



FISHERY ASSESSMENT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



FISHERY:	Sandeel (<i>Ammodytes marinus</i>)
LOCATION:	Northeast Atlantic - Norway
DATE OF REPORT:	5 August 2011
ASSESSOR:	Sam Peacock

Global Trust Certification Ltd, Quayside Business Centre, , Dundalk, Co. Louth, Ireland Tel: 042 932 0912 Fax 042 938 6864

Issue No; 2; Issue Date; Nov 09

Report Ref: Norway Sandeel

CCM Code:

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1. Application Details and Summary of the Assessment Outcome			
Name:		Norwegian Seafood Federation	
Address:			
Country:		Norway	Zip:
Tel. No.		Fax. No.	
Email address:		Applicant Code:	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification Ltd	
Assessor Name:	Peer Reviewer:	Assessment Days:	Initial/Surveillance/Re-certification:
Sam Peacock	Mike Platt	10	Initial
Assessment Period	30 th August – 26 th September 2011		
Scope Details			
1. Scope of Assessment:		IFFO RS approval of fishery	
2. Fishery		Norway Sandeel (<i>Ammodytes marinus</i>)	
3. Fishery Location		ICES Division IIIa and Subarea IV.	
4. Fishery Method		Demersal trawl	
Outcome of Assessment			
5. Overall Fishery Compliance Rating		HIGH	
6. Sub Components of Low Compliance		NONE	
7. Information deficiency		NONE	
8. Peer Review Evaluation		The Peer reviewer agrees with the approval decision made by the assessment team and the condition that research B(i) to inform management decisions be improved in Sandeel Area 6, or this Area be removed from the approved location	
9. Recommendation		Approve fishery	

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Agreed Conditions for approval

IFFO Norway Sandeel Fishery Assessment Report 2011.

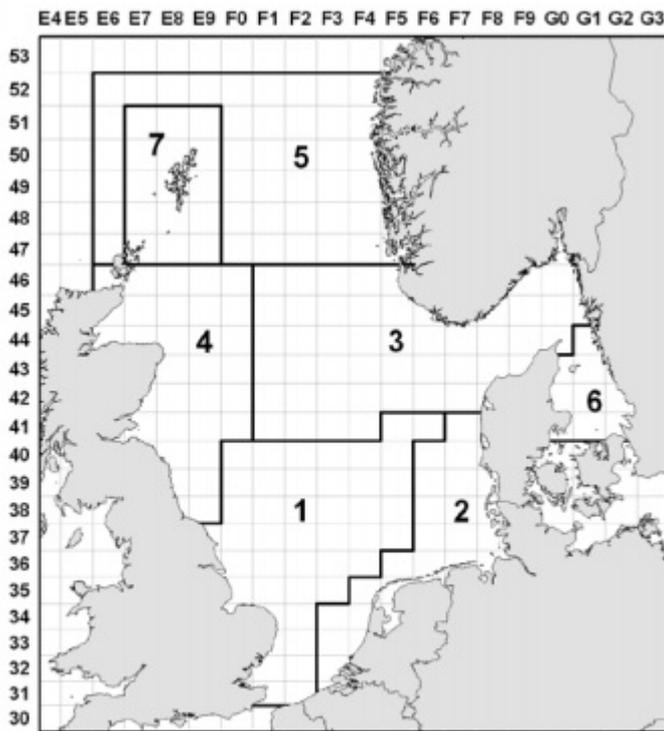
- All fishermen involved in the catching of Sandeel in all regions covered by the fishery management plan of this stock must be encouraged to cooperate with the research programmes.

2. Quality of Information
Good; majority taken from ICES assessments and Norwegian government websites.

3. Compliance Level Achieved
MEDIUM-HIGH
Recommendation
Circulate to Client and Consultation committee for approval
4. Guidance for On-site Assessment
Based on High Compliance Findings
During on site audits, evidence of reporting compliance of catches to the Competent Authority should be undertaken to support verification of this information.
Based on Medium Compliance Findings
Key Stakeholders of the Fishery

5. Assessment Determination

Approve, on the condition that research B(i) to inform management decisions be improved in Sandeel Area 6, or this Area be removed from the approved location.



Sandeel in Division IIIa and Subarea IV. Map of Sandeel Areas (SA).

The assessment determination for section A(iii) could be improved with the implementation of an officially stated management plan.

The assessment determination for the precautionary approach c(i) and the new regional advice plan. ICES has considered this new advice format as being a major improvement in terms of uncertainty. However, there are still several important sources of uncertainty which prevent this fishery obtaining a ‘high’ rating for the implementation of the precautionary approach.

HIGH COMPLIANCE

A1, A2, B1, B2, D1, D2, D3, E1, E2

MEDIUM COMPLIANCE
A2, C1

Fishery Background

Background

The Sandeel (*Ammodytes marinus*) is fished industrially, in the North Sea, ICES Sub Area IV and ICES Division IIIa (Skagerrak – Kattegat). Fishing is principally from Norway and Denmark (EU) although UK, Sweden and Germany have minor fisheries. The North Sea Sand Eel fishery is the largest fishery in the region, with historical landings of circa 1 million tonnes in the late eighties.

Sandeels are small eel-like fish which swim in large shoals. They are an abundant and important component of food webs in the North Atlantic. Of the five species of sandeels inhabiting the North Sea, the lesser sandeel, (*Ammodytes marinus*) is the most abundant and comprises over 90% of sandeel fishery catches.

Sandeels mature between age one and three. They spawn a single batch of eggs in December-January, several months after ceasing to feed. The eggs are deposited on the seabed. The larvae hatch after several weeks, usually in February-March, and drift in the currents for one to three months, after which they settle on the sandy seabed.

The fishery developed in the 1970s and landings rapidly increased to over 1 million tonnes in 1988 (ICES, 2008a). Landings remained high until 2002 but have decreased considerably in recent years (ICES,2009c).

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SUMMARY OF LEVEL OF COMPLIANCE					
	The Management Framework and Procedures	Stock assessment procedures and management advice	Precautionary approach	Management measures	Implementation
legal and administrative basis	High Compliance	Low Compliance	Low Compliance	Low Compliance	Low Compliance
Fisheries management should be concerned with the whole stock unit	High Compliance	Low Compliance	Low Compliance	Low Compliance	Low Compliance
Management actions should be scientifically based	Medium Compliance	Low Compliance	Low Compliance	Low Compliance	Low Compliance
Research in support of fisheries conservation and management should exist	Low Compliance	High Compliance	Low Compliance	Low Compliance	Low Compliance
Best scientific evidence available should be taken into account when designing conservation and management measures	Low Compliance	High Compliance	Low Compliance	Low Compliance	Low Compliance
The precautionary approach is applied in the formulation of management plans	Low Compliance	Low Compliance	Medium Compliance	Low Compliance	Low Compliance
The level of fishing permitted should be set according to management advice given by research organisations	Low Compliance	Low Compliance	Low Compliance	High Compliance	Low Compliance
Where excess fishing capacity exist, mechanisms should be in established to reduced capacity	Low Compliance	Low Compliance	Low Compliance	High Compliance	Low Compliance
Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment	Low Compliance	Low Compliance	Low Compliance	High Compliance	Low Compliance
A management system for fisheries control and enforcement should be established	Low Compliance	Low Compliance	Low Compliance	Low Compliance	High Compliance
A framework for sanctions of violation of laws and regulations should be efficiently exists	Low Compliance	Low Compliance	Low Compliance	Low Compliance	High Compliance

KEY: Low Compliance [Red Box] Medium Compliance [Yellow Box] High Compliance: [Green Box]

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6. Rationale of the Assessment Outcome

a. The Management Framework and Procedure

LEVEL OF COMPLIANCE	a.i. The management of the fishery must include a legal and administrative basis for the implementation of measures and controls to support the conservation of the fishery.	References	Rating
LOW	<p>Determination: Fisheries management in Norway is subject to an iterative, stakeholder-driven management process, led by the Norwegian Ministry of Fisheries and Coastal Affairs. There is an effective legal and administrative basis for the implementation of management measures.</p>	R1, R5, R6	HIGH
MEDIUM			
HIGH			



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	<ul style="list-style-type: none"> criteria for participating in various fisheries <p>This is then presented to stakeholders in an open meeting held in late November or early December. A broad range of participants attend this open meeting – including representatives from the Norwegian Fishermen’s Association, Federation of Norwegian Fishing Industries, the Norwegian Seamen’s Union, The Norwegian Food and Allied Workers’ Union, The Sami Parliament, environmental NGOs, the regional counties, as well as recreational fishermen.</p> <p>After this meeting, the Directorate of Fisheries recommends next year’s fisheries regulations to the Ministry of Fisheries and Coastal Affairs. The Ministry bases its final decision on outcomes from the quota negotiations with other states, discussions from the open meeting, the recommendation from the Directorate of Fisheries, as well as input from various fisheries industry organisations.</p> <p>The regulations are normally valid for one calendar year at a time. It is common, however, that some adjustments to the regulations take place during the year. One such adjustment could be changes in by-catch regulations.</p> <p>It is important to note that the experiences from previous year’s fishing are of great importance in the decision process for the following year. One reason for this is to ensure predictability and stability for the fishing fleet. In order to exchange views on and evaluate the current fishing year, another open meeting is held in early summer.</p>		
	a.ii. Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account fishery removals and the biology of the species	References	Rating
LOW	<p>Determination: <i>Sandeel in ICES divisions IV and IIIa is now managed as seven distinct Sandeel Areas. ICES advice continues to take into account all fishery removals and the biology of the species.</i></p> <p>Until 2011, Sandeel fishery management in the North Sea was based on the assumption that there was a single stock. Advice was provided by ICES for three areas (North Sea excluding Shetlands, Shetlands, and Skagerrak Kattegat). Following research by ICES suggesting that the stock consists of a complex of regional populations,</p>	R3, R9	HIGH
MEDIUM			
HIGH			

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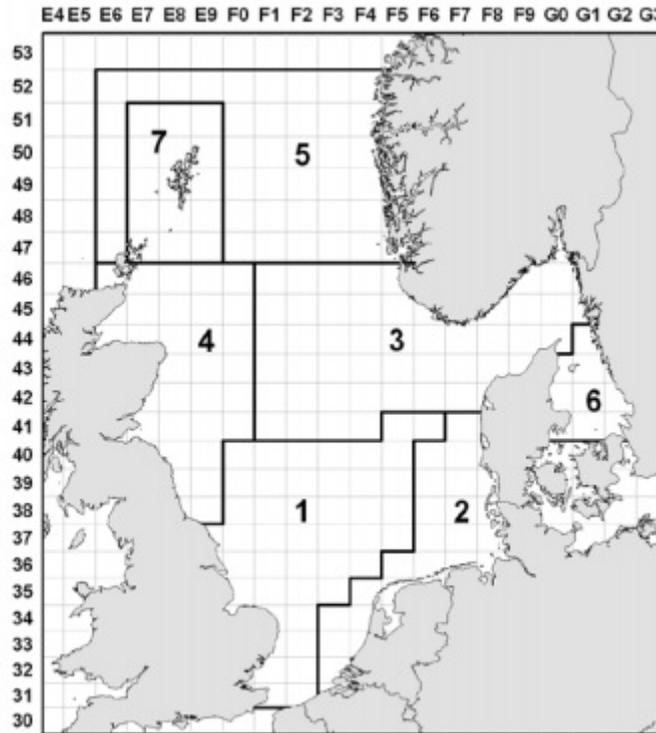
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advice was this year provided for 7 separate Sandeel Areas (SAs). An EU amendment updated TACs to reflect these new management areas (covered in detail in section D(i)).



Sandeel in Division IIIa and Subarea IV. Map of Sandeel Areas (SA).

Figure 1 - From the ICES advice, October 2010.

Sandeel is a short-lived species. The high natural mortality of sandeel and the few year classes in the fishery make the stock size and catch opportunities largely dependent on the size of the incoming year classes. Sandeel

	<p>are largely stationary after settlement; however recruitment to individual fishing banks may not only be related to the local (sub-) stock, as some interchange between (sub-) stocks may take place during the early phases of life before settlement.</p> <p>ICES advice takes into account fishery removals, and reflects the biology of the species.</p>		
	a.iii .Management actions should be based on long-term conservation objectives	References	Rating
LOW	<p>Determination: <i>There is no management plan currently in place for the sandeel fishery. ICES advice is based on retaining sufficient SSB to maintain the population of both sandeel and predators in the long-term; however the lack of a formal statement that this is the long-term management objective leads the assessment team to award the fishery a ‘medium’ compliance level in this category.</i></p> <p>At present, there is no management plan in place for the North Sea sandeel fishery. ICES has recommended the implementation of a management plan, which would include an upper limit on effort, based on the effort applied in recent years. This plan (as recommended by ICES) would aim to ensure that SSB remains above a specific B_{pa} for each Sandeel Area, a B_{pa} which already forms the basis of the ICES advice. To this end, a long-term aim is unofficially in place as long as management actions continue to follow scientific advice; however, as there is no stated long-term conservation objective for this fishery due to the lack of a management plan, the assessment team considers a ‘medium’ rating appropriate.</p> <p>For short-lived species such as sandeel, the ICES interpretation of the MSY concept uses B_{pa} estimates as the default value for MSY $B_{escapement}$. ICES advice is based on the sandeel stock being at or above MSY $B_{escapement}$ in the year after the advised fishery has taken place. This escapement strategy should allow for sufficient stock to remain for successful recruitment and providing adequate resource for predators of sandeel.</p>	R3, R4	MEDIUM
MEDIUM			

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b. Stock Assessment Procedures and Management Advice

LEVEL OF COMPLIANCE	bi. Research in support of fisheries conservation and management should exist.	References	Rating
LOW	<p>Determination: Annual dredge surveys and industrial landings data provide the basis for ICES management advice in Sandeel Areas 1-4. Areas 5 and 7 have insufficient research associated but have been effectively closed since 2004. Management actions in Area 6 are largely unsupported by scientific research; however, this is the first time ICES advice has been separated into 7 regions, and so it is the view of the assessment team that this section be scored highly only on the condition that regional research improves in future.</p> <p>ICES advice for this sandeel stock is based on an annual December dredge survey and all industrial landings data. The quality of the current assessment, which considers seven separate sub-stocks, is considered much improved compared to the combined assessment for whole North Sea conducted previously. This is because the stock assessment areas used now better reflect the actual spatial stock structure and dynamics of sandeel. The use of fishery independent data from dredge surveys has also improved the quality of the assessment. Application of the new statistical assessment model “SMS-effort” in combination with the area-based assessment approach has removed retrospective bias in F and SSB for the most recent years. This is probably due to the robust model assumption of fishing mortality being proportional to fishing effort.</p>	R3, R4, R9	HIGH
MEDIUM			
HIGH			

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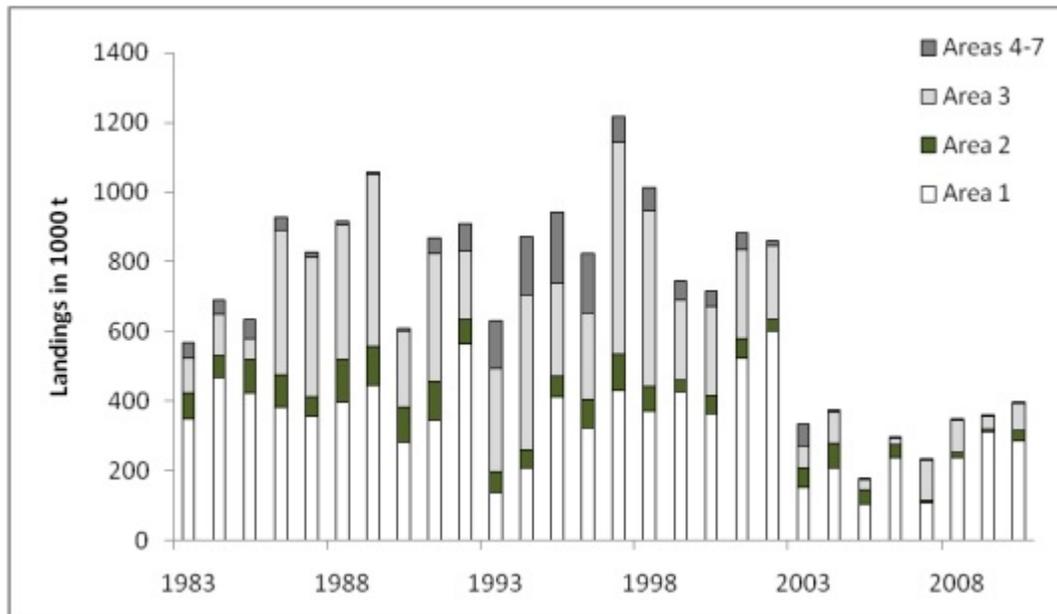


Figure 2 - Sandeel landings in Division IIIa and Subarea IV, 1983-present. From the ICES advice, Feb 2001.

The 2010 dredge survey results confirmed a large 2009 year classes in area 1, 2 and 4 and a modest 2009 year class in area 3. For all areas the 2010 year class was estimated to be low. ICES did not provide specific advice for areas 5-7, due to a lack of available data; however there have been almost no landings from areas 5 or 7 since 2004, and the TACs in these areas were once again set at 0t for 2011. There is no research available for the establishment of scientifically-derived management actions for Area 6, although **historically** this Area has produced only a very minor proportion of landings.

				Table 1 - Sandeel landings (in tonnes) by Sandeel Area since 2001. From the ICES advice, Feb 2011.						
Year	SA1	SA2	SA3	SA4	SA5	SA6	SA7	Total		
2001	521,724	58,645	253,088	47,828	1,687	312	976	884,260		
2002	599,585	35,553	209,344	12,213	10	2,378	521	859,604		
2003	150,711	56,262	62,569	64,002	44	869	261	334,718		
2004	206,696	71,426	87,695	6,915	0	570	0	373,302		
2005	103,777	41,447	29,667	1,486	0	262	0	176,640		
2006	238,296	35,392	18,867	85	0	161	0	292,802		
2007	109,363	5,910	113,905	11	4	661	0	229,855		
2008	238,523	13,065	94,576	1,201	0	472	0	347,836		
2009	310,471	10,239	34,052	0	0	260	0	355,022		
2010	285,794	30,530	78,067	262	0	132	0	394,785		
<p>As the large majority of sandeel catch will be covered by robust research, and as this is the first year that ICES has set advice based on seven regional sub-stocks, it is the view of the assessment team that the limited research in Area 6 should not prevent approval of the fishery. However, an improvement in the research in this Area should be a condition of approval.</p>										
LEVEL OF COMPLIANCE	b.ii Best scientific evidence available should be taken into account when designing conservation and management measures								References	Rating
LOW	<p>Determination: <i>The Norwegian Institute of Marine Research provides a robust advisory service based on international science-sharing agreements. Conservation and management decisions are taken within the context of this and ICES advice.</i></p> <p>Management of North Sea Sandeel follows the advice of ICES, both in the setting of annual quotas and the closing of local fisheries in cases where stocks are found to be over-exploited. This is exemplified in the recent</p>								R3, R9	HIGH
MEDIUM										
HIGH										

	<p>change in advice from a single stock to a multi-sub-stock approach. Within months of the new advice format, an EU Regulation amendment was passed setting TACs for the seven Sandeel Areas individually. In addition, areas have been subject to temporal or regional closure as a direct result of scientific advice.</p> <p>The North Sea Ecosystem Programme</p> <p>The North Sea Ecosystem Programme is an on-going project carried out by the Norwegian Institute of Marine Research. The overarching objective of this programme is to generate knowledge that will provide a basis for developing advice for the authorities in all areas that concern resources and the environment in the North Sea.</p> <p>Tasks and sub-goals:</p> <ul style="list-style-type: none"> • Resources monitoring and provision of fish stocks management advice. • Deep-sea resources. • The recruitment situation in the North Sea. • Environmental monitoring and management advice, including environmental toxins and radioactivity. • Contribute to the development of ecosystem-based management, including feed resources for aquaculture. • Seabed and benthic habitat surveys. • Dissemination and implementation of research results. 		
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c. The Precautionary Approach

LEVEL OF COMPLIANCE	c.i The precautionary approach is applied in the formulation of management plans.	References	Rating
LOW	<p>Determination: <i>The EU Common Fisheries Policy is based on the precautionary approach, regional sandeel fisheries have been closed to comply with the approach, and ICES consider the new advice format to be a major improvement in terms of uncertainty. However, there are still several important sources of uncertainty which prevent this fishery obtaining a 'high' rating.</i></p> <p>The EU Common Fisheries Policy, which is the principal management framework for the EU sandeel fishery, is based on the precautionary approach to managing fish stocks. In 2002 this policy was further strengthened through the introduction of a precautionary approach to protect and conserve living aquatic resources, and to minimise the impact of fishing activities on marine eco-systems.</p> <p>Sandeel is an important prey species for many marine predators such as seabirds and fish. There have been concerns of the magnitude of the fishery and its potential impact on the North Sea marine ecosystem. Though multi-species analyses have shown that over the scale of the North Sea the predators do not suffer from a lack of food, this was not found to be the case in locally concentrated harvesting which may cause regional and temporary depletions of food for predators. This, amongst other factors, led to the new region-based management approach.</p> <p>Temporal and regional closures have been implemented as a direct result of precautionary scientific advice. Since 2004 the fishery in the Norwegian EEZ has been restricted to April 1 to June 23. Since 2005 Danish vessels have not been allowed to fish sandeel before 31st of March. Since 2008 the entire fishery in the EU controlled zone opens on April 1st and closes after August 1st. Advice on the precautionary management of the stock has closed areas in the Norwegian EEZ and in Scotland’s Firth of Forth.</p> <p>While the new sub-stock based approach is considered by ICES to be a major improvement on the previous</p>	R2, R3	MEDIUM
MEDIUM			
HIGH			

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	<p>analysis, uncertainty within the new assessment and forecast framework continues to be derived from the following sources:</p> <ul style="list-style-type: none"> • Use of common, time-invariant natural mortality values over all areas. • Assumption of correspondence between commercial effort and fishing mortality. • Observations of effort are only available from the Danish fishery (which also has the largest catches). • Age and length sampling uncertainty (as with any stock). • Assumption that the maturity pattern in the forecast year is the long term average 		
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d. Management Measures

LEVEL OF COMPLIANCE	d.i The level of fishing permitted should be set according to management advice given by research organisations.	References	Rating																								
LOW	<p>Determination: <i>Historically, ICES advice has not provided specific recommendations for catch limits. This year it provided recommendations for 4 of the 7 new regions, and these were accepted by fishery managers. At present the level of fishing is set according to the scientific advice.</i></p> <p>Historically, TACs in the region have not always been set directly according to scientific advice, although in many past years the ICES advice has not specified recommended catch limits but rather suggested that the fishery be closed unless additional data are available. However, historical adherence to set TACs has been good, with landings not exceeding the TAC for at least 6 years.</p> <p>The advice released by ICES in February 2011 included specific recommendations for TACs in Sandeel Areas 1-4, and the advice that Areas 5-7 should have ‘No increase in effort unless evidence that this is sustainable’. The EU Council Regulation Amendment issued in June 2011 set TACs largely in accordance with this advice, with the exception of Area 3. The TAC in Area 3 was recommended to be 0t, but was set at 10,000t to maintain a research fishery in the Area.</p> <p>Table 2 - Recommended and agreed TACs for Sandeel Areas 1-7, 2011. From the ICES advice and EU Amendment.</p> <table border="1"> <thead> <tr> <th>Sandeel Area</th> <th>SA1</th> <th>SA2</th> <th>SA3</th> <th>SA4</th> <th>SA5</th> <th>SA6</th> <th>SA7</th> </tr> </thead> <tbody> <tr> <td>Recommended TAC</td> <td><320,000</td> <td><34,000</td> <td>0</td> <td>5,000-10,000</td> <td>No increase</td> <td>No increase</td> <td>No increase</td> </tr> <tr> <td>Agreed TAC</td> <td>320,000</td> <td>34,000</td> <td>10,000</td> <td>10,000</td> <td>0</td> <td>420</td> <td>0</td> </tr> </tbody> </table>	Sandeel Area	SA1	SA2	SA3	SA4	SA5	SA6	SA7	Recommended TAC	<320,000	<34,000	0	5,000-10,000	No increase	No increase	No increase	Agreed TAC	320,000	34,000	10,000	10,000	0	420	0	R3, R9	HIGH
Sandeel Area		SA1	SA2	SA3	SA4	SA5	SA6	SA7																			
Recommended TAC		<320,000	<34,000	0	5,000-10,000	No increase	No increase	No increase																			
Agreed TAC	320,000	34,000	10,000	10,000	0	420	0																				
MEDIUM																											
HIGH																											

LEVEL OF COMPLIANCE	d.ii Where excess fishing capacity exist, mechanisms should be in established to reduced capacity to allow for the recovery of the stock to sustainable levels.	References	Rating
LOW	<p>Determination: Norway has a demonstrably functional system for reducing fishing capacity when it is demanded by fishery management conclusions. The Norwegian fleet fishing for sandeel declined from 90 to 33 vessels between 2002 and 2009.</p> <p>Licenses in Norway</p> <p>The law on trawling, which dates back to 1951, prohibits all use of trawls without a license issued by the fisheries authorities. Since then the license has been transformed from a kind of general rights document into several sub-categories where each sub-category grants the right to trawl for identified species only.</p> <p>However, the most important reform to license regulation was the introduction of vessel quotas for the coastal fleet in the fishery for Northeast Arctic cod, in the late 1980s. The cod stock was at a serious state and in 1989, the coastal fishery was closed after only three and a half months. Because of this, an individual vessel quota system was established in the costal fleet. This represented exclusive rights to fish distributed to a limited number of fishermen based on tradition. More than 3000 vessels were excluded from the vessel quota arrangement. This caused upheaval in fishing communities and provoked public debate on fisheries management. Today all fisheries of importance require every vessel to hold a license that allows it to participate in the fishery. Limitations on access to fisheries are critical to management as well as to the economics of the fleet.</p> <p>Registration requirements</p> <p>Other measures of access limitation are certain registration requirements set out in the annual regulation for each fishery. The most common requirements relate to the vessel and/or the owner/master of the vessel. The annual regulation requires the vessel to be listed in the official register of fishing vessels, and similarly require the master of the vessel to be officially registered as a fisherman. These mandatory registrations were introduced in order to reserve fishing rights for professional fishermen and thereby reduce effort.</p>	R6, R8	HIGH
MEDIUM			
HIGH			

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LEVEL OF COMPLIANCE	d.iii Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment.	References	Rating
LOW	<p>Determination: <i>There is evidence that a reduction in sandeel populations will have an effect on the localized ecosystem, but to what extent this will affect the population dynamics of these predator species is unclear. However, there have been cases where areas have been closed to fishing that are adjacent to bird colonies, e.g. Firth of Forth Area since 2000. It is the view of the assessment team that when potential problems are highlighted, this fishery is managed to minimise the impact of fishing activities on non-target species.</i></p> <p>By-catch</p> <p>The sandeel is considered a very important prey species for a variety of predators, including fish, marine mammals and seabirds. In general, fishing on sandeel aggregations at a distance less than 100 km from seabird colonies has been found to affect some surface feeding bird species, especially black-legged kittiwake and sandwich tern.</p> <p>In the light of studies linking low sandeel availability to poor breeding success of kittiwake, all commercial fishing in the Firth of Forth area has been prohibited since 2000, except for a short-term fishery in May and June of each year for stock monitoring purposes.</p> <p>There is a low by-catch of other commercially exploited fish species in sandeel fisheries. The direct effects of the sandeel fishery on species that are also fished are considered smaller than the effects of directed fishing on these fish species. Sandeel catches include several <i>Ammodytoidei</i> species but consist largely of <i>Ammodytes marinus</i>. At some of the grounds in the Dogger Bank area the smooth sandeel <i>Gymnammodytes semisquamatus</i> can be important. The levels of by-catch in the sandeel fishery are considered to be very low, including those of species for which a TAC has been set</p> <p>PET Species</p> <p>In the North Sea ecosystem, sandeel is considered a very important prey species for a variety of predators,</p>	R3, R4	HIGH
MEDIUM			
HIGH			

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	<p>including fish, marine mammals and seabirds. In general, fishing on sandeel aggregations at a distance less than 100 km from seabird colonies has been found to affect some surface feeding bird species, especially kittiwake (<i>Rissa tridactyla</i>; IUCN, 2010: “Least Concern”) and sandwich tern (<i>Sterna sandvicensis</i>; IUCN, 2010: “Least Concern”). Fish and mobile marine mammals’ populations are assumed to be less vulnerable to local sandeel depletion.</p> <p>Habitat</p> <p>Sandeels are the principal species targeted by the small fish bottom trawl fishery in which small meshed-gear is used (i.e., trawls with mesh sizes < 16 mm). It is noted that bottom trawling in general can have impact on benthic communities and habitats and this has been shown to have occurred in the southern parts of the North Sea in the past. The type of trawl used in the sandeel fishery is very light in construction compared to other demersal trawl gears and the impact on the seabed is thought to be minimal as no chains or rubber discs are used. Additionally, the benthic ecology of sandeel habitat- clean, sandy bottom – typically includes no hard corals, and fauna can generally re-colonise areas quickly.</p>	
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e. Implementation

LEVEL OF COMPLIANCE	e.i There should be a framework for sanctions of violation of Laws and regulations.	References	Rating
LOW	<p>Determination: Norway has a robust system of sanctions in place for those violating laws, regulations, quotas and international agreements.</p> <p>Norway constantly seeks to regulate its own fisheries sustainably and ensure efficient control of resources both on landing and at sea through the Coast Guard. Moreover, a number of measures have been implemented to deter Norwegian vessels from participating in IUU fishing and to prevent illegally caught fish from entering the</p>	R1, R8, R7	HIGH
MEDIUM			
HIGH			

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	<p>Norwegian market. The Norwegian Government’s Plan of Action on Economic Crime has been used in order to enforce measures against Norwegian actors in IUU activities.</p> <p>There is a full list of Norwegian fisheries regulations available at http://www.fiskeridir.no/english/fisheries/regulations</p> <p>Black list of vessels</p> <p>Norway adopted a black list of vessels that had been engaged in IUU activities in Northeast Atlantic waters in 1994, and banned such vessels from fishing in Norwegian waters. The concept of a black list has later been adopted by several regional fisheries management organizations where Norway is a member.</p> <p>Vessels that have taken part in fishing outside quota arrangements in international waters for a stock which is subject to regulations in waters under Norwegian fisheries jurisdiction or take part in fishing operations that contravene regulatory measures laid down by regional or sub regional fisheries management organisations or arrangements are blacklisted. The consequences of being listed are:</p> <ul style="list-style-type: none"> • Refusal of a licence to fish/ tranship in the Norwegian Economic Zone and the Fishery Zone around Jan Mayen. • Refusal of being registered as a fishing vessel under Norwegian flag. 		
LEVEL OF COMPLIANCE	e.ii A management system for fisheries control and enforcement should be established.	References	Rating
LOW	<p>Determination: <i>Norway has a robust system for the management of fisheries control and enforcement.</i></p> <p>Norwegian fisheries regulations are enforced at sea, when the fish is landed and when it is exported. At sea, the Coast Guard is responsible for inspecting fishing vessels and checking their catch against their log books.</p> <p>Both Norwegian and foreign fishing vessels are subject to stringent controls in all Norwegian fishing waters. The</p>	R1, R8	HIGH
MEDIUM			
HIGH			

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	<p>activity of the Coast Guard is generally considered vital for the functioning of the management regime as a whole.</p> <p>The Coast Guard performs more than 1800 inspections of Norwegian and the foreign vessels that fish in Norwegian waters annually. Vessels over 24 meters (15 meters for vessels from EU) are required to carry satellite transponders that makes it possible to track their activity 24 hours a day all around the year.</p> <p>The Directorate of Fisheries also inspects activities on the fishing grounds. When catches are landed, the landing data are checked against the fishing rights of the vessel. This task is performed by the fish sales organisations and the Directorate of Fisheries. The Directorate also performs physical inspections of landings. The Directorate also performs physical inspections of landings. When irregularities are detected, at sea or on landing or through later controls, serious cases are referred to the courts.</p> <p>Cooperation between the affected states</p> <p>Controlling the fishing on shared fish stocks requires close cooperation between the affected states. Norway currently has co-operative agreements with Russia, Iceland, England, Ireland, Scotland, Sweden, Denmark, Faroe Islands, Netherlands, Germany, Portugal, Canada and Poland. Also the Directorate of Fisheries inspects activities on the fishing grounds.</p>		
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References

R1 – About the Common Fisheries Policy, Control and Enforcement:

http://ec.europa.eu/fisheries/cfp/control_enforcement_en.htm

R2 - About the Common Fisheries Policy, Managing a Common Resource

http://ec.europa.eu/fisheries/cfp_en.htm

R3 – ICES advice, Sandeel in Division IIIa and Subarea IV, February 2011:

<http://www.ices.dk/committe/acom/comwork/report/2011/2011/san-34.pdf>

R4 – Fishsource Dogger Bank Sandeel:

<http://www.fishsource.org/fishery/summary?fishery=Lesser+sand-eel+-+Dogger+Bank+area>

R5 – Norway Fisheries website, ‘The Regulatory Chain’:

http://www.fisheries.no/resource_management/setting_quotas/The-regulatory-chain/

R6 – Norway Ministry of Fisheries and Coastal Affairs website:

<http://www.regjeringen.no/en/dep/fkd/The-Ministry-of-Fisheries-and-Coastal-Affairs.html?id=262>

R7 – Norwegian black list:

<http://fiskeridir.no/english/fisheries/norwegian-black-list>

R8 – Norway Fisheries website, ‘Control and Enforcement’:

http://www.fisheries.no/resource_management/control_monitoring_surveillance/Control_and_enforcement/

R9 - 9: COUNCIL REGULATION (EU) No 683/2011 of 17 June 2011 amending Regulation (EU) No 57/2011 as regards fishing opportunities for certain fish stocks: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:187:0001:0019:EN:PDF>