MACALISTER ELLIOTT AND PARTNERS LTD

SURVEILLANCE VISIT REPORT FOR THE SFSAG SAITHE FISHERY

CERTIFICATE CODE: MEP-F-019
SURVEILLANCE YEAR 1

Undertaken by:

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14TH OCTOBER 2014

MEP QA REF: 2432R07A



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1. GENERAL INFORMATION

Fishery Name	SFSAG saithe				
Unit of Certification	The fishery for saithe (<i>Pollachius virens</i>) in the North Sea and West of Scotland (ICES Subareas IIa, IIIa, IV and VI) by vessels covered by membership of the Scottish Fisheries Sustainable Accreditation Group (SFSAG). Members of SFSAG are the following organisations: - Aberdeen Fish Producers Organisation - Anglo-Scottish Fish Producers Organisation - Fife Fish Producers Organisation - Fishermen's Mutual Association (Pittenweem) - North East of Scotland Fishermen's Organisation - Northern Producers Organisation - Orkney Fish Producers Organisation - Scottish Fishermen's Organisation - Scottish White Fish Producer's Association (SWFPA) - Shetland Fish Producers Organisation				
Species	Saithe, Pollach	ius virens			
Area	North Sea and VI)	North Sea and West of Scotland (ICES Subareas IIa, IIIa, IV and VI)			
Method of capture		Single-rig trawl (TR1 and TR2), pair trawl (TR1), twin-rig trawl (TR1 and TR2), Danish seine			
Client Address	Scottish Fisher	Scottish Fishermen's Federation (SFF) Head office			
Client Contact Name	Mike Parks (SWFPA CEO), Jennifer Mouat (SWFPA Policy coordinator)				
Client Telephone No.:	+44 (0)1779 47	70886			
Client Email	sfsag@scottish	fishermen.co.uk			
Certificate number	MEP-F-019				
Certificate Issue Date	03 October 201	13			
Certificate Expiry Date	02 October 201	18			
Audit stage	Year 1	Year 2	Year 3	Year 4	
Audit experts	Expert 1 (Team	Expert 1 (Team Leader): Dr Jo Gascoigne			
	Expert 2: Dr Sophie des Clers				
Surveillance Audit Date	14 October 201				
Conclusion	Progress with the conditions is on track. The fishery should remain certified for another year. On the basis on the information submitted by the client, MEP concludes that the re-opening of the Faroese zone to EU vessels				

	presents a minimal risk to the traceability in this fishery. While no further actions are proposed at this stage, a review of the on-board separation and traceability systems will be carried out during the year 2 surveillance audit for this fishery.
	year 2 surveillance audit for this fishery.

2. Introduction

This report outlines the process and outcome of the first annual surveillance audit for the MSC certified fishery 'SFSAG saithe'. The fishery is conducted by member vessels of the organisations making up SFSAG (see list provided above). An updated list of member vessels is available on the SFSAG website:

 $\underline{http://scottishfsag.org/images/stories/downloads/MSC_North_Sea_Haddock__Saithe.pdf}$

The UoC includes all saithe landed by these vessels, whether it is a target species or a retained bycatch (it is in most cases the latter). The vessels use a variety of gears, including whitefish (TR1) trawls (single, twin-rig and pair – mainly single), nephrops (TR2) trawls (single and twin rig – mainly twin) and Danish seines. The fishery occurs around Scotland. The most important fishing area in terms of landings is the North Sea (ICES Division IVa and occasionally IVb, IIa and IIIa), but there is also a significant fishery off the west coast (ICES Division VIa and occasionally VIb). (Detailed maps are available in the Public Certification Report.)

This audit is the first annual surveillance audit for this fishery since certification, achieved in October 2013. The on-site audit was carried out on the 14 October 2014 by Jo Gascoigne and Sophie des Clers.

The fishery was certified subject to ten conditions summarised in Table 1. A detailed discussion of the client group's progress against these conditions is provided in Section 8.

Table 1. Summary of conditions for the SFSAG saithe fishery, and their status after the Year 1 surveillance audit.

Conc	lition	Status
1	PI 1.1.1	
	Because the stock is considered depleted, PI 1.1.3 (rebuilding plan) was	closed
	scored. This requirement for a rebuilding plan acts as the de facto condition	
	for this PI, therefore no formal condition was required here. The score for PI	
	1.1.3 was 80. (NB: These scores were agreed during the harmonisation	
	process for all the MSC-certified saithe fisheries during December 2011 and	
	January 2012.)	
2	PI 2.1.1	
	The fishery should work to ensure that it can demonstrate within 5 years that	open
	its impact on the whiting stock in Subarea VI, including via discards, does	
	not put the recovery of the stock at risk.	
3	PI 2.1.2	
	The fishery should put in place a management plan for the whiting stock in	open
	Subarea VI within 5 years, should working with other management agencies	
	if necessary.	
4	PI 2.1.3	

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	The fishery should carry out a data needs assessment for these stocks within two years, and to support the gathering of the information required to undertake a basic stock assessment – data should be made available for stock assessment within four years, with data collection on-going as required from that point.	closed for megrim, open for ling, monkfish and whiting
5	PI 2.2.1	
	The fishery should within three years collect sufficient information on sandy ray bycatch to assess the likely impact of the overall fleet, so that it is possible to assess whether or not it is appropriate to consider this species a 'main' bycatch species. If further assessment considers that it should be 'main', the fishery should ensure that its bycatch of this species is not having a population-level impact within five years.	open
6	PI 2.2.3	
	This condition relates to the quantitative information available on discards for the UoC. The information provided to the assessment team was not sufficient to make a quantitative or semi-quantitative assessment of total discard rates by the fleet for all, or even main, discard species. The fishery should put in place within 3 years a data collection system such that discard rates can be quantitatively assessed across the fleet.	open
7	PI 2.3.1 This condition relates to possible impacts on common skate in IV and VI and can be addressed jointly with Conditions 8 and 9. The fishery should work with Marine Scotland and other experts as appropriate to ensure that the bycatch of this species is not hindering the recovery of the stock.	open
8	PI 2.3.2 The fishery should put in place within three years a strategy for common skate, to ensure that bycatch is not hindering the recovery of the stock.	open
9	PI 2.3.3 This condition also relates to common skate and can be addressed jointly with Conditions 7 and 8. The fishery should within two years collect data on common skate bycatch such that the population-level impacts of the whole fishery on common skate can be assessed.	open
10	PI 2.4.1 This condition relates to the possible overlap of the fishery in Subarea VI with the East Mingulay reef area. The fishery should ensure that it does not act either now or in the future to damage this area. Protection should be in place within three years	open

The main purpose of the annual surveillance audit process is to review progress in meeting the condition as set out in the Client Action Plan (a part of the certification process, see the <u>Public Certification Report</u> for this fishery). The audit team also reviewed the fishery to see if there had been any significant changes since certification.

Stakeholders were informed of the scheduled site visit, its time and location and the proposed audit team on the 9th October 2014. No comments or requests for interviews were received. The meeting was held on 14 October 2014 at SFF offices in Aberdeen, with Jo Gascoigne, Sophie des Clers, Mike Parks and James-Forbes Birnie (SFF data coordinator) in attendance.

David Maclennan (SNH) was contacted by phone; Simon Dryden, Gregor McKenzie (Marine Scotland Compliance) and Jeremy Sparks (Seafood Scotland) were contacted by email.

The fishery remains in conformance with the Scope Criteria relating to unilateral exemption and destructive fishing practices (Certification Requirements v1.3, Section 27.4.4).

3. LANDINGS AND QUOTAS

Quota allocations and landings for the UoC are given in Table 2. Information on TACs is given under 'Principle 1' below.

Table 2. Initial and final quota allocations and landings by the UoC (Scottish fleet) for 2012 and 2013, tonnes live weight (data provided by the client)

Quota / Landings	Scottish (UoC) total (tonnes live weight)
	2012	2013
Initial quota allocation	3324.9	3801.1
Change during year	1766.5	2681.4
Final quota allocation	5091.4	6482.5
Total landings	4825.2	6443.5
% of final quota allocation used	94.8 %	99.4 %

4. SIGNIFICANT CHANGES SINCE CERTIFICATION

4.1. SELECTIVITY

The same system of closed areas is in place for the fishery (cod spawning seasonal closures, real time closed areas and juvenile closed areas – see Public Certification Report for full details), but it is reported that no juvenile closed areas were put in place during 2014. This is most likely due to improvements in fleet selectivity, since the TR2 fleet has continued to innovate their gear in an attempt to reduce their catch of juvenile whitefish to a minimum.

4.2. HAKE

It is reported that catches of hake (*Merluccius merluccius*) have increased dramatically over recent years, as the species continues to 'bloom' in the North Sea. The core principle of relative stability underlying the distribution of quota under the CFP means that the European fisheries management system is not able to deal easily with significant shifts in abundance and distribution of fish stocks, such as we are now seeing. Hake discarding by Scottish vessels has had to increase because of a lack of UK quota, and hake is likely to be one of the 'choke' species for the implementation of the landings obligation, along with cod and potentially saithe.

4.3. LANDINGS OBLIGATION

No significant changes are reported in the operation, area, size or management of the fishery since certification. Regulatory change to deal with the landings obligation is in the pipeline, and the fishery is undertaking considerable work to try and mitigate negative impacts on the fishery as far as possible. The landings obligation will come in for the demersal whitefish fishery in some form from 2016 and in full for all fisheries from 2019. More information will be provided in subsequent surveillance audit reports as the regulatory framework for implementation of the landings obligation is finalised.

5. PRINCIPLE 1

5.1. ADVICE, TACS AND LANDINGS

ICES advice, TACs and landings for 2012-2014 are given in Table 3. The management plan has not changed since the fishery was certified, and ICES advice continues to be provided, and TACs agreed, according to the harvest control rules set out in the management plan. The TACs for 2013 and 2014 were set by invoking the +/-15% TAC constraint in the management plan (2013 – 15% increase over 2012; 2014 – 15% decrease from 2013). The proposed TAC for 2015 (ICES advice) is 66,006 tonnes for the North Sea and 6,848 tonnes for the West of Scotland – a 14.9% decrease from 2014.

Table 3. ICES advice, TACs and total landings (ICES estimates) for 2012, 2013 and 2014 (tonnes live weight). Source: ICES 2014.

Area	Year	ICES advice (t live weight)	TAC (t live weight)	total landings (t live weight; ICES estimate)
North Sea (IIIa and	2012	<79320	79000	69890
IV)	2013	<91219	91220	71830
	2014	<77536	77536	
West of Scotland (VI	2012	<8230	8000	7210
for advice, VI, VIIb and VIIc for TAC)	2013	<9464	9464	8060
and viic for TAC)	2014	<8045	8045	

5.2. STOCK STATUS

The most recent assessment of the stock status in relation to reference points (ICES 2014a) is summarised in Figure 1. Fishing mortality (F) is estimated to be at an appropriate level – below MSY, precautionary and management plan reference points. Spawner biomass (B), however, is estimated to be below all reference points except B_{lim} . It is clear from Figure 2 and Table 4, however, that both F and B are estimated to be very close to MSY reference point levels, and can be fairly characterised as 'fluctuating around' these target levels.

Stock status Fishing pressure 2013 2011 2012 MSY (F_{MSY}) Appropriate Precautionary Harvested sustainably approach (Fpa,Flim) X At limit Management plan (FMP) Stock size 2014 2012 2013 ľΧ Below trigger MSY (Btrigger) Precautionary Increased risk approach (Bpa, Blim) Management plan (SSBMP) Below trigger

Figure 1. ICES assessment of stock status in relation to reference points (ICES 2014a).

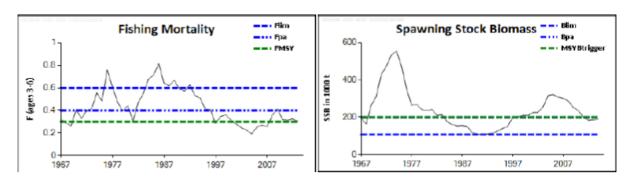


Figure 2. Trajectories of fishing mortality (left) and spawner biomass (right) estimated by the ICES stock assessment, in relation to reference points: blue dashed line=limit reference point (Blim, Flim); blue dashed line=Fpa; green dashed line=MSY reference points (MSYBtrigger, FMSY) (ICES 2014a).

Table 4. Estimated values of reference points and current stock status (ICES 2014a).

Type of reference point	Reference point	Estimated value
Limit	F_{lim}	0.6
	B_{lim}	106,000 tonnes
Target	F_{MSY}	0.3
	F_{MP}	0.3
	$MSYB_{trigger}$	200,000 tonnes
	SSB_{MP}	200,000 tonnes
Precautionary	F_{pa}	0.4
	B_{pa}	200,000 tonnes
Current stock status	F_{2013}	0.301
	B ₂₀₁₄	188,837 tonnes

6. PRINCIPLE 2

6.1. BACKGROUND

The Scottish saithe fishery, unlike most other MSC-certified saithe fisheries, is a mixed fishery, which lands saithe as a component of a mixed catch of demersal species, of which saithe is not the most economically significant. The whitefish (TR1) fleet lands saithe alongside haddock, whiting and cod (to the extent that quota is available). The prawn (TR2) fleet lands ~~70% Nephrops alongside some fish, principally monkfish (anglerfish) and megrim. Main retained species for the assessment were cod, haddock, hake, ling, megrim, monkfish, nephrops and whiting. Landings are recorded by electronic logbook. Discards are monitored by an observer programme, run by SFF, although this focuses on the vessels participating in the Conservation Credits Scheme and so does not cover the whole fleet (although it is possible to scale the data up to obtain total estimates, with some uncertainty). The only ETP species identified in the fishery was common skate (Dipturus batis). In relation to habitats, the main concern was overlap with an area of vulnerable Lophelia (cold-water coral) habitat.

6.2. SITUATION UPDATE

6.2.1. Retained species

Landings by species for the Scottish fleet are given in Table 5. Note that these landings are total landings, not landings necessarily in association with saithe landings. The main retained stocks, with a brief summary of the latest stock assessment (if applicable) are listed in Table 6. In the North Sea there have been increases in catches of haddock, whiting, saithe and flatfish, and a decline in nephrops landings. In the West of Scotland, the four key species are nephrops, haddock, saithe and monkfish – landings of saithe and nephrops declined while landings of haddock and monkfish were stable. The reasons for these changes are complex – stock biomass, availability of landing quota and effort quota, market forces and climate change all play interacting roles.

Table 5. Landings by species by the Scottish fleet, 2012 and 2013, tonnes live weight (data provided by the client).

Area	Species	Scottish 1	Scottish landings		
		2012	2013	%change	
North Sea	cod	10929	11711	+7.1	
	haddock	26161	32249	+23.3	
	whiting	8645	9903	+14.6	
	saithe	6269	9037	+44.2	
	plaice	900	1634	+81.5	
	sole	0	1		
	hake	1748	1586	-9.3	
	nephrops	8303	5565	-33.0	
	monkfish	4475	4428	-1.1	
	megrim	1383	1679	+21.4	
	lemon sole and witch	879	1171	+33.2	

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	skates and rays	294	324	+10.1
	dabs and flounders	1	15	
	turbot and brill	32	40	+25.4
	spurdog	0	0	
West of	cod (VIb - Rockall)	11	9	-16.5
Scotland	cod (VIa, EU waters of Vb – Faroes area)	136	131	-4.0
	haddock (VIb, XII, XIV)	577	596	+3.2
	haddock (VIa, EU waters of Vb)	3739	3897	+4.2
	whiting	205	115	-44.0
	saithe	4540	3615	-20.4
	plaice	40	40	-0.8
	sole	3.8	1.2	
	monkfish	1831	1789	-2.3
	nephrops	13336	12126	-9.1
	megrim	662	527	-20.4
	pollack	33	21.5	-34.8
	spurdog	0	0	
both	Greenland halibut	67	344	+415

Table 6. Management measures and summary stock status (according to ICES most recent assessment) for the main retained stocks identified during the assessment.

Species	Management measures	Most recent ICES assessment	Ref
Cod IV	Cod Recovery Plan – TAC, effort	F below Fpa but above FMSY; B in	ICES
	restrictions (days at sea), real time	vicinity of Blim	2014b
Cod VI	closures; also juvenile real time	F remains most likely above Flim and	ICES
	closures, conservation credits	B remains well below Blim	2014c
	scheme, catch quota scheme		
Haddock	TAC; effort restrictions and	Now assessed together as one stock; F	ICES
IV	closures for CRP also impact on	below FMSY and B above all ref.	2014d
	haddock fishery.	points	
Haddock VI	As above.		
Hake	EU recovery plan in place since	B 3-4 times > MSYBtrigger	ICES
	2004.		2014e
Ling	Precautionary TAC	CPUE increasing in all areas	ICES
			2014f
Megrim	Precautionary TAC	F below and B above MSY ref. points	ICES
			2013a
Monkfish	Precautionary TAC	Qualitative assessment suggests B	ICES
		decreasing	2013b
Nephrops	Assessment at FU level but TAC by	All FUs healthy except Farne Deeps	ICES
IV	Subareas	which continues to be depleted	2014g
Nephrops		B>MSYBtrigger but F above FMSY in	ICES
VI		Minch and Firth of Clyde	2013c
Whiting	Revised management plan in force	B close to Blim, F declining	ICES
IV	from 2014 reducing target F from		2014h
	0.3 to 0.15.		
Whiting	Precautionary TAC in place but	F below all ref. points but B most	ICES

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Species	Management measures	Most recent ICES assessment	Ref
VI	most of catch is discarded.	likely below Blim	2014i

To summarise Table 6, there have not been significant changes in the status of the main retained stocks, since the fishery was certified, except for haddock in Subarea VI (now evaluated with Subarea IV and considered to be healthy). The stock assessment has been improved for megrim since previously only a qualitative analysis was available (see further information below). Whiting and cod remain the key stocks of concern, particularly in Subarea VI (see further information below).

6.2.2. Discarded by-catch

The key source of information on discards is the observer programme run by SFF in conjunction with Marine Scotland, as part of the conservation credits scheme. It covers the whole fleet, but focuses on vessels in the Conservation Credit scheme (i.e. those with additional days based on measures to reduce cod bycatch). The observers measure and identify a sub-sample of discards from each haul, and estimate total quantity of discards for each haul to provide overall estimates of discards by species and size class for the trip (converted to weight using length-weight relationships for each species).

Overall, this is a reasonably robust system for estimating discards compared to most fisheries. During the assessment, the team noted two issues, which led to the imposition of a condition on PI 2.2.3 (discards information):

- At the time of the assessment, the programme was relevantly new, and data had only been analysed for species where the data were of particular concern for stock assessments i.e. cod, haddock, whiting and saithe;
- Since the focus of the conservation credits programme is cod bycatch, it is not clear that the estimates can be scaled up to estimate all discards (since the discarding behaviour of these vessels is assumed to be different). However, estimates of discards of non-target species such as elasmobranchs (of interest here) may be more subject to generalisation.

For the audit, data were provided on elasmobranch discards as the species group identified in the assessment as of key concern (notably sandy ray, thornback ray and spurdog). These data suggest that discards of sharks account for ~1% of the total catch (nearly all dogfish *Scyliorhinus canicula*) while discards of skates and rays (all species) account for about 0.37% of the total catch.

Spurdog must all be discarded (zero TAC). In relation to spurdog catches from observed trips, for TR1 vessels spurdog discards made up 0.29% of the catch in Division IVa, 0.1% in IVb and 0.05% in VIa; for TR2 vessels the figures are 0.01%, 0% and 0.12%. Bycatch of spurdog is thus mainly a problem in relation to North Sea whitefish trawlers. The most recent ICES advice for spurdog (ICES 2014k) suggests that fishing mortality has been reduced to an appropriate level and the stock appears to be starting to recover, although biomass remains low.

Figure 3 shows the skate and ray discards by species and area, for TR1 and TR2 vessels. The starry ray dominates discards in the northern North Sea (IVa), while discards are more diverse from the west coast (VIa).

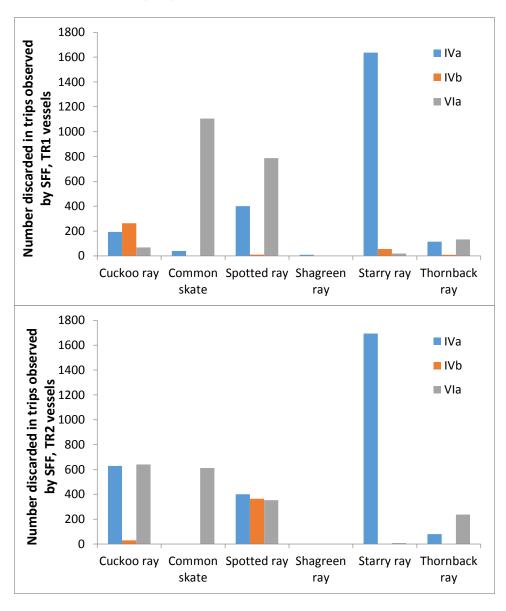


Figure 3. Elasmobranch discards by ICES Division and species, in numbers discard for all observed trips; top: TR1, bottom: TR2. Source: SFF.

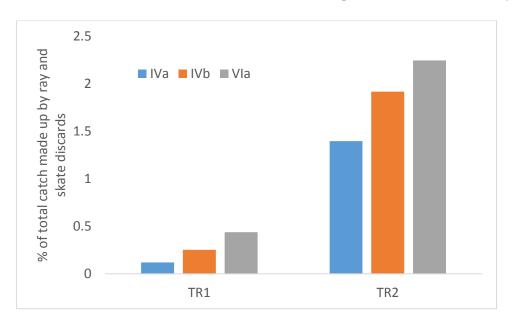


Figure 4. Percentage of the total catch from observed trips made up by discards of skate (all species) by area and gear type.

Figure 4 shows that ray discards also make up a higher percentage of the total catch on the west coast, as they do for TR2 vessels (nephrops trawlers). Note that TR2 vessels in Division VIa make up a relatively small proportion of the total effort. The species noted as of concern in relation to PI2.2.1 (sandy ray and thornback ray) appear from these data to make up a rather small proportion of discards (none, in the case of sandy ray). (Note that common skate is considered under ETP species below.)

6.2.3. ETP species

The only ETP species identified as of concern was common skate (*Dipturus batis*). Observer data on discards of common skate are set out above. Information was also provided on landings of common skate. Declared landings in 2012 were 534kg from IVa (all TR1) and 329kg from VIa (265kg from TR1 and 64kg from TR2).

The audit team queried these data as landing common skate is forbidden under EU fisheries regulations. Marine Scotland Compliance reports that this is an issue with the electronic logbook reporting, and they are working with skippers to improve their knowledge and awareness of correct species identification (Gregor McKenzie, Marine Scotland Compliance, pers. comm.) It appears as if there is a considerable problem in Scotland (as elsewhere) with ray species being misreported in landings. Presumably, observer data on discards is more reliable since observers are trained in species identification.

6.2.4. Habitats and ecosystems

The main concern in relation to habitats and ecosystems was the possibility of fisheries-related impacts on a newly-identified area of *Lophelia* habitat at East Mingulay reefs, which at the time of certification was a candidate SAC. The current situation is that the Scottish Government have accepted SNH's proposal that the area be designated, and forwarded their decision to the European Commission, which designated the area as a 'Site of Community Interest (SCI)' in anticipation of the final paperwork. The Scottish Government has not quite finished the administrative procedure for finalising designation as an SAC, but according to

SNH (David Maclennan, pers. comm.) the legal status of the site is the same as if it were an SAC.

In terms of management, Marine Scotland is in the process of preparing management measures for marine SACs, including this area. A series of workshops were held in September 2014, and the process of consultation is on-going. There is no formal timetable for the measures to be approved as far as SNH is aware, but most likely they will be in place by summer of 2015.

SNH submitted their opinion to Marine Scotland on the management of the site (provided to the auditors), which suggested that a buffer zone be placed around the reef areas within the SAC, both for towed and static gear, but that fishing could continue in other areas of the SAC which are mainly muddy habitat. They also noted that based on VMS data, the existing patterns of fishing activity in the area would not be likely to impact on the *Lophelia* areas.

7. Principle 3

There has been no significant change to the management system of the SFSAG Saithe fishery since certification. The 2008 EU-Norway agreement on a long-term management plan for the Saithe stock was renewed without change.

The reformed Common Fisheries Policy (CFP), agreed by the European Council and Parliament, became effective on 1 January 2014 and will bring along new measures. In particular, the landing obligation previously mentioned.

Marine Scotland Compliance was contacted by email and provided the information that follows. There is significant discarding of Saithe by the TR1 fleet, in areas VI and IV in particular, visible from CCTV and anecdotal evidence. A fundamental issue is that saithe catches in the mixed whitefish demersal fishery currently significantly exceed the availability of quota, including quota that may be leased or swapped. Therefore saithe is seen by the industry as a 'choke' species. However, Marine Scotland Compliance continues to have a high degree of confidence that the TR1 fleet meets or exceeds the statutory fishing gear rules required, as well as operating within days at sea limits, which both help to limit discards.

For the TR2 fleet, the introduction of highly selective gear (HSG) has had a positive impact on reducing fish discards, including saithe, when targeting Nephrops, and trials of gear options continue that may deliver even greater selectivity.

8. CONDITIONS AND ACTION PLAN

The most important aspect of the annual audit is to assess progress with the Action Plan towards meeting the conditions. The Scottish saithe fishery was certified with 10 conditions (several interrelated), which are further detailed below.

PI	1.1.1 – stock status, target stock
Condition	Because the stock is considered depleted, PI 1.1.3 (rebuilding plan)
	was scored. This requirement for a rebuilding plan acts as the <i>de facto</i>
	condition for this PI, therefore no formal condition was required here.

	The score for PI 1.1.3 was 80. (NB: These scores were agreed during the harmonisation process for all the MSC-certified saithe fisheries during December 2011 and January 2012.)
Timeline	n/a
Action Plan	n/a
Actions during Year 1	n/a The most recent stock assessment (ICES 2014a) suggests that the stock is 'fluctuating around' target reference points, as required for SG80 – see analysis in Section 5 above.
Evidence provided during Year 1 Audit	ICES 2014a
Conclusion of Year 1 Audit	SG80 is now met for the PI and this condition is closed.

PI	2.1.1 – stock status, whiting in Subarea VI
Condition	For the whiting stock in Subarea VI the stock is likely to be outside biologically-based limits, and while there is a 'partial strategy' in place (TAC, measures under the CRP, juvenile real time closures) it is not 'demonstrably effective' because most of the catch is discarded. The fishery should work to ensure that it can demonstrate within 5 years that its impact on the whiting stock in Subarea VI, including via discards, does not put the recovery of the stock at risk.
Timeline	Year 5 – fishery can demonstrate that its impact on whiting in Subarea VI is not hindering the recovery of the stock, or the maintenance of the stock within biologically based limits, if it has already recovered.
Action Plan Year 1	Initial consultation with NWWRAC, Marine Scotland Science and other stakeholders. It is possible that the work can be delivered through a bespoke NWWRAC focus group, similar to that convened to progress the haddock management plan. If this is possible, the plan will have increased gravity and will be more likely to be readily adopted by the Commission. If this is not possible, the RAC would have to be consulted and adopt the plan prior to submission to the Commission. Identification of data deficiencies would also be carried out in this year.
Actions during Year 1	The initial proposal for addressing this condition was to take the existing EU-Norway management plan for North Sea whiting as a basis for a similar management plan for Subarea VI. This plan, as originally agreed, set a target reference point of F =0.3. However, during 2013, this management plan was reviewed, and it was concluded that this target was not appropriate, and was not achieving recovery of the stock (see summary analysis above). The management plan has been revised to a target of F =0.15, but given that this is a big change, and that the plan also includes a 15% TAC constraint (as is usual), it will take some time for the fishery to come back into line

	with this new target. In addition, ICES set out in their review some other options for management – e.g. a higher target <i>F</i> but with a more flexible TAC constraint. ICES was also benchmarking the stock
	Given all this uncertainty around management of whiting in the North Sea, it does not seem sensible to take the existing management plan as a basis for the Subarea VI management plan until review and revision has been completed.
Evidence provided	ICES review of management plan (ICES 2014j)
during Year 1	
Audit	
Conclusion of	Since there is no milestone in this condition until Year 5, this
Year 1 Audit	condition is on target . The conditions on PIs 2.1.2 and 2.1.3 are also
	relevant (see below).

PI	2.1.2 – management, whiting in Subarea VI		
Condition	This condition also relates to the management of whiting in Subarea VI, and can be addressed jointly with Condition 2.		
	For the whiting stock in Subarea VI, there are no management objectives or plan in place, and the stock status is poorly known, although it is likely to be outside biologically based limits (see above). On this basis, the assessment team did not feel there was a good objective basis for confidence about the management strategy. The fishery should put in place a management plan for the whiting stock in Subarea VI within 5 years, should working with other management agencies if necessary.		
Timeline	Year 1 – Identify key problems and data gaps Year 2 – Identify management and data collection measures Year 3 – Start data collection Year 4 – Draft and consult on plan		
Action Plan Year 1	Year 5 – Finalise and implement plan As for condition on 2.1.1 above		
Actions during Year 1	As for condition on 2.1.1 above. The ICES advice (ICES 2014i) sets out the data gaps for whiting in Subarea VI – this is considered further below.		
Evidence provided during Year 1 Audit	ICES review of management plan (ICES 2014j)		
Conclusion of Year 1 Audit	More information on data collection (milestones for the first three years) is given below. Even given the constraints set out above, this condition is on target .		

PI	2.1.3 – information, whiting (VI), monkfish, megrim and ling
Condition	This condition relates to the information available on stock status of whiting in Subarea VI, and monkfish, megrim and ling generally.

	Information on these stocks is not sufficient to estimate stock status in relation to biologically based limits. The missing information is
	mainly biological information rather than fisheries information, but also relates to discards, particularly for whiting. The fishery should
	work with fisheries scientists in Scotland to carry out a data needs assessment these stocks within two years, and to support the gathering of the information required by Marine Scotland and/or ICES to undertake a basic stock assessment – data should be made available to
	Marine Scotland within four years, with data collection on-going as required from that point.
	The fishery should carry out a data needs assessment for these stocks within two years, and to support the gathering of the information required to undertake a basic stock assessment – data should be made available for stock assessment within four years, with data collection on-going as required from that point.
Timeline	Year 1 – Liaison with Marine Scotland and ICES scientists
	Year 2 – Data needs assessment for each stock, evaluation of data that can usefully be provided by this fishery, development of data
	collection plan for this fishery.
	Year 3 – Implementation of data collection plan Years 4 and 5 – Data collection and analysis as required
Action Plan Year 1	Whiting: As for 2.1.1 above
	Monkfish: As the data needs for this stock have already been identified and industry organisation are already considering the
	project, consultation with Marine Scotland Science (MSS) and
	training of fishing vessel crews Megrim and ling: No milestones for Year 1 (will follow along lines of
	monkfish programme once that has been developed)
Actions during Year 1	Whiting: It is reported by ICES (2014i) that Scotland has put in place two new surveys, which ICES anticipates will help considerably in
	addressing the data gaps for Subarea VI. The client reports that these
	are surveys carried out by Marine Scotland Science on board
	commercial vessels, and funded by the Scottish Government.
	Monkfish: Aberdeen University held a workshop in September 2014,
	which trained fishermen in collecting otoliths and other useful data for monkfish and other data-deficient species.
	Megrim: The audit team noted that ICES now provide a quantitative
	assessment of megrim in relation to MSY reference points, although
	they still note that limited aging data are a problem. This PI is
	rescored for megrim below. <u>Ling</u> : It is not clear whether ling was included in the workshop
	discussed above. In any case, there is no milestone for Year 1 for ling.
Evidence provided during Year 1 Audit	Univ. of Aberdeen Workshop flyer (2013), ICES advice (2014i, 2013a, 2014f).
Conclusion of	For whiting, monkfish and ling, the condition is on target . For
Year 1 Audit	megrim, the condition is closed .

Rescoring of PI 2.3.1 for megrim

Evaluation Table: PI 2.1.3

PI 2.1.3		deteri strate	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		
SG	Issue	Met ? (Y/ N)	Justification/Rationale		
60	a	y	Qualitative information is available on the amount of main retained		
			species taken by the fishery.		
			Catches are monitored via logbooks (electronic). Discards are		
			discussed under SG80 below.		
	b	y	Information is adequate to qualitatively assess outcome status with		
			respect to biologically based limits.		
			There is a qualitative assessment for each of the 'main' retained stocks		
			(see rationale for PI 2.1.1 above).		
	c	y	Information is adequate to support measures to manage main		
			retained species.		
			Based on the qualitative or quantitative stock assessments discussed		
			above, measures (TACs) are in place for each of the 'main' retained		
90			stocks as described in the rationales for PI 2.1.2 above. Qualitative information and some quantitative information are		
80	a	y			
			available on the amount of main retained species taken by the fishery. As noted above, catches are monitored. Up till now, it has been		
			difficult to get a full picture of discards from this fishery, but this is		
			changing:		
			 Requirement to log all discards >50kgs in electronic logbooks; 		
			 Requirement to log an discards >50kgs in electronic logbooks, Discard sampling for conservation credits vessels by SFF 		
			observers;		
			 The 'catch quota' scheme gives a complete idea of catches, as 		
			opposed to landings.		
			opposed to failulings.		
			Fernandes et al. 2011 give a detailed analysis of discards of gadoid		
			species in the Scottish fishery.		
	b	n	Information is sufficient to estimate outcome status with respect to		
	_		biologically based limits.		
			As noted above, stock status is estimated in relation to biologically		
			based limits for some but not all stocks:		
			Megrim: Yes, see summary assessment below (ICES 2013a)		

PI 2	I 2.1.3 Information on the nature and extent of retained species is adequate determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species		mine the risk posed by the fishery and the effectiveness of the	
SG	Issue	Met ? (Y/ N)	Justification/Rationale	
			Stock status	
			F (Fishing Mortality) 2010 2011 2012	
			MSY (F _{MSY})	
			Precautionary approach (F _{pa} ,F _{lim}) ? ! Undefined	
			Biomass	
			2011 2012 2013	
			MSY (B _{trigger})	
			Precautionary approach (B _{pa} ,B _{lim}) Full reproductive capacity	
			1.2 F/F _{MSY} Fmsy 0.8 0.6 0.4 0.2 0.2 0.9 1985 1991 1997 2003 2009	
			B/BMSY	
			Top: summary of ICES assessment for megrim (most recent biennial assessment from 2013); middle: trends in F in relation to MSY	
	c	y	reference point; bottom: trends in B in relation to MSYBtrigger (ICES 2013a) Information is adequate to support a partial strategy to manage main retained species.	

PI 2.1.3		deteri	formation on the nature and extent of retained species is adequate to termine the risk posed by the fishery and the effectiveness of the rategy to manage retained species		
SG	Issue	Met ? (Y/ N)	Justification/Rationale		
				team concluded that a 'partial stocks, supported by the information quantitative or a qualitative stock	
	d	у	level (e.g. due to changes in the operation of the fishery or the effect of the North Sea, sufficient data above. For Subarea VI, the assess that there is not very much samp majority of observer and catch quality Nonetheless, the data presented by CPUE data for stocks without a stock of the control of the	fectiveness of the strategy) a continue to be collected as noted sment team expressed some concern ling of discards; noting that the uota trips are in the North Sea. by ICES (catch data for all; survey or	
100	a	n	Accurate and verifiable informat retained species and the consequent populations.	ion is available on the catch of all ences for the status of affected ined species, because there is not the data to be 'accurate and	
	b	n	•		
	С	n	Information is adequate to support a comprehensive strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective. As above		
	d	n	Monitoring of retained species is assess ongoing mortalities to all No, because discard sampling is	retained species.	
R	Reference	ees	Catch quota scheme terms and conference of the conference of al. 2011	onditions, ICES advice Nephrops,	
OVERALL PERFORMA SCORE: Megrim – SG80			ORMANCE INDICATOR - SG80 is met	IV megrim: 80 VI megrim: 80	

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PI	2.2.1 – stock status, sandy rays
Condition	This condition relates to possible impacts on sandy rays in Subarea IV. Although some mitigation measures are in place to minimise fisheries impacts on sandy rays, information on discards, discard mortality and populations of sandy rays in Subarea IV are not sufficient to assess whether these mitigation measures are having any effect. The fishery should within three years collect sufficient information on sandy ray bycatch to assess the likely impact of the overall fleet, so that it is possible to assess whether or not it is appropriate to consider this species a 'main' bycatch species. If further assessment considers that it should be 'main', the fishery should ensure that its bycatch of this species is not have a population-level impact within five years. This condition can be implemented alongside Condition 6 below which calls for a wider review of the data collections strategy for
Timeline	discards. Year 1 – Develop data collection strategy Year 2 – Start data collection Year 3 – Continue data collection, assess whether impacts on sandy rays are likely to be sufficient to consider it a 'main' bycatch species Year 4 – If yes, continue data collection and analysis of impacts; if necessary develop plan to mitigate impacts Year 5 – Finalise and implement mitigation plan
Action Plan Year 1	Initiate discussion with other organisations e.g. Seafish, with a view to identifying the most appropriate project management method. Distribute identification cards and user manuals.
Actions during Year 1	SFSAG, in collaboration with Seafood Scotland, have developed a 'skate and ray guide' (see http://www.seafoodscotland.org/en/news-publications/news-releases-new/463-scottish-vessels-committed-to-sustainability.html) for distribution to skippers. This includes species identification aids, information on catch reporting, highlighting of species with particular management (e.g. common skate landings ban) and appropriate handling to return specimens at sea and minimise discard mortality. Printed copies were supplied to the SFSAG for distribution to the fleet, aiming for every boat in the fleet to have a copy on board. SFSAG have also initiated a data collection programme on ray catches with selected skippers. Although the programme has only just started, initial indications are that there is some bycatch of common skate in Subarea VI, none in area IV so far and no instances of sandy ray. Information from processors suggests that this species is not landed by this fishery.
Evidence provided during Year 1 Audit	Skate and ray guide; information from Jeremy Sparks, Seafood Scotland.
Conclusion of Year 1 Audit	Based on initial information, and on the SFF observer data set out above, it seems as if sandy ray is not likely to be caught in sufficient quantities to be considered a 'main' bycatch species. Nevertheless, the team decided to keep the condition open until further results from

Marine Scotland and the SFSAG data collection programme are
available.

PI	2.2.3 – information on discards				
Condition	Some data on discards is available but it is not sufficient to be able to evaluate total discards by species across the whole fleet in a quantitative or even semi-quantitative way, and therefore cannot be used to assess the impact of the fishery in relation to biologically based limits for the main discard species.				
	This condition relates to the quantitative information available on discards for the UoC. The information provided to the assessment team was not sufficient to make a quantitative or semi-quantitative assessment of total discard rates by the fleet for all, or even main, discard species. The fishery should put in place within 3 years a data collection system such that discard rates can be quantitatively assessed across the fleet.				
Timeline	Year 1 – Review existing data collection on discards and evaluate how improvements can be made Year 2 – Develop new/improved data collection strategy Year 3 – Implement discard data collection strategy Year 4 – Collect and analyse data Year 5 – Collect and analyse data				
Action Plan	Information relating to discards of all key species is harvested by the electronic logbook system. It is a requirement of Marine Scotland that all discards in excess of 50kg are logged within the system. This information is then available to Marine Scotland Science to feed into stock assessments. Although the information may not have been made available to the assessment team, and at the time of the site visit the collection system may not have been fully operational, the data are available to the stock assessors. It is anticipated that, once full accessibility of the information from the e-log hub is fully integrated into the public statistics system, such information may be more widely available.				
Actions during Year 1	The rules reporting logbook data remain the same, and it appears that these data are important to ICES (e.g. whiting assessments rely on Scottish discard data, apparently from this source – see ICES 2014h and i). Data from the SFF observer programme are more readily available, and cover more species (at time of certification, the logbook discard data, although it covers all species, was only analysed for some species). A specific data collection programme has been initiated in 2014 to identify whether or not catches of common skate and sandy rays take place in the fishery.				
Evidence provided during Year 1 Audit Conclusion of Year 1 Audit	Information from Marine Scotland and SFF about discard monitoring system being put in place and some data are collected. Skate and rays-specific project details from Seafood Scotland (Jeremy Sparks). A data collection strategy exists, and some data are collected. Data analyses to present (qualitative or some quantitative) estimates of discards in the fishery are expected to be presented at next year's surveillance audit. Activities to lift this condition are therefore ahead of target.				

PI	2.3.1 – possible impacts on common skate			
Condition	Although there are mitigation measures in place to minimise impacts on common skate, observer data suggest that some impacts remain. MEP notes that the international management framework for this species is confused (cannot discard in Norwegian waters, must discard in EU waters). Because of the poor stock status of common skate, even small impacts may have population-level impacts. This condition relates to possible impacts on common skate in IV and VI and can be addressed jointly with Conditions 8 and 9. The fishery should work with Marine Scotland and other experts as appropriate to ensure that the bycatch of this species is not hindering the recovery of the stock.			
Timeline	(To be implemented alongside Conditions 8 and 9) Year 5 – fishery can demonstrate that its impact on common skate is not hindering the recovery of the stock.			
Action Plan	Initiate discussion with other organisations e.g. Seafish, with a view to identifying the most appropriate project management method. Distribute identification cards and user manuals.			
Actions during Year 1	The actions taken in relation to gathering data on bycatch of common skate are set out under the condition PI2.2.1 above. The audit team considered that the combination of the SFF observer data and the SFSAG targeted data collection for skate bycatch should provide a good estimate of the overall impacts of the fishery on common skate, after which appropriate actions can be taken.			
Evidence provided during Year 1 Audit	Skate and ray handbook produced in 2014. Discussion with Jeremy Sparks, Seafood Scotland.			
Conclusion of Year 1 Audit	The condition is on target.			

PI	2.3.2 – management of impacts on common skate						
Condition	Although there is a strategy in place to minimise impacts on common						
	skate, it is not possible to have a 'reasonable basis for confidence'						
	that it will work, due to lack of data on fleet-wide impacts.						
	This condition also relates to common skate and can be addressed						
	jointly with Conditions 7 and 9. The fishery should put in place						
	within three years a strategy for common skate, to ensure that bycatch						
	is not hindering the recovery of the stock.						
Timeline	To be implemented alongside Conditions 7 and 9						
	Year 1 – Consultation						
	Year 2 – Draft strategy						
	Year 3 – Finalisation and implementation						
Action Plan Year 1	Initiate discussion with other organisations e.g. Seafish, with a view						
	to identifying the most appropriate project management method						
	Distribute identification cards and user manuals.						
Actions during	The actions taken in relation to gathering data on bycatch of common						
Year 1	skate are set out under the condition PI2.2.1 above. The team						
	considered that at present insufficient data are available to decide						

	whether a strategy is necessary and if so, what it should contain.
Evidence provided during Year 1 Audit	See above
Conclusion of Year 1 Audit	The condition is on target .

PI	2.3.3 – information on impacts on common skate				
Condition	Although there is a strategy in place to minimise impacts on common skate, it is not possible to have a 'reasonable basis for confidence' that it will work, due to lack of data on fleet-wide impacts. This condition also relates to common skate and can be addressed jointly with Conditions 7 and 8. The fishery should within two years collect data on common skate bycatch such that the population-level impacts of the whole fishery on common skate can be assessed.				
Timeline	To be implemented alongside Conditions 7 and 8 Year 1 – Assessment of data gaps, data collection strategy Year 2 – Start of data collection Years 3 and on – Ongoing data collection, data analysis				
Action Plan Year 1	Initiate discussion with other organisations e.g. Seafish, with a view to identifying the most appropriate project management method. Distribute identification cards and user manuals.				
Actions during Year 1	The actions taken in relation to gathering data on bycatch of common skate are set out under the condition PI2.2.1 above.				
Evidence provided during Year 1 Audit	See above				
Conclusion of Year 1 Audit	The condition is ahead of target since data collection has already started.				

PI	2.4.1 - possible impacts on East Mingulay reef, Subarea VI
Condition	For Lophelia reefs the assessment team were concerned that the East Mingulay area, which is clearly very significant for this species, has no formal protection from towed gear. The team did not accept on this basis that serious or irreversible harm was 'highly unlikely' taking into account the fact that a single trawl pass can cause very considerable damaging to this habitat type. Therefore, for Lophelia reefs, this issue is not fully met at the 80 level.
	This condition relates to the possible overlap of the fishery in Subarea VI with the East Mingulay reef area. The fishery should ensure that it does not act either now or in the future to damage this area. Protection should be in place within three years.
Timeline	Year 1 – Liaison with SNH and Marine Scotland Year 2 – Draft agreement with SNH and Marine Scotland on protection for East Mingulay reefs

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	Year 3 – Consultation and finalisation on agreement
Action Plan	A proposal for the designation of the East Mingulay reef as an SAC was submitted to the European Commission on 5 September 2011. The fishery will co-operate with the management requirements of the SAC as agreed between SNH and stakeholders. Annual audits will evaluate whether fishing is operating within the SAC within the parameters set out by the SAC management plan, and/or such that SNH and other key stakeholders are satisfied that damage to the key habitat elements of the SAC is not occurring.
Actions during Year 1	The East Mingulay reef was designated as a 'site of community interest'. Marine Scotland are currently consulting on management measures, which will include fisheries. SNH have put forward their opinion to Marine Scotland, stating that, while some restrictions on fisheries are appropriate, they are not likely to impact much on currently fishing activities in the area, which are reportedly limited to the muddy areas.
Evidence provided during Year 1 Audit	Discussion with David Maclennan, SNH
Conclusion of Year 1 Audit	This condition is on target

9. HARMONISATION

The closure of the condition on PI1.1.1 is in line with the other certified fisheries on this stock.

10. TRACKING AND TRACING OF FISH PRODUCTS

An updated list of member vessels is available on the SFSAG website:

http://scottishfsag.org/images/stories/downloads/MSC_North_Sea_Haddock_Saithe.pdf

As of April 2014, SFSAG vessels have regained access to Faroese waters which is a change from the situation presented in this fishery's Public Certification Report. To assess the risk of mixing MSC and non-MSC saithe, MEP requested further details on 1) the likelihood of these vessels fishing in both MSC and non-MSC waters and 2) the traceability and separation systems aboard the vessels. Information was not forthcoming in a time period that allowed the assessment team to meet Certification Requirement 27.22.13 (provision of the surveillance audit report to the MSC within thirty days of the completion of the site visit). As a result the assessment team requests that this information is provided to them by the 31st January 2015. Should the information not be forthcoming or its content seen to present (in the views of the assessment team) 'major changes', a Chain of Custody audit will be required. No MSC product from this fishery would thus be able to enter further chains of custody until separate CoC certification has been achieved.

The following information was provided by the Client to MEP on the 8th January 2014:

- The combination of EC_Buyers and Sellers of First Sale Fish' regulations, EC logbook and custom and practise provide a series of independent and verifiable mass-balance measures that would enable transgressions to be detected. The 'Buyers and Sellers' Act requires that all transactions at the first point of sale are fully recorded, allowing immediate traceability between the fishery and the first point of the chain of custody whilst the logbook provides a record of the time, location and nature (species and volumes) of the catch. Therefore traceability to the point of first sale is maintained by the vessel skipper. Risks are considered very low as it is normal practise to fully identify and segregate fish by spp and vessel, backed-up by the buyers and sellers regulation.
- The vessels covered by the Saithe MSC certification gained access to the Faroese waters on 1st April 2014 after agreement was reached.
- When fishing within those waters any catch must be logged with the Faroese authorities which is also noted with the UK authorities. The catch is therefore accounted for separately. Vessels are very used to ensuring that catch is accountable and stored appropriately as they can be checked at any time to ensure that the catch is accountable to the sector in which it was caught.
- It is also very unlikely that vessels would land fish from Faroese and other waters in the same trip.

On the basis on the information submitted, MEP concludes that the re-opening of the Faroese zone to EU vessels presents a minimal risk to the traceability in this fishery. While no further actions are proposed at this stage, a review of the on-board separation and traceability systems will be carried out during the year 2 surveillance audit for this fishery.

11. CONCLUSION AND CERTIFICATION RECOMMENDATION

The audit team concluded that progress is on target with all the conditions. The condition on 1.1.1 has been closed, as has the condition on PI 2.1.3 for megrim, while the condition on PI 2.3.3 is ahead of schedule. This fishery's overall progress is therefore considered to be **on target**. On the basis of the above, the Scottish saithe fishery **should** retain its MSC certification for another year.

12. SURVEILLANCE SCORE

In accordance with the Certification Requirements v1.3, the frequency of future surveillance visits was visits was calculated for this fishery. The overall surveillance score is calculated by adding the scores from scores from

Table 7 and matching those with the Surveillance Level in Table 8.

This fishery's score was calculated at 6, which implies a normal surveillance level with annual on-site surveillance audits.

Table 7. Criteria to determine Surveillance Score

Criteria	Surveillance Score	SFSAG Score		
1. Default Assessment Tree used?				
Yes	0	0		
No	2			
2. Number of conditions				
Zero conditions	0	2		
Between 1 – 5 conditions	1			
More than 5	2			
3. Principle level Scores				
≥85	0	2		
≤85	2			
4. Conditions on outcome PIs?				
Yes	2	2		
No	0			
<u>Total Score</u>	<u>6</u>			

Table 8. Surveillance level

			Years after certification or recertification			
Surveillance score (from Table C3)	Surveillance level		Year 1	Year 2	Year 3	Year 4
2 or more	Normal Surveillance		On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & recertification site visit
1	Remote Surveillance	Option 1 Option 2	Off-site surveillance audit On-site surveillance audit	On-site surveillance audit Off-site surveillance audit	Off-site surveillance audit On-site surveillance audit	On-site surveillance audit & recertification site visit
0	Reduced Surveillance		Review of new information	On-site surveillance audit	Review of new information	On-site surveillance audit & recertification site visit

13. REFERENCES

ICES 2013a. ICES advice Megrim (Lepidorhombus spp.) in Divisions IVa and VIa

ICES 2013b. ICES advice Anglerfish (*Lophius piscatorius* and *L. budegassa*) in Division IIIa and Subareas IV and VI

ICES 2014a. ICES advice Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall)

ICES 2014b. ICES advice Cod in Subarea IV (North Sea) and Divisions VIId (Eastern Channel) and IIIa West (Skagerrak)

ICES 2014c. ICES advice Cod in Division VIa (West of Scotland)

ICES 2014d. ICES advice Haddock in Subarea IV and Divisions IIIa West and VIa (North Sea, Skagerrak, and West of Scotland)

ICES 2014e. ICES advice Hake in Division IIIa, Subareas IV, VI, and VII, and Divisions VIIIa,b,d (Northern stock)

ICES 2014f. ICES advice Ling (*Molva molva*) in Divisions IIIa and IVa, and in Subareas VI, VII, VIII, IX, XII, and XIV (other areas)

ICES 2014g. ICES advice *Nephrops* in Subarea IV (North Sea)

ICES 2014h. ICES advice Whiting in Subarea IV (North Sea) and Division VIId (Eastern Channel)

ICES 2014i. ICES advice Whiting in Division VIa (West of Scotland)

ICES 2014j. ICES advice Joint EU–Norway request to evaluate the long-term management plan for whiting in the North Sea

ICES 2014k. ICES advice Spurdog (Squalus acanthias) in the Northeast Atlantic

Seafood Scotland, 2014. SFSAG Skate and Ray Handbook, 25p.

University of Aberdeen, 2013. Fisheries Sampling Training Course, 3-4 July 2013 held with Marine Scotland Science from http://www.abdn.ac.uk/news/4800/.