoid ownership outside the sector.
- Maintain the right to access stable proportion of quota, guaranteed to the licence holder, which reflect existing FQA.

This action would protect the Scottish fleet from a quota bubble which would reduce the financial ability to innovate and modernise the fleet. It would also help to maintain the pelagic sector in Scotland.

Action Fourteen: Reduce discards

Discarding fish is seen as a risk to stock sustainability and to marketing potential, apart from being a wasteful practice. There was a raft of suggestions relating to reducing discards:

- Discard detection – could use data on average size fish collected in factories before going on grading machine. If a batch is much greater average size, then this indicates that the vessel might have slipped a catch of smaller fish. Link to VMS data, location of catch – could work instead of observers on board
- Legislate to reduce discarding – with view to eliminating it [although don't have a total outright ban on all discards overnight – need time to adjust]
- Observer scheme – to enforce legislation, need 2 per boat at any time
- Evaluate the possibility of using special Cameras on board (these have been trialled successfully elsewhere) Audit against log book
- Gear technology research – improving jigging for non-daylight hours
- Sampler nets – funding for trials e.g. catch IT. Seafish could do secondary research into their use
- Look into possibility of industry funded small sampling boat to tell fleet where to fish and where next according to size of fish samples - small fish are still all west – small ones don't move much
- Be able to catch all our entitlement when it's east of 4 degrees – change quota year to October-September rather than January-December - **This action would solve the entire problem of discarding small fish!**

These actions could deliver benefits to stock sustainability and marketing of the catch as environmentally friendly, both of which would contribute to vessel profit.

4.4.3 Preliminary Priority Actions

From the fourteen actions and groups of actions identified above, four were initially prioritised above the others. The following actions reflect the highest priority actions identified by attendees at the event, in numerical order these were:

- Action 1. Create a system of UK credit supply or guarantee for exports
- Action 3. Promotion programme to increase demand and consumption
- Action 6. Establish shore-based power connections for vessels
- Action 8. Hold a structured, externally facilitated discussion between FRS and the fleet on stock assessment methods, aims and objectives
- Action 11. Create a level playing field EU/Norway for reporting in and out of each others' waters. Put these rules onto Norwegian vessels. Do more spot checks of Norwegian vessels at EU / Norway line

- Action 14. Be able to catch all our entitlement when it's east of 4 degrees – change quota year to October-September rather than January-December Summary of the Event Findings

4.4.4 Summary of the event findings

4.4.4.1 Priority Issues

The discussions in each of the four breakout groups within the pelagic event followed the same structure and this allowed different views to be aired. There was a different focus on each of the tables but several issues and actions were common among more than one group. The priority issues for the pelagic sector can be summarised under the headings:

- Marketing and supply chain issues
- Utilisation of vessels and operating costs; and
- Fisheries Management issues, especially:
  - Stock assessments
  - International negotiations and level playing field
  - Access rights
  - Discard reduction.

4.4.4.2 Proposed Actions

Table 4.8 summarises all actions identified under each of the three priority areas and splits them into High, Medium and Low priority in line with discussions at the event. Further consultation will be required to assess potential value to the sector and Scotland against likely cost of implementation of the various actions.

Priority Area	Action	Description	Priority
Product and markets	1	Create a system of UK credit supply or guarantee for exports	High
	2	Extend the catching season or implement “bank and borrow” scheme for quotas	Medium
	3	Promotion programme to increase demand and consumption	High
	4	Evaluate possibility of a Scottish auction for pelagic fish	Medium
Fleet operations and people	5	Maintain and improve cooperation within the pelagic sector	Low
	6	Establish shore-based power connections for vessels	High
	7	Use pelagic vessels for research and survey work	Low
Fisheries management	8	Strengthen involvement of vessel owners in stock assessment	High
	9	Improve stock assessments	Medium
	10	Reduce conflict between SGMD and Defra	Medium
	11	Maximise advantage through better international negotiations	High
	12	Continue and improve an effective enforcement regime	Medium
	13	Preserve access rights similar to current situation and avoid the introduction of ITQs	Low
	14	Reduce discards	High

Table 4.8 Summary of actions arising from the pelagic sector event

4.5 Pelagic sector event attendees

Name	Organisation / Vessel
Jess Sparks	Seafood Scotland
Alex Wiseman	Scottish Pelagic Fishermen's Association
David Hutchison	Scottish Pelagic Fishermen's Association / Shetland Fish Producers Organisation
Alex West	Scottish Fishermen's Organisation
Andrew Tait	Tait Group
Sinclair Banks	Lunar Group
John Wallace	Peterhead Port Authority
George West	Resolute
Ernie Simpson	Christina S
John Goodlad	Shetland Catch
Brian Isbister	Shetland Fish Producers Organisation
Sandra Laurenson	Lerwick Port Authority
Chris Anderson	Fresh Catch Ltd
Ian McFadden	Herring Buyers Association
Derek Duthie	Scottish Pelagic Fishermen's Association
James Brown	Caley
Andrew Pillar	Interfish / Altaire
Colin Faulkner	Scottish Government