



## **Surveillance Report**

### **SFSAG NORTH SEA HADDOCK TRAWL & DANISH SEINE FISHERY**

**Certificate No.: MML-F-082**

**Intertek Moody**

**21st October 2011**

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## 1. GENERAL INFORMATION

**Scope against which the surveillance is undertaken:** MSC Principles and Criteria for Sustainable Fishing as applied to the Scottish Fisheries Sustainable Accreditation Group (SFSAG) - North Sea haddock trawl & Danish seine haddock fishery.

**Species:** Haddock (*Melanogrammus aeglefinus*)

**Area:** ICES IVa & IVb: Central & Northern North Sea.

**Method of capture:**

Demersal (otter trawls (single & multiple rigs)

Danish seine

<b>Date of Surveillance Visit:</b>	<b>21st October 2011</b>			
<b>Initial Certification</b>	<b>Date: 22<sup>nd</sup> October 2010</b>	<b>Certificate Ref: MML-F-082</b>		
<b>Surveillance stage</b>	<b>1st</b>	<b>2<sup>nd</sup></b>	<b>3rd</b>	<b>4th</b>
<b>Surveillance team:</b>	<b>Lead Assessor:</b> R. Cappell <b>Assessor(s):</b> P1:M Pawson, P2:T. Huntington, P3:R. Cappell			
<b>Company Name:</b> <b>Address:</b>	Scottish Fisheries Sustainable Accreditation Group (SFSAG)  c/o Scottish White Fish Producers Association Ltd North Lodge Bath St Stonehaven AB39 2DH United Kingdom			
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## 2. APPROACH

This report contains the findings of the first surveillance cycle in relation to this fishery. Information regarding this year's audit has been collected from interviews held with the client, stakeholders and reports. All are listed at the end of this report

The client's response to the Conditions of Certification was set out in the Client Action Plan (CAP), which was appended to the final certification report. Action on the CAP was examined as a part of this first surveillance.

For each condition, the report sets out progress to date. The Moody Marine assessment team evaluated progress ('Observations' and 'Conclusion') against the commitments made in the CAP. The evaluation includes a re-evaluation of the scoring allocated to the relevant Performance Indicators in the original MSC assessment. Where the requirements of a condition are met, the Performance Indicators are re-scored. If the score is 80 or more and the condition does not require ongoing activity, then the condition is closed.

The assessment team has considered all performance indicators scoring below 80 in the initial assessment as part of this surveillance audit. All P.I.s scoring below 80 after this surveillance audit will be subject to conditions.

FCM ver 6: 6.3 states Members from the original assessment team or comparably qualified and experienced individuals shall conduct the surveillance audit. If different from the original assessment team, the selection of individuals to conduct audits shall be justified in writing and their relevant skills and/or expertise documented. Changes to the assessment team were included in the announcement of the surveillance audit posted on the MSC website.

Colin Chapman was responsible for Principle 1 in the initial assessment. Mike Pawson considered Principal 1 status of the stock issues in the current surveillance audit. Mike Pawson recently retired as senior fisheries advisor at CEFAS, Lowestoft, after 39 years. Between 1990 and 2002 Mike led the CEFAS Western demersal team, providing analytical assessments and management advice for 12 finfish stocks. Mike was chairman of the ICES Southern Shelf Demersal Stock Assessment Working Group (1996-98), Seabass Study Group (2000-04) and Elasmobranch Study Group (2001-02). Mike has provided scientific evaluation, quality assurance and advice to several national and EC-funded projects on fisheries biology, monitoring and assessment, and one of his major roles over the last 15 years has been peer-reviewing scientific papers and reports, including MSC assessment reports. All of Mike's work has been published in refereed Journals, in ICES and EC working group reports, and in contract reports.

Stephen Lockwood was responsible for Principle 3 in the initial assessment. Rod Cappell considered Principal 3 management issues in the current surveillance audit. Rod Cappell is a fisheries management consultant with over 15 years experience in European fisheries. He has a degree in Marine Biology, MSc in Marine Resource Development and a postgraduate certificate in Environmental Economics. Rod is currently working in several areas of European and UK fisheries management including European Commission Regulatory Impact Assessments, Socio-Economic research on fisheries dependency and is managing the assessment & mitigation of Green House Gas emissions in the fisheries sector. Rod has been involved with a number of MSC assessments, including several North Sea fisheries, which has involved consultation with key stakeholders throughout Europe.

This surveillance assessment team is comparably qualified and as experienced as the original assessment team.

### 3 RESULTS

	ITEM	COMMENTS
1.	Stock status update	<p><b>HISTORY OF THE FISHERY</b></p> <p>The North Sea haddock fishery is smaller than it was in the 1970s, when average annual landings were around 150,000 t compared to around 30,000 t reported between 2007 and 2010. ICES has estimated haddock discards in the North Sea have fallen from 27,805 t in 2007 to 9515 t in 2010 (when the total catch was 39,600 t), chiefly a consequence of recent poor recent recruitment (see Assessment, below), but also through increased gear selectivity and other discard reduction measures.</p> <p>In recent years, it has been necessary to reduce fishing effort by the demersal fishing fleet as part of the cod recovery plan and there has been significant decommissioning of Scottish vessels. As a result of decommissioning schemes in 2001–2002 and 2003–2004, 165 vessels were taken out of the Scottish fleet. Together with days-at-sea limits, this has resulted in a decline in haddock landings.</p> <p>Scotland's landings of haddock from the North Sea in 2010 amounted to around 24,000 t, most of which was by pair trawls – seines, seine nets and light trawl. Other nations taking haddock in the North Sea include Norway (1,114 t in 2010), Belgium (78 t), France (271 t), Denmark (725 t), Germany (634 t), Sweden (89 t) and The Netherlands (41 t). The TAC for 2011 was set at 34,057 t, of which the UK quota share is 24,312 t.</p> <p>In 2009, many Scottish vessels spent more time in Division VIa and around Rockall in order to save their limited North Sea days allocation, though reduced numbers of larger haddock around Shetland led to some vessels fishing off north-east Scotland instead at certain times and reduced whiting quota led other vessels to focus more specifically on haddock. It is also possible that the expansion of the CCTV/fully documented fisheries programmes in 2010 and 2011 in Scotland, Denmark and England may have led to some vessels preferentially targeting haddock to alter fishing patterns to prevent exhausting cod quota (vessels carrying CCTV systems are not permitted to discard cod). Nevertheless, exploitation levels on haddock do not appear to have increased (see Assessment, below), and the industry's perception of increasing haddock abundance in the North Sea in 2010 is generally in line with scientific surveys (Napier, 2011).</p> <p><b>Assessments and stock status</b></p> <p>Annual assessments of the state of the North Sea haddock stock are carried out by ICES (WGNSSK: ICES 2011a), which uses</p>

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	<p>information available up to the end of the previous year in order to provide management advice for the year following. The ICES Advisory Committee on Management (ACOM) considers this assessment advice and their report forms the official advice, which is presented for consideration by the EC and ultimately by the Council of Ministers.</p> <p><b>Table 1: Summary of stock assessment for haddock in ICES Sub-area IV (North Sea) &amp; Div. IIIa north (Skagerrak), 1998-2010 (t = □ 000 tonnes). Ind. By-catch refers to by-catch of haddock in the industrial fishery for Norway pout</b></p> <table> <tr> <th>Year</th><th>Recruits (age 0) millions</th><th>SSB t</th><th>Catch t</th><th>Landing s t</th><th>Discards t</th><th>Ind. By-catch t</th><th>Landings/SSB = harvest ratio (%)</th><th>Mean F Age 2-4</th></tr> <tr><td>1998</td><td>9958</td><td>203</td><td>131</td><td>81</td><td>45</td><td>5.1</td><td>39</td><td>0.60</td></tr> <tr><td>1999</td><td>138418</td><td>157</td><td>112</td><td>66</td><td>43</td><td>3.8</td><td>42</td><td>0.71</td></tr> <tr><td>2000</td><td>26490</td><td>135</td><td>104</td><td>48</td><td>49</td><td>8.1</td><td>35</td><td>0.77</td></tr> <tr><td>2001</td><td>2844</td><td>316</td><td>167</td><td>41</td><td>118</td><td>7.9</td><td>13</td><td>0.49</td></tr> <tr><td>2002</td><td>3728</td><td>524</td><td>108</td><td>58</td><td>46</td><td>3.7</td><td>11</td><td>0.23</td></tr> <tr><td>2003</td><td>3899</td><td>517</td><td>67</td><td>42</td><td>24</td><td>1.2</td><td>8</td><td>0.20</td></tr> <tr><td>2004</td><td>3717</td><td>445</td><td>65</td><td>49</td><td>16</td><td>0.6</td><td>11</td><td>0.26</td></tr> <tr><td>2005</td><td>42319</td><td>387</td><td>57</td><td>48</td><td>9</td><td>0.2</td><td>13</td><td>0.31</td></tr> <tr><td>2006</td><td>9032</td><td>310</td><td>56</td><td>38</td><td>18</td><td>0.5</td><td>12</td><td>0.51</td></tr> <tr><td>2007</td><td>5287</td><td>221</td><td>60</td><td>31</td><td>29</td><td>0.05</td><td>14</td><td>0.40</td></tr> <tr><td>2008</td><td>4293</td><td>224</td><td>44</td><td>30</td><td>13</td><td>0.2</td><td>14</td><td>0.23</td></tr> <tr><td>2009</td><td>33108</td><td>192</td><td>43</td><td>33</td><td>11</td><td>0.05</td><td>17</td><td>0.21</td></tr> <tr><td>2010</td><td>1794</td><td>182</td><td>40</td><td>29</td><td>10</td><td>0.4</td><td>16</td><td>0.23</td></tr> <tr><td>2011</td><td>3663</td><td>235</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table> <p>For assessment purposes, the North Sea haddock stock (ICES Divisions IVa,b,c) is combined with that in the Skagerrak (Div. IIIa north) and is subject to an age-based Extended Survivors' Analysis (XSA) carried out by WGNSSK. The data used in the assessment are derived from (i) total reported landings, (ii) sampling for weight, length and age, (iii) estimates of discards and industrial by catch, (iv) fishing effort data from logbooks, (v) three research vessel survey indices and (vi) data on natural mortality from multi-species analyses. The Scottish data collected by Marine Scotland Science (MSS) is comprehensive,</p>								Year	Recruits (age 0) millions	SSB t	Catch t	Landing s t	Discards t	Ind. By-catch t	Landings/SSB = harvest ratio (%)	Mean F Age 2-4	1998	9958	203	131	81	45	5.1	39	0.60	1999	138418	157	112	66	43	3.8	42	0.71	2000	26490	135	104	48	49	8.1	35	0.77	2001	2844	316	167	41	118	7.9	13	0.49	2002	3728	524	108	58	46	3.7	11	0.23	2003	3899	517	67	42	24	1.2	8	0.20	2004	3717	445	65	49	16	0.6	11	0.26	2005	42319	387	57	48	9	0.2	13	0.31	2006	9032	310	56	38	18	0.5	12	0.51	2007	5287	221	60	31	29	0.05	14	0.40	2008	4293	224	44	30	13	0.2	14	0.23	2009	33108	192	43	33	11	0.05	17	0.21	2010	1794	182	40	29	10	0.4	16	0.23	2011	3663	235						
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	ITEM	COMMENTS
		<p>comprising market sampling at all the main ports, observer discard trips, as mentioned earlier, and participation in MSS and international collaborative trawl surveys. The basis of the assessment and advice is the same as that used at the time of the original MSC assessment, though a linear cohort-based model is now used to forecast weights-at-age in catch predictions. A benchmark assessment was conducted in early 2011 (WKBENCH 2011). The most up-to-date ICES WGNSSK and ACOM reports available at the time of this surveillance report were those for 2011 (ICES 2011a, 2011b).</p> <p>The results shown in Table 1 (which vary somewhat with successive year's assessments as new data become available) indicate how SSB in 2001–2005 was strongly influenced by the relatively high recruitment of 0-group fish in 1999 and 2000. This is a feature of haddock population dynamics, in that stock biomass and hence yield are strongly dependent on occasional and unpredictable strong recruitment events. An exceptionally large year class in 1967, roughly 10 times the average, sustained a large increase in fishing effort for many years. Though recruitment in 2005 and 2009 was above the recent average, this has been much lower than in the period 1960s to 2000. Catches and landings have reduced commensurately. The Table shows that fishing mortality (F), averaged over fish aged 2–4, was relatively high at the beginning of the time series, but has generally been below 0.3 since 2002.</p> <p><b>Stock status in relation to reference points</b></p> <p>At the time of the original MSC assessment, the sustainability of the North Sea haddock stock was evaluated by comparing the estimates of SSB and F in Table 1 to precautionary approach reference points that were intended to avoid recruitment failure. The precautionary level for SSB (B<sub>pa</sub>) was set at 140,000 t in 2007, while the corresponding precautionary fishing mortality (F<sub>pa</sub>) was set at 0.7. Subsequently, ICES adopted reference points based on Maximum Sustainable Yield (MSY), as required by the EC and adopted by MSC, and now provides advice against F<sub>MSY</sub> (the fishing mortality that produces the highest sustainable catch) and B<sub>MSY</sub> trigger (the corresponding SSB), rather than F<sub>pa</sub> and B<sub>pa</sub>. F<sub>MSY</sub> has been set at 0.3, and B<sub>MSY</sub> trigger at 140,000 t, defaulting to the value of B<sub>pa</sub> (SSB equivalents to F<sub>MSY</sub> are not straightforward). The latest estimates of SSB and F (in 2010) indicate that the North Sea haddock stock may currently be considered as having full reproductive capacity, SSB comfortably exceeding 140,000 t, and is being harvested sustainably (F &lt; 0.3).</p> <p>Given that the abundance of haddock in the North Sea is strongly influenced by recruitment, which is highly variable and not particularly dependent on SSB (the very strong 1999 year class was produced when the SSB was near to its lowest historic level), fishing mortality is arguably the most important factor in relation to sustainability. Though F was estimated at 0.31 in</p>

	ITEM	COMMENTS
		<p>2004, 0.52 in 2006 and 0.42 in 2007, it has otherwise remained below <math>F_{MSY}</math> (0.3) since 2002.</p> <p><b>Management</b></p> <p>The North Sea haddock stock is being managed according to a plan agreed between the EU and Norway. The Management Plan was initially set up in 1999, was revised at the start of 2007 and again in 2008, and includes the following main elements:</p> <ol style="list-style-type: none"> <li>1. Every effort shall be made to maintain a minimum level of SSB, greater than 100,000 t (below which there is an increased risk of recruitment failure).</li> <li>2. Fishing will be restricted on the basis of a TAC consistent with a fishing mortality rate of no more than 0.30 for appropriate age groups, along with a limitation on inter-annual TAC variability of <math>\pm 15\%</math>.</li> <li>3. Inter-annual quota flexibility ("banking and borrowing") of up to <math>\pm 10\%</math> is permitted (although this facility has not yet been used).</li> </ol> <p>ICES evaluated the EU and Norway management plan during 2007 and 2008 and concluded that it is precautionary and appropriate for framing advice and, in 2011, ICES considered that adherence to the management plan has contributed to lower fishing mortality levels, increased yield and greatly improved stability of yield.</p> <p>ICES advises that, on the basis of this management plan, a TAC of 41 575 t in 2012 is implied, which is expected to lead to a TAC increase of 15% and an F increase of 23% (to 0.287). If the ICES MSY framework is followed, this would imply F to be increased to 0.3, which would result in human consumption landings of some 43 000 t in 2012. The former scenario would be expected to lead to an SSB of 230,000 t in 2013, and the latter to 227 000 t in 2013.</p>
		Condition 1
2.	Condition 1	<p><b>Mitigation Measures to reduce by-catch:</b> The client shall ensure that there is a partial strategy in place that is expected to maintain both retained species at levels that are highly likely to be within biologically-based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p>

	ITEM	COMMENTS
		<p>To achieve this outcome, it is recommended that the SFSAG fleet should continue to collaborate proactively with research and development organisations engaged in seeking gear improvements aimed at reducing unwanted by-catch (both commercial and non-commercial) and other adverse environmental effects. On the basis of this joint research, the client fleet should, in consultation with both statutory and non-statutory organisations, adopt suitably selective gear to reduce bycatch levels of both whiting and cod.</p> <p>Evidence should be provided by the first annual surveillance there is a partial strategy in place that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding. This will include verifiable information on selectivity and gear performance measured against current benchmark levels, which will be formally assessed at the third surveillance audit.</p> <p>The main focus of this condition was on whiting and monkfish.</p>
3.	Associated PIs	2.1.2: <b>Management strategy:</b> There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species.
4.	Activity assessed	<p>1. Level of collaboration with R&amp;D organisations engaged in seeking gear improvements aimed at reducing unwanted by-catch.</p> <p>2. Level of adoption of suitably selective gear to reduce discard levels of both whiting and cod.</p> <p>3. Evidence that there is a partial strategy in place that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding</p>
5.	SFSAG client action plan	<p>Members of the client group will continue to participate extensively in the development and trial of further selective gears to reduce discards through their participation in initiatives such as the Conservation Credits scheme, a Scottish response to regional management that promotes sustainable fishing practices, and the Scottish Industry Science Partnership (SISP), which helps fishers develop new, environmentally friendly, fishing gears. Furthermore, the group will seek to influence the on-going use and development of innovative net design and configuration of whitefish gear, Seasonal Closures (SC's), and Real Time Closures (RTC's) which together provide substantial protection for juveniles and vulnerable stocks such as cod and whiting.</p> <p>The group will use current levels of selectivity and gear design as a benchmark from which to assess the need for further improvements; the group will deliver any necessary changes through their participation, and influence within the various stakeholder groups.</p> <p>It is expected that a formal partial strategy for the adoption of suitably selective gear will be in place within a year of initial certification and that there is evidence that this strategy is being implemented successfully within three years of certification.</p>

	ITEM	COMMENTS
6.	AT observation at Surv 1	<p><b>1. Level of collaboration with R&amp;D organisations engaged in seeking gear improvements aimed at reducing unwanted by-catch.</b> The main approach taken by SFSAG is to participate in the 'Fisheries Management and Conservation Group' (FMAC), a new fisheries co-management group established in June 2011 that is chaired by Marine Scotland and includes representatives from fishing industry representative bodies including SFSAG), Fish Producer Organisations (POs) Environmental organisations and Marine Scotland policy and science. The Scottish Government is implementing fisheries policy through co-management and SFSAG feel that encouraging the uptake of selective gear through the use of a centralised, incentive-based scheme fulfils its objectives in more rational and effective manner than could be achieved by SFSAG alone.</p> <p><b>2. Level of adoption of suitably selective gear to reduce discard levels of both whiting and cod.</b> A proportion of the client fleet (around 30 vessels) has trialled a number of new gear types since the site visit in 2009. The variety of gears, as well as the timeline of actions, can be seen in <b>Appendix A</b>. This also reflects SFSAG participation in a number of wider statutory and voluntary initiatives to reduce interaction with unwanted species, such as the Real Time Closure (RTC) scheme for cod, seasonal closure of Long Hole and Phases 1 &amp; 2 of the Marine Scotland voluntary 'Cod Catch Quota Scheme' (CCQS). This latter scheme has significantly reduced the discarding of cod in the North Sea as participating vessels may not discard any of the species. Once the vessel has exhausted its cod quota, it must stop fishing in the North Sea.</p> <p><b>3. Evidence that there is a partial strategy in place that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</b> The partial strategy consists of a combination of reduced effort on cod through a combination of RTCs, seasonal closures and the CCQS on the one hand and the active participation in trialling - and if appropriate - adopting new gear designs with increased selectivity for the target species on the other. Research results to date suggest elements of this partial strategy e.g. increased selectivity are effective (Anon, 2010; Campbell <i>et al</i>, 2010; Kynoch <i>et al</i>, 2011; Kynoch <i>et al</i>, 2010; &amp; Kynoch <i>et al</i>, 2007). Evidence on the selectivity and gear performance as measured against current benchmark levels will be formally assessed at the third surveillance audit.</p>
7.	Initial scores	75
8.	Re-scoring	75
9.	AT conclusion from Surv 1	The client has met the condition at this first surveillance point. The partial strategy is in place and the results of gear trials appear to be encouraging. Evidence on the selectivity and gear performance as measured against current benchmark levels will be formally assessed at the third surveillance audit.
Condition 2		

	ITEM	COMMENTS
10	Condition 2	By the first surveillance audit, evidence must be presented that shows that measures have been developed to provide some accurate quantitative information on total catch (i.e. retained plus discarded catch) of all retained species.
11	Associated PIs	<b>2.1.3: Information / monitoring:</b> Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species.
12	Activity assessed	1. Measures developed to provide some accurate quantitative information on total catch (i.e. retained plus discarded catch) of all retained species.
13	SFSAG client action plan	The group will liaise with Government, fish selling offices, Producer Organisations and within its membership with a view to creating a flow of total catch information. This may be attached to existing documentation, such as official landing declarations, or take the form of bespoke record keeping for vessels landing MSC product. Alternatively, in order to satisfy the condition, vessels may make use of new technology as and when it develops. The group will liaise with MSS to develop a common standard for the reporting of total catch so that such information may ultimately support existing information.
14	AT observation at Surv 1	<p>A custom-designed retained species reporting system was developed with assistance from MS Science. An example was presented to the team (see <b>Appendix B</b>). This has been distributed throughout the SFSAG fleet and a 40% return was reported to the AT (Jane Sandell, pers. comm., 21 October 2011). As yet there is no review or interpretation of data.</p> <p>The paper form will be replaced by electronic logbooks installed throughout the fleet by January 2012, which has a requirement to record all retained &amp; discarded species. This will introduce the central collection and distribution of information by Marine Scotland will occur from 2012.</p>
15	Initial scores	75
16	Re-scoring	80
17	AT conclusion from Surv 1	<p>A paper-based system has been introduced that has had a good level of returns from the client fleet. Electronic logbooks installed throughout the fleet by January 2012, which has a requirement to record all retained &amp; discarded species, will replace this paper form.</p> <p>It is considered that this condition is fulfilled.</p>

	ITEM	COMMENTS
Condition 3		
18	Condition 3	<p>The client shall ensure that there is a partial strategy in place that is expected to maintain discarded bycatch species at levels which are highly likely to be within biologically-based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p> <p>To achieve this outcome, it is recommended that the SFSAG fleet should continue to collaborate proactively with research and development organisations engaged in seeking gear improvements aimed at reducing unwanted by-catch (both commercial and non-commercial) and other adverse environmental effects. On the basis of this joint research, the client fleet should, in consultation with both statutory and non-statutory organisations, adopt suitably selective gear to reduce discard levels of both whiting and cod.</p>
19	Associated PIs	<b>2.2.2: Management strategy:</b> There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.
20	Activity assessed	<p>1. Level of collaboration with R&amp;D organisations engaged in seeking gear improvements aimed at reducing discarded by-catch.</p> <p>2. Level of adoption of suitably selective gear to reduce discard levels of both whiting and cod.</p> <p>3. Evidence that there is a partial strategy in place that is expected to maintain the main discarded species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p>
21	SFSAG client action plan	<p>Members of the client group will continue to participate extensively in the development and trial of further selective gears to reduce discards through their participation in initiatives such as the Conservation Credits scheme, a Scottish response to regional management that promotes sustainable fishing practices, and the Scottish Industry Science Partnership (SISP), which helps fishers develop new, environmentally friendly, fishing gears. Furthermore, the group will seek to influence the on-going use and development of innovative net design and configuration of whitefish gear, Seasonal Closures (SC's), and Real Time Closures (RTC's) which together provide substantial protection for juveniles and vulnerable stocks such as cod and whiting</p> <p>The group will use current levels of selectivity and gear design as a benchmark from which to assess the need for further improvements; the group will deliver any necessary changes through their participation, and influence within the various stakeholder groups.</p> <p>It is expected that a formal partial strategy for the adoption of suitably selective gear will be in place within a year of initial certification and that there is evidence that this strategy is being implemented successfully within three years of certification.</p>

	ITEM	COMMENTS
22	AT observation at Surv 1	<p><b>1. Level of collaboration with R&amp;D organisations engaged in seeking gear improvements aimed at reducing unwanted by-catch.</b> The main approach taken by SFSAG is to participate in the ‘Fisheries Management and Conservation Group’ (FMAC), a new fisheries co-management group established in June 2011 that is chaired by Marine Scotland and includes representatives from fishing industry representative bodies inc SFSAG), Fish Producer Organisations (POs) Environmental organisations and Marine Scotland policy and science. The Scottish Government is implementing fisheries policy through co-management and SFSAG feel that encouraging the uptake of selective gear through the use of a centralised, incentive based scheme fulfils its objectives in more rational and effective manner than could be achieved by SFSAG alone.</p> <p><b>2. Level of adoption of suitably selective gear to reduce discard levels of both whiting and cod.</b> A proportion of the client fleet (around 30 vessels) has trialled a number of new gear types since the site visit in 2009. The variety of gears, as well as the timeline of actions, can be seen in <b>Appendix A</b>. This also reflects SFSAG participation in a number of wider statutory and voluntary initiatives to reduce interaction with unwanted species, such as the Real Time Closure (RTC) scheme for cod, seasonal closure of Long Hole and Phases 1 &amp; 2 of the Marine Scotland voluntary ‘Cod Catch Quota Scheme’ (CCQS). This latter scheme has significantly reduced the discarding of cod in the North Sea as participating vessels may not discard any of the species. Once the vessel has exhausted its cod quota, it must stop fishing in the North Sea.</p> <p><b>3. Evidence that there is a partial strategy in place that is expected to maintain the main discarded species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</b> The partial strategy consists of a combination of reduced effort on cod through a combination of RTCs, seasonal closures and the CCQS on the one hand and the active participation in trialling - and if appropriate - adopting new gear designs with increased selectivity for the target species on the other. Research results to date suggest elements of this partial strategy e.g. increased selectivity are effective (Anon, 2010; Campbell <i>et al</i>, 2010; Kynoch <i>et al</i>, 2011; Kynoch <i>et al</i>, 2010; &amp; Kynoch <i>et al</i>, 2007). Evidence on the selectivity and gear performance as measured against current benchmark levels will be formally assessed at the third surveillance audit.</p>
23	Initial scores	75
24	Re-scoring	75
25	AT conclusion from Surv 1	The client has met the condition at this first surveillance point. The partial strategy is in place and the results of gear trials appear to be encouraging. Evidence on the selectivity and gear performance as measured against current benchmark levels will be formally assessed at the third surveillance audit.

	ITEM	COMMENTS
26	Any complaints against the certified operation; recorded reviewed and actioned	Marine Scotland Compliance reported a number of issues relating to log book completion and catch recording – this was mainly a result of teething problems with the e-logbook system rather than what they perceive to be deliberate non-compliance. These minor non-compliances were discussed to ensure issues were resolved and no further action taken.  No complaints were reported against the client group.
27	Any relevant changes to legislation or regulation	E-logbooks to be mandatory by January 2012.
28	Any relevant changes to management regime	Co-management is now being implemented through the F-MAC group. The organigram in Appendix C illustrates how F-MAC relates to fisheries management bodies and industry organisations.
29	Annual catch data reporting (MSC Policy Advisory 22):	The total North Sea Haddock TAC for 2011 is 34,057t.  The EU share is 27,009t.  The UK share is 24,312t.  The client TAC is approximately 20,500t (84%).
30	Overall Conclusion from surv 1	SFSAG has made good progress against all conditions, with some evidence of discard reduction already presented. This exceeds the timeline set for development and implementation of a discard reduction strategy. Many of these efforts revolve around the cod recovery plan where discards of cod are the focus. The assessment team also identified other species for inclusion in a discard reduction strategy and the evidence presented in subsequent assessments will be expected to include information on all relevant species.

	ITEM	COMMENTS
		A total of 35 vessels were reported to have adopted gear selectivity measures, which amounts to 15% of the 231 vessels within the group. Wider adoption of these measures under the discard reduction strategy would be expected by subsequent surveillance audits.

#### 4. SUMMARY and RECOMMENDATIONS

Table 6 below presents a summary of the performance indicators that were re-scored during the first annual surveillance audit.

Performance indicator	Initial Score	Re-scoring	Condition
2.1.2	75	75	Good progress against condition Condition remains open.
2.1.3	75	80	Information on total catch collated via bespoke paper system, now superseded by on-going collection by e-logbook. Condition closed.
2.2.2	75	75	Good progress against condition Condition remains open.

**Table 6 Summary of surveillance audit assessment**

A total of 35 vessels were reported to have adopted gear selectivity measures, which amounts to 15% of the 231 vessels within the group. Wider adoption of these measures under the discard reduction strategy would be expected by subsequent surveillance audits.

The discard reduction efforts revolve around the cod recovery plan where discards of cod are the focus. The assessment team identified other species for inclusion in a discard reduction strategy and the evidence presented in subsequent assessments will be expected to include information on all relevant species.

SFSAG has made good progress against all conditions and some evidence of discard reduction by members of the client group has already been presented. This exceeds the timeline set for development and implementation of a discard reduction strategy.

## 5. INFORMATION SOURCES

### Meetings

SFSAG client meeting 21<sup>st</sup> October 2011.

### Reports

**Anon (2010).** 120, 160 and 200mm square mesh panels in the extension of whitefish trawls. Preliminary report. 9 pages.

**Campbell, R., T. Marcus, D. Weirman, R.J. Fryer, R.J. Kynoch, F.G. O'Neill (2010).** The reduction of cod discards by inserting 300mm diamond mesh netting in the forward

sections of a trawl gear. Fisheries Research 102 (2010) 221–226. 6 pages.

**ICES. 2011a.** Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak, 4-10 May 2011 ICES CM 2011/ACOM:13.

**ICES 2011b.** Advice Book 6.

**Napier, I. R. 2011.** Fishers' North Sea stock survey 2010. NAFC Marine Centre, Shetland, Scotland.

**Kynoch, R.J., F G O'Neill and K Summerbell (2011).** 300, 600 and 800 mm Diamond Mesh Belly Panels in Whitefish Demersal Trawl Fisheries. Scottish Marine And Freshwater Science Volume 2, Number 6. 13 pages.

**Kynoch, R.J., F.G O'Neill & R.J. Fryer (2010).** Trials to reduce cod by-catches in Shetland mixed demersal whitefish trawl fisheries by putting large meshes (300 and 600mm) in the front portion of a commercial trawl. Scottish Industry / Science Partnership (SISP) Report no. 01/10. SISP project 004/09. Marine Scotland Science. 24 pages.

**Kynoch, R.J., R.S.T. Ferro & R.J. Fryer (2007).** Further selection trials of a 95mm codend with a 120 mm square mesh panel in the North Sea mixed nephrops/whitefish trawl fishery. Scottish Industry / Science Partnership (SISP) Report No 01/07. SISP pilot project A/07. Marine Scotland Science. 14 pages.

### Standards and Guidelines used

1. MSC Principles and Criteria for Sustainable Fishing
2. MSC Fishery Certification Methodology Version 6. September 2006
3. TAB Directives - all

**Appendix A: Gear and Technical Developments in the Scottish Demersal Sector (March 2009 – October 2011)**

Date of introduction	TRI (Whitefish)	TR2 (Nephrops)	Comment
March 2009	Real Time Closures for cod		144 closures in 2009; closures were based on both physical samples and CPUE information.
June 2009	Seasonal Closure becomes permanent		The seasonal closure of an area known as the Long hole becomes a permanent feature due to the on-going densities of cod. A further 3 remaining seasonal closures become a permanent feature of the Scottish fisheries management regime.
July 2009	Introduction of a voluntary Cod Catch Quota Scheme		Under the Marine Scotland voluntary Cod Catch Quota Scheme (CCQS), participating vessels must retain on board and land all cod that is caught, regardless of size and marketability. Those participating in the Catch Quota Scheme operate a fully documented fishery for cod.  A pilot scheme was launched in July 2009 for skippers to use electronic monitoring on their boats to help reduce fish discards. Seven Scottish skippers were chosen for the initial pilot scheme (four whitefish and three nephrops).
January 2010	Real Time Closures for Cod		165 closures in 2010; from the 1 <sup>st</sup> July the area of closure increased from 7.5km by 7.5mn, to, 15km by 15km. The period of closure remained 21 days.
January 2010	Introduction of second phase of a voluntary Cod Catch Quota Scheme		The pilot was expanded to include 17 vessels. An additional 5% of the EU share of Cod TAC was set aside for Member States to operate the scheme.  Vessels taking part are not permitted to discard any North Sea cod including those below the minimum size, with all catches counting against quota. Once the quota for these stocks is used up the vessels must stop fishing for all species, whereas under current rules vessels can continue to fish but discard over-quota fish and risk over-exploitation of the stocks.
March 2010	<ul style="list-style-type: none"> <li>• 130mm Cod end</li> <li>• 300mm BM</li> <li>• 600mm BM</li> <li>• 200mm SMP</li> <li>• Orkney Trawl</li> <li>• Shetland Trawl</li> </ul>	<ul style="list-style-type: none"> <li>• 130mm SMP</li> <li>• 160mm SMP</li> <li>• 200mm SMP</li> </ul>	<p>Additional selectivity – a matrix of options that delivered an additional number of days. The majority of options were proposed for trial by client group members</p> <p>BM: Belly mesh SMP: Square mesh panel</p>

Date of introduction	TRI (Whitefish)	TR2 (Nephrops)	Comment
12 August 2010	Commission Regulation (EU) No 724/2010 of 12 August 2010		<p>Introduction of rules to protect densities of juvenile (fish below the minimum landing size) cod haddock, whiting, and saithe. SFSAG participation via North Sea RAC.</p> <ul style="list-style-type: none"> <li>• 8 closures during 2010</li> <li>• 30 closures in 2011 (as of 16<sup>th</sup> October)</li> </ul>
January 2011	Introduction of third phase of a voluntary Cod Catch Quota Scheme		The scheme has been expanded in 2011 and vessels have been given an additional amount of cod which is no greater than 30% of the vessels cod landings in 2010. This additional opportunity comes from the additional 12% of the EU share of the cod TAC. 57 vessels applied for the scheme, 26 were successful.
January 2011	Real Time Closures for Cod		152 closures in 2011 (As of 16 <sup>th</sup> October); the area closed remains 15km by 15km.
29th June 2011		Scottish Scientific Trial – Juvenile Closures	21 day trial that allowed vessels using approved gear (improved selectivity) access to Juvenile areas. A scheme promoted by client group members as a way of incentivising change
29 <sup>th</sup> June 2011		Introduction of new net designs	The introduction of prototype net designs that reduces significantly the capture of unwanted species. The initiative is solely driven by catchers. Scientific analyses of the output will be available in December 2011. Industry led trials of other designs continues. Falls within the responsibility of SISP.
5 <sup>th</sup> August 2011	Commission Implementing Regulation (EU) No 783/2011 of 5 August 2011		Strengthening amendment to Juvenile RTC regulation. Reduced the sampling threshold from 300kg to 200kg and trigger threshold of from 15% to 10%.

**Appendix B: Example of completed Discard Estimate Monitoring Logsheets**

ALL BOXES RETAINED 40 KILO'S.

**SFSAG - Discard Estimate Monitoring Sheet**

Vessel name: ALLEGIANCE      PLN: SH90      Skipper/Master: DANNY NORMANDALE

Gear Type: OTB      Mesh size: 120      Total Hauls for trip: 15

SFSAG			Nephrops		Haddock		Cod		Whiting		Saithe		Monkfish		Other (Please State)	
Date	Haul No.	Area (Statistical Rectangle)	Retained (kg)	Discarded (kg)	Retained (kg)	Discarded (kg)	Retained (kg)	Discarded (kg)	Retained (kg)	Discarded (kg)	Retained (kg)	Discarded (kg)	Retained (kg)	Discarded (kg)	Retained (kg)	Discarded (kg)
	1	43EB			2		10						1		5	
	2	"			3		6				1				3	
	3	"			2		10						1		4	
	4	"			2		10				1		2		13	
	5	"			4		9				1		1		5	
	6	"			4		5						1		10	
	7	"			3		7						2		4	
	8	"			2		8						2		8	
	9	"			4		4				1		1		7	
	10	"			3		6						1		6	
	11	"			2		9		1		1		1		4	
	12	"			1		11				1		1		5	
	13	"			2		9				1		1		2	
	14	"			4		5				1		1		6	
	15	"			4		11		1		1		1		10	
Sampled Totals:					42		120		2		9		18		92	
Catch Total (As per logbook)																

