



## MarinTrust Standard V2

# Wholefish Fishery Assessment

**MarinTrust Programme**

Unit C, Printworks

22 Amelia Street

London

SE17 3BZ

E: [standards@marin-trust.com](mailto:standards@marin-trust.com)

T: +44 2039 780 819

Table 1 Application details and summary of the assessment outcome

Application details and summary of the assessment outcome			
<b>Name:</b>			
<b>Address:</b>			
<b>Country:</b>		<b>Zip:</b>	
<b>Tel. No.</b>		<b>Fax. No.</b>	
<b>Email address:</b>		<b>Applicant Code:</b>	
<b>Key Contact:</b>		<b>Title:</b>	
Certification Body Details			
<b>Name of Certification Body:</b>		Global Trust Certification	
<b>Assessor Name</b>	<b>CB Peer Reviewer</b>	<b>Assessment Days</b>	<b>Initial/Surveillance/ Re-approval</b>
Sam Dignan	Géraldine Criquet	3 days	Surveillance 1
<b>Assessment Period:</b>		To April 2021	
Scope Details			
<b>Management Authority (Country/State)</b>		Norway	
<b>Main Species</b>		Norway pout ( <i>Trisopterus esmarkii</i> ) Stock = Norway pout in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat).	
<b>Fishery Location</b>		FAO Area 27 (Atlantic, Northeast), ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat)	
<b>Gear Type(s)</b>		1. Demersal/Bottom trawls 2. Pelagic/Mid-water trawls	
Outcome of Assessment			
<b>Overall Outcome</b>		Pass	
<b>Clauses Failed</b>		None	
<b>CB Peer Review Evaluation</b>		Agree with the assessor's determination.	
<b>Fishery Assessment Peer Review Group Evaluation</b>		Approved see <a href="#">Appendix</a>	
<b>Recommendation</b>		Approved	

## Table 2. Assessment Determination

Assessment Determination
The fishery under assessment meets the minimum requirements for all applicable Clauses such that products arising from the fishery should be approved for use in MarinTrust approved products.
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified all species in conformity with the Species categorisation requirements.</p> <p>The fishery is managed by the European Union and Norway management systems. There is a monitoring, surveillance and control system in place. There is a harvest strategy in place to ensure that stocks are fished at sustainable levels. Data are collected and stocks are assessed.</p> <p>In the most recent stock assessment, the latest estimate the Norway pout stock (category A) is considered above the limit reference point. There is a mechanism in place by which total fishing mortality of the stock is restricted.</p> <p>In the most recent stock assessment, all Category C stocks have a biomass above the limit reference point, except for the North Sea cod stock. However, removals by the fishery under assessment may be considered negligible. Regarding Category D species, ICES does not express particular concern about the impacts of the Norway pout fishery on anglerfish.</p> <p>There is no evidence that the fishery impacts significantly habitats, ETP species and the ecosystem.</p> <p>Therefore, all stocks should be awarded continued approval for the production of fishmeal and fish oil under the IFFO-RS v 2.0 standard.</p>
Notes for On-site Auditor

## Table 3 General Results

General Clause	Outcome (Pass/Fail)
M1 - Management Framework	PASS
M2 - Surveillance, Control and Enforcement	PASS
F1 - Impacts on ETP Species	PASS
F2 - Impacts on Habitats	PASS
F3 - Ecosystem Impacts	PASS

## Table 4 Species- Specific Results

List all Category A and B species. List approximate total percentage (%) of landings which are Category C and D species; these do not need to be individually named here

Category	Species/Stock	% landings	Outcome (Pass/Fail)	
Category A	Norway pout ( <i>Trisopterus esmarkii</i> ) in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat).	>95%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category B	None applicable.			
Category C	1. Herring ( <i>Clupea harengus</i> ) in ICES Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel) 2. Herring ( <i>Clupea harengus</i> ) in ICES subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean)	<5%	PASS	

	Blue whiting ( <i>Micromesistius poutassou</i> ) in ICES subareas 1 – 9, 12, and 14 (Northeast Atlantic and adjacent waters)	<5%	PASS
	Cod ( <i>Gadus morhua</i> ) in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	<5%	PASS
	Haddock ( <i>Melanogrammus aeglefinus</i> ) in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	<5%	PASS
	Saithe ( <i>Pollachius virens</i> ) in ICES subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	<5%	PASS
	Whiting ( <i>Merlangius merlangus</i> ) in ICES Subarea 4 and Division 7.d (North Sea and eastern English Channel)	<5%	PASS
Category D	Anglerfish ( <i>Lophius budegassa</i> , <i>Lophius piscatorius</i> ) in ICES subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	<5%	PASS
	Greater silver smelt ( <i>Argentina silus</i> ) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)	<5%	PASS

**Table 5 Species Categorisation Table**

Common name	Latin name	Stock	IUCN Redlist Category <sup>1</sup>	% of landings	Management	Category
Norway pout	<i>Trisopterus esmarkii</i>	Norway pout in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat)	LC	>95%	Species-specific	A
Herring	<i>Clupea harengus</i>	3. Herring in ICES Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel) 4. Herring in ICES subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean)	LC	<5%	Species-specific	C
Blue whiting	<i>Micromesistius poutassou</i>	Blue whiting in ICES subareas 1 – 9, 12, and 14 (Northeast Atlantic and adjacent waters)	LC	<5%	Species-specific	C
Cod	<i>Gadus morhua</i>	Cod in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	Global VU, Europe LC	<5%	Species-specific	C
Haddock	<i>Melanogrammus aeglefinus</i>	Haddock in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	Global VU, Europe LC	<5%	Species-specific	C
Anglerfish/ Monkfish	<i>Lophius budegassa</i> , <i>Lophius piscatorius</i>	Anglerfish in ICES subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	LC	<5%	Species-specific, no reference points	D
Saithe	<i>Pollachius virens</i>	Saithe in ICES subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	LC	<5%	Species-specific	C
Whiting	<i>Merlangius merlangus</i>	Whiting in ICES Subarea 4 and Division 7.d (North Sea and eastern English Channel)	LC	<5%	Species-specific	C
Greater silver smelt	<i>Argentina silus</i>	Greater silver smelt in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)	LC	<5%	Species-specific, no reference points	D
<b>Species categorisation rationale</b>						
Species should be categorised, and Table 5 completed as fully as the available information permits according to the following requirements:						

<sup>1</sup> <https://www.iucnredlist.org/>

- If a species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in CITES Appendix 1, it **cannot** be approved for use as an IFFO RS raw material.
- Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. Species which make up less than 0.1% of landings do not need to be listed.
- Species should be divided into Type 1 and Type 2 as follows:
  - **Type 1 Species** which make up the bulk of annual landings and can be considered the ‘target’ or ‘main’ species in the fishery. Cumulatively, Type 1 Species must represent 95% of the total annual catch. Type 1 species must then be further sub-divided as follows:
    - **Category A:** Type 1 species with a species-specific management regime in place.
    - **Category B:** Type 1 species with no species-specific management regime in place.
  - **Type 2 Species** which make up a small proportion of the annual landings up to a cumulative maximum of 5% of the annual catch and can be considered the ‘non-target’ species in the fishery. Type 2 species must then be further sub-divided as follows:
    - **Category C:** “Non-target” species with a species-specific management regime in place.
    - **Category D:** “Non-target” species with no species-specific management regime in place
- ETP species are considered separately, irrespective of their % occurrence in the catch, where ETP species:
  - appear in the CITES appendices, or
  - are categorised by the IUCN as Endangered or Critically Endangered.

The Norwegian industrial trawl fishery in the North Sea is a mixed demersal trawl fishery that operates primarily in Norwegian waters (NEEZ) along the western part of the Norwegian Trench and in the UK (formerly EU) waters, of the Fladen Ground and east of Shetland. While Norway pout and blue whiting are the main target species, the fishery also results in varying degrees of bycatch of as many as 40 species in any one trip<sup>2</sup>

According to Johnsen et al., 2016<sup>3</sup>, there are proscribed maximum % bycatches of cod, haddock, saithe, herring, greater argentine and monkfish in the fishery. In addition, according to Nielsen et al., 2016a<sup>4</sup>, bycatches of herring, saithe, cod, haddock, whiting, and monkfish have been documented at various levels in the Norway pout directed small meshed fishery in the North Sea and Skagerrak. Therefore, these species have been considered for inclusion here. The stocks of those species deemed relevant to this assessment have been determined based on the spatial distribution of Norwegian Norway pout fishing which occurs in the North Sea as described in Johnsen et al 2016.

#### **Atlantic herring**

While ICES recognises multiple herring stocks in the Northeast Atlantic, and based on their respective distributions, two are deemed relevant to this assessment:

1. Herring (*Clupea harengus*) in ICES Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel)
2. Herring (*Clupea harengus*) in ICES subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean)

#### **Blue whiting**

A single blue whiting stock, blue whiting (*Micromesistius poutassou*) in subareas ICES 1 – 9, 12, and 14 (Northeast Atlantic and adjacent waters), is currently recognised and managed in the Northeast Atlantic.

<sup>2</sup> Anon 2013. Provetaking av industristoff og seddelskriving ved landing - Forslag til forbedringer. (In Norwegian): <http://www.fiskeridir.no/content/download/8733/106501/version/2/file/rapportindustrialstoff-og-seddelskriving-ved-landing.pdf>

<sup>3</sup> Johnsen, E., Misund, R., Palmason, S. R., and Blom, G. 2016. Norwegian industrial fishery for Norway pout in the North Sea in ICES. 2016. Report of the Benchmark Workshop on Norway Pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat), 23–25 August 2016, Copenhagen, Denmark. ICES CM 2016/ACOM:35. 396 pp. <https://doi.org/10.17895/ices.pub.5599>.

<sup>4</sup> Nielsen, J. R., Olsen, J., Håkonsson, K. B., Egekvist J. and Dalskov, J. 2016. Danish Norway pout fishery in the North Sea and Skagerrak in ICES. 2017. Report of the Benchmark Workshop on Norway Pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat), 23–25 August 2016, Copenhagen, Denmark. ICES CM 2016/ACOM:35. 69 pp: <https://doi.org/10.17895/ices.pub.5599>

**Cod**

For management purposes, ICES recognises multiple (>10) cod stocks in the Northeast Atlantic; however, only one, Cod (*Gadus morhua*) in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak), is deemed relevant to this assessment.

**Haddock**

As with cod, ICES recognises multiple haddock stocks in the Northeast Atlantic but only one, Haddock (*Melanogrammus aeglefinus*) in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak), is relevant to this assessment.

**Anglerfish/Monkfish**

There are ICES multiple anglerfish/monkfish stocks in the Northeast Atlantic. Of relevance to this assessment is a stock-complex of two anglerfish species, Anglerfish (*Lophius budegassa*, *Lophius piscatorius*) in ICES subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat).

**Saithe**

In the Northeast Atlantic, 3 saithe stocks are currently recognised. Of relevance to this assessment is saithe (*Pollachius virens*) in ICES subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)

**Whiting**

One whiting stock is deemed relevant to this assessment, Whiting (*Merlangius merlangus*) in ICES Subarea 4 and Division 7.d (North Sea and eastern English Channel).

**Greater silver smelt/Greater Argentine**

One stock of this species is considered relevant to this assessment namely Greater silver smelt (*Argentina silus*) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat).

## MANAGEMENT

The two clauses in this section (M1, M2) relate to the general management regime applied to the fishery under assessment. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. A fishery must meet all the minimum requirements in every clause before it can be recommended for approval.

M1 Management Framework – Minimum Requirements		
<b>M1.1</b>	There is an organisation responsible for managing the fishery.	PASS
<b>M1.2</b>	There is an organisation responsible for collecting data and assessing the fishery.	PASS
<b>M1.3</b>	Fishery management organisations are publicly committed to sustainability.	PASS
<b>M1.4</b>	Fishery management organisations are legally empowered to take management actions.	PASS
<b>M1.5</b>	There is a consultation process through which fishery stakeholders are engaged in decision-making.	PASS
<b>M1.6</b>	The decision-making process is transparent, with processes and results publicly available.	PASS
<b>Clause outcome:</b>		PASS
<p><b>M1.1 There is an organisation responsible for managing the fishery.</b> Historically, the fishery under assessment here has taken place in the North Sea in both Norwegian (along the western part of the Norwegian Trench) and UK (formerly EU) waters (the Fladen Ground and east of Shetland). It remains to be seen what impacts Britain's leaving the EU (i.e. Brexit) will have on the distribution of this fishery.</p> <p>Norwegian fisheries management is the remit of the Ministry of Trade, Industry and Fisheries<sup>5</sup> (Department of Fisheries and Aquaculture) with a Directorate of Fisheries and Aquaculture<sup>6</sup> acting as the Ministry's advisory and executive body. Both the Ministry and Directorate develop and apply fishery laws and regulations.</p> <p>All-in-all there is an organisation(s) responsible for managing the fishery such that <b>the fishery passes Clauses M1.1.</b></p>		
<p><b>M1.2 There is an organisation responsible for collecting data and assessing the fishery.</b> At the national level, the Norwegian Institute of Marine Research (IMR)<sup>7</sup> is the main research body within Norway responsible for collecting fishery-related data and assessing fisheries.</p> <p>Internationally, this function is performed by the International Council for the Exploration of the Sea (ICES)<sup>8</sup>, an intergovernmental marine science organisation based in Copenhagen, Denmark comprising 20 member countries including the Norway and the UK. ICES provides impartial evidence on the state and sustainable use of marine resources in the ICES area of competence which includes <i>inter alia</i> the areas of operation of the fishery under assessment here.</p> <p>Overall, as there are organisations responsible for collecting data and assessing the fishery, <b>the fishery passes Clause M1.2.</b></p>		
<p><b>M1.3 Fishery management organisations are publicly committed to sustainability.</b> Norway has in place a Marine Resources Act whose aims include ensuring sustainable and economically profitable management of wild living marine resources. In addition, Norway has committed to international agreements on sustainable management for fish stocks under its management which entail defined exploitation rates and minimum limit <math>B_{lim}</math> for spawning stocks.</p> <p>Overall, as fishery management organisations are publicly committed to sustainability, <b>the fishery passes Clause M1.3.</b></p>		
<p><b>M1.4 Fishery management organisations are legally empowered to take management actions.</b> The Norwegian Directorate of Fisheries operates under the aforementioned Marine Resources Act (MRA) which details, among other things, the structure of the management system, the obligation for sustainable, science-based management and</p>		

<sup>5</sup> Ministry of Trade Industry and Fisheries, Norway: <https://www.regjeringen.no/en/id4/>

<sup>6</sup> Directorate of Fisheries. Norwegian-Fisheries-Management: <https://www.fiskeridir.no/English/Fisheries/Norwegian-Fisheries-Management>

<sup>7</sup> Norway Institute of Marine Research (IMR): <http://www.imr.no/en>

<sup>8</sup> International Council for the Exploration of the Sea (ICES): <https://ices.dk/explore-us/who-we-are/Pages/Who-we-are.aspx>



<b>M1</b>	<b>Management Framework – Minimum Requirements</b>	
	<b>M1.1</b>	There is an organisation responsible for managing the fishery. <span style="float: right;">PASS</span>
	<b>M1.2</b>	There is an organisation responsible for collecting data and assessing the fishery. <span style="float: right;">PASS</span>
	<b>M1.3</b>	Fishery management organisations are publicly committed to sustainability. <span style="float: right;">PASS</span>
	<b>M1.4</b>	Fishery management organisations are legally empowered to take management actions. <span style="float: right;">PASS</span>
	<b>M1.5</b>	There is a consultation process through which fishery stakeholders are engaged in decision-making. <span style="float: right;">PASS</span>
	<b>M1.6</b>	The decision-making process is transparent, with processes and results publicly available. <span style="float: right;">PASS</span>
<b>Clause outcome:</b>		PASS
<p>ecosystem considerations. The Act contains technical regulations for commercial and recreational fisheries and applies to all harvesting and other utilisation of wild living marine resources and the genetic material derived from them.</p> <p>Chapter 3 of the Act (Catch quantities and quotas) allows the Ministry to prescribe maximum permitted quantities (national quotas) of marine resources that may be harvested, expressed in terms of weight, volume, number of individuals, the number of days harvesting is permitted, or in other terms.</p> <p>Chapter 4 of the Act (Conduct of harvesting operations and other utilisation of wild living marine resources) specifies that all catches of fish shall be landed (discard ban). The Ministry also may by regulations grant exemptions from the obligation to land catches and may also prohibit discarding of biological waste.</p> <p>Chapters 6 &amp; 7 of the Act specifies arrangements for control and enforcement including facilitating vessel inspections, use of logbooks to record catches and powers of the Directorate of Fisheries Inspectors to issue orders to stop a vessel, haul in gear, seal gear and obtain documents, relevant information and objects if they suspect infringements of the fisheries legislation have occurred.</p> <p>Chapter 8 outlines measures in place to deter illegal, unreported and unregulated (IUU) fishing. Chapter 11 empowers the Ministry to impose coercive and infringement fines to ensure compliance with provisions made in or under the Act. The MRA entered into force on 06 June 2008.</p> <p>Existing technical measures such as the closed Norway pout box, minimum mesh size and by-catch regulations to protect other species have been maintained by Norwegian flagged vessels fishing in EU waters in the assessment area.</p> <p>Overall, fishery management organisations are legally empowered to take management actions such that <b>the fishery passes Clause M1.4.</b></p>		
<b>M1.5</b>	<p><b>There is a consultation process through which fishery stakeholders are engaged in decision-making.</b></p> <p>In Norway, fishery stakeholders including representatives of the fishing industry, scientific bodies and governmental authorities cooperate in decision-making.</p> <p>Specifically, stakeholders are involved in management decisions via advisory meetings with representatives of fishermen’s associations, fishing industries, trade unions, the Sami Parliament (Indigenous population), local authorities, eNGOs and other stakeholders.</p> <p>Overall, there is a consultation process through which fishery stakeholders are engaged in decision-making such that <b>the fishery passes Clause M1.5.</b></p>	
<b>M1.6</b>	<p><b>The decision-making process is transparent, with processes and results publicly available.</b></p> <p>The Norwegian Directorate includes a communications office with responsibility for disseminating information which is achieved <i>inter alia</i> through the Directorate’s Internet and intranet pages and the English-language website <a href="http://www.fisheries.no">www.fisheries.no</a> through which authorities provide information about Norwegian fisheries and aquaculture management. Information on fisheries management; real-time closures and other announcements are made available on the Directorate’s website.</p>	

<b>M1</b>	<b>Management Framework – Minimum Requirements</b>	
	<b>M1.1</b>	There is an organisation responsible for managing the fishery. PASS
	<b>M1.2</b>	There is an organisation responsible for collecting data and assessing the fishery. PASS
	<b>M1.3</b>	Fishery management organisations are publicly committed to sustainability. PASS
	<b>M1.4</b>	Fishery management organisations are legally empowered to take management actions. PASS
	<b>M1.5</b>	There is a consultation process through which fishery stakeholders are engaged in decision-making. PASS
	<b>M1.6</b>	The decision-making process is transparent, with processes and results publicly available. PASS
<b>Clause outcome:</b>		PASS
<p>At the International level, stock assessments etc. are prepared by ICES with all assessments, advice documents etc. publicly available on the ICES website.</p> <p>Overall, decision-making processes are entirely transparent, with the processes and all results publicly available including assessments of stock status and advice arising from said assessments. Examples of the types of documents publicly available may be seen in the evidence relating to the analysis of Category A and C species below. Overall decision-making processes are transparent, with processes and results publicly available such that <b>the fishery passes Clause M1.6.</b></p>		
<b>References</b>		
See footnotes.		
<b>Links</b>		
<b>MARINTRUST Standard clause</b>	1.3.1.1, 1.3.1.2	
<b>FAO CCRF</b>	7.2, 7.3.1, 7.4.4, 12.3	
<b>GSSI</b>	D.1.01, D.4.01, D2.01, D1.07, D1.04,	

<b>M2</b>	<b>Surveillance, Control and Enforcement - Minimum Requirements</b>		
	<b>M2.1</b>	There is an organisation responsible for monitoring compliance with fishery laws and regulations.	PASS
	<b>M2.2</b>	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.	PASS
	<b>M2.3</b>	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.	PASS
	<b>M2.4</b>	Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.	PASS
<b>Clause outcome:</b>			PASS
<p><b>M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations.</b></p> <p>A number of organisations are responsible for enforcement in Norwegian fisheries including:</p> <ol style="list-style-type: none"> <li>1. The Directorate of Fisheries (Control Section) which monitors and controls the entire seafood chain via quayside controls, sales inspections, post landing audits and inspections at sea. A Fisheries Monitoring Centre ensures 24/7 monitoring of fishing activities. Inspectors may board vessels at any time when at sea.</li> <li>2. The Coast Guard (Ministry of Defence) conducts control of both Norwegian and foreign flagged vessels, performing more than 1,800 vessel inspections annually. Main areas of control are for resource, quota, and customs violations and to verify adherence to technical fishery regulations.</li> <li>3. Norges Sildesalgslag (a pelagic sales organization) is a legal intermediary for settlement between buyer and sellers that also performs landing controls, compiles statistics and cooperates closely with the Directorate.</li> </ol> <p>Therefore, there are organisations responsible for monitoring compliance with fishery laws and regulations such that <b>the fishery passes Clause M2.1.</b></p>			
<p><b>M2.2 There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.</b></p> <p>Chapter 11 (Coercive and infringement fines) of the Marine Resources Act empowers the Ministry to impose fines to ensure compliance with provisions made under the Act. A coercive fine is a continuous fine that becomes effective from a specified deadline for complying with an order. The Ministry may in special cases reduce or waive a coercive fine that has accrued. The Ministry may order any person that wilfully or through negligence contravenes provisions made in or under this Act to pay an infringement fine. For serious quota infractions occur, the Directorate can administer fines, withdraw quota or submit a police report, which will hand the issue over to the criminal system. Fishing license and a license to purchase fish may also be withdrawn as can the value of the catch.</p> <p>As there is a framework of sanctions which are applied when laws and regulations are discovered to have been broken, <b>the fishery passes Clause M2.2.</b></p>			
<p><b>M2.3 There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.</b></p> <p>Norway adopted a blacklist of vessels engaged in IUU activities in Northeast Atlantic waters in 1994 and banned such vessels from fishing in Norwegian waters. The concept of a blacklist was later adopted by several Regional Fisheries Management Organizations (RFMO's) and by the European Union. The EU Regulation (EC No 1005/2008) to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU) entered into force in 2010. The Commission is working actively with all stakeholders to ensure coherent application of the IUU Regulation. The fishery is not TAC-constrained in that total landings have been well below TACs in recent years such that there is no incentive for TAC-related offenses such as underreporting.</p> <p>Overall, there is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing such that <b>the fishery passes Clause M2.3.</b></p>			
<p><b>M2.4 Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.</b></p>			

M2	Surveillance, Control and Enforcement - Minimum Requirements		
	<b>M2.1</b>	There is an organisation responsible for monitoring compliance with fishery laws and regulations.	PASS
	<b>M2.2</b>	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.	PASS
	<b>M2.3</b>	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.	PASS
	<b>M2.4</b>	Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.	PASS
<b>Clause outcome:</b>			PASS
<p>Chapter 7 (Control and enforcement) Section 47 (Placing inspectors and observers on board vessels) of the MRA obliges vessel owners, when requested, to provide board and lodging at the vessel's expense and use of communication equipment without charge. The Ministry may adopt regulations relating to;</p> <ul style="list-style-type: none"> <li>• The duties of an observer.</li> <li>• Which vessel groups and how many vessels are to carry an inspector or observer on board.</li> <li>• How these vessels are to be selected.</li> </ul> <p>VMS transmitters on Norwegian vessels must be approved by the Directorate and installed only by those authorized by the Directorate. Norwegian vessels involved in fishing operations 15m and above are required to comply with position reporting. This also includes vessels of 12m (Norway and EU) when operating in the Skagerrak area. Foreign vessels of 24m or more (15m or more in the case of EU vessels) are subject to position reporting when operating in Norwegian waters outside Skagerrak. For the Norwegian fishery, an ordinance was introduced in 2010 requiring the use of sorting grids to further reduce bycatch. This is still in force for Norwegian vessels fishing in EU waters, in the directed fishery for Norway pout.</p> <p>Overall compliance with laws and regulations is actively monitored, such that <b>the fishery passes Clauses M2.4.</b></p>			
<b>References</b>			
See footnotes.			
<b>Links</b>			
	<b>MARINTRUST Standard clause</b>		1.3.1.3
	<b>FAO CCRF</b>		7.7.2
	<b>GSSI</b>		D1.09

## CATEGORY A SPECIES

The four clauses in this section apply to Category A species. Clauses A1 - A4 should be completed for **each** Category A species. If there are no Category A species in the fishery under assessment, this section can be deleted. A Category A species must meet the minimum requirements of all four clauses before it can be recommended for approval. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. The species must achieve a pass rating against all requirements to be awarded a pass overall. **If the species fails any of these clauses it should be re-assessed as a Category B species.**

<b>Species Name</b>		Norway pout ( <i>Trisopterus esmarkii</i> ) in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat)	
<b>A1</b>	<b>Data Collection - Minimum Requirements</b>		
	<b>A1.1</b>	Landings data are collected such that the fishery-wide removals of this species are known.	PASS
	<b>A1.2</b>	Sufficient additional information is collected to enable an indication of stock status to be estimated.	PASS
			<b>Clause outcome:</b> PASS
<b>A1.1 Landings data are collected such that the fishery-wide removals of this species are known.</b>			
Commercial landings data are collected and known and are included in the assessment process with Figure 1 of the latest ICES Advice on fishing opportunities, catch, and effort for Norway pout ( <i>Trisopterus esmarkii</i> ) in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat) (Figure 1 below) presenting a history of catches for the period 1984 – 2020.			
			<p><b>Figure 1.</b> Norway pout in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat) catches (1984 – 2020) (Source: ICES, 2019<sup>9</sup>).</p>
As landings data are collected such that the fishery-wide removals of this species are known, <b>the fishery passes Clause A1.1.</b>			
<b>A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.</b>			
Aside from the landings data outlined above, sufficient additional information is available in the form of commercial catches (quarterly catches; catch-at-age and mean weight-at-age from catch sampling from the main Danish and Norwegian fisheries), four survey indices (IBTS Q1, IBTS Q3, EngGFS-IBTS-Q3, ScoGFS-IBTS-Q3), constant maturity data from survey estimates, constant natural mortality estimated from survey indices (IBTS Q1&3), and constant mean weight-at-age in the stock from long-term commercial catch estimates. All of these data sources feed into a based analytical assessment (quarterly SAM model, SESAM) which estimates <i>inter alia</i> Spawning Stock Biomass (SSB) which constitutes an indication of stock status. As sufficient additional information is collected to enable an indication of stock status to be estimated, <b>the fishery passes Clause A1.2.</b>			
<b>References</b>			
See footnotes.			
<b>Links</b>			

<sup>9</sup> ICES. 2020. Norway pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, nop.27.3a4. <https://doi.org/10.17895/ices.advice.5885>.

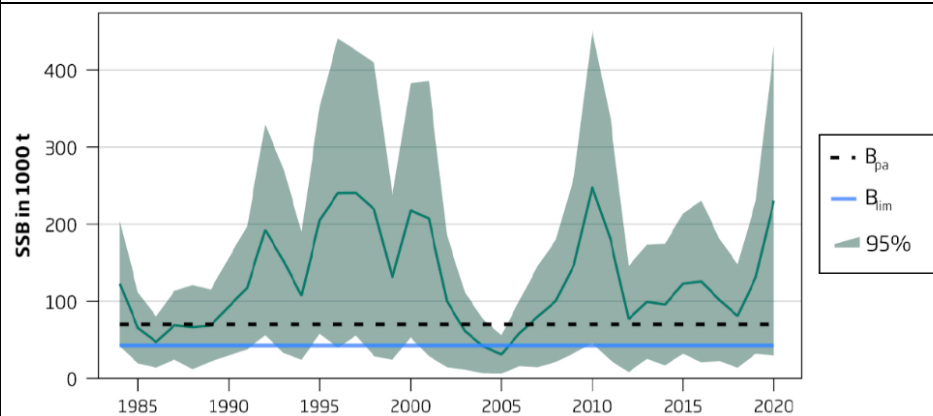
<b>Species Name</b>		Norway pout ( <i>Trisopterus esmarkii</i> ) in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat)	
<b>A1</b>	<b>Data Collection - Minimum Requirements</b>		
	<b>A1.1</b>	Landings data are collected such that the fishery-wide removals of this species are known.	PASS
	<b>A1.2</b>	Sufficient additional information is collected to enable an indication of stock status to be estimated.	PASS
			<b>Clause outcome:</b> PASS
<b>MARINTRUST Standard clause</b>		1.3.2.1.1, 1.3.2.1.2, 1.3.2.1.4, 1.3.1.2	
<b>FAO CCRF</b>		7.3.1, 12.3	
<b>GSSI</b>		D.4.01, D.5.01, D.6.02, D.3.14	

A2 Stock Assessment - Minimum Requirements															
	<b>A2.1</b>	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	PASS												
	<b>A2.2</b>	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	PASS												
	<b>A2.3</b>	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	PASS												
	<b>A2.4</b>	The assessment is subject to internal or external peer review.	PASS												
	<b>A2.5</b>	The assessment is made publicly available.	PASS												
<b>Clause outcome:</b>			PASS												
<b>A2.1 A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.</b>															
<p>The Norway pout stock is assessed annually with the latest advice being published in October 2020<sup>10</sup>; therefore, a stock assessment is conducted at least once every 3 years.</p> <p>Data inputted into the stock assessment includes commercial catches (quarterly catches; catch-at-age and mean weight-at-age from catch sampling from the main Danish and Norwegian fisheries), four survey indices (IBTS Q1, IBTS Q3, EngGFS-IBTS-Q3, ScoGFS-IBTS-Q3), constant maturity data from survey estimates, constant natural mortality estimated from survey indices (IBTS Q1&amp;3), and constant mean weight-at-age in the stock from long-term commercial catch estimates. Therefore, the assessment also considers the biological characteristics of the species.</p> <p>All-in-all stock assessments are conducted at least once every 3 years which consider all fishery removals as well as the biological characteristics of the species such that <b>the fishery passes Clause A2.1.</b></p>															
<b>A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.</b>															
<p>ICES defines various reference points for the Norway pout stock (Table 6).</p> <p><b>TABLE 6. NORWAY POUT IN SUBAREA 4 AND DIVISION 3.A. REFERENCE POINTS, VALUES, AND THEIR TECHNICAL BASIS.</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #c6e0b4;"> <th style="text-align: left;">Ref. point</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Technical basis</th> </tr> </thead> <tbody> <tr> <td><math>F_{cap}</math></td> <td>0.70</td> <td>A long-term management strategy evaluation, indicating that an escapement strategy for Norway pout is only precautionary with the addition of an <math>F_{cap}</math> (<math>F_{bar(1-2)}</math>) at 0.7.</td> </tr> <tr> <td><math>B_{lim}</math></td> <td>42,573 mt (4<sup>th</sup> quarter)</td> <td><math>B_{lim} = B_{loss}</math>, the lowest observed biomass in 2005 (as estimated in the updated benchmark assessment).</td> </tr> <tr> <td><math>B_{pa}</math></td> <td>69,736 mt (4<sup>th</sup> quarter)</td> <td><math>B_{pa} = B_{lim}e^{0.3 \times 1.645}</math></td> </tr> </tbody> </table> <p>Stock status is assessed and presented relative to <math>B_{lim}</math> and <math>B_{pa}</math> as can be seen in Figure 1 of the latest ICES advice (Figure 2).</p>				Ref. point	Value	Technical basis	$F_{cap}$	0.70	A long-term management strategy evaluation, indicating that an escapement strategy for Norway pout is only precautionary with the addition of an $F_{cap}$ ( $F_{bar(1-2)}$ ) at 0.7.	$B_{lim}$	42,573 mt (4 <sup>th</sup> quarter)	$B_{lim} = B_{loss}$ , the lowest observed biomass in 2005 (as estimated in the updated benchmark assessment).	$B_{pa}$	69,736 mt (4 <sup>th</sup> quarter)	$B_{pa} = B_{lim}e^{0.3 \times 1.645}$
Ref. point	Value	Technical basis													
$F_{cap}$	0.70	A long-term management strategy evaluation, indicating that an escapement strategy for Norway pout is only precautionary with the addition of an $F_{cap}$ ( $F_{bar(1-2)}$ ) at 0.7.													
$B_{lim}$	42,573 mt (4 <sup>th</sup> quarter)	$B_{lim} = B_{loss}$ , the lowest observed biomass in 2005 (as estimated in the updated benchmark assessment).													
$B_{pa}$	69,736 mt (4 <sup>th</sup> quarter)	$B_{pa} = B_{lim}e^{0.3 \times 1.645}$													

<sup>10</sup> ICES. 2020. Norway pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, nop.27.3a4. <https://doi.org/10.17895/ices.advice.5885>.

A2 Stock Assessment - Minimum Requirements		
A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	PASS
A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	PASS
A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	PASS
A2.4	The assessment is subject to internal or external peer review.	PASS
A2.5	The assessment is made publicly available.	PASS

Clause outcome: PASS



**Figure 2.** Norway pout in ICES Subarea 4 and Division 3a. SSB as estimated at the beginning of quarter 4 (1984 – 2020). Shaded areas indicate 95% confidence intervals (Source: ICES, 2019<sup>11</sup>).

Overall, the assessment provides an estimate of the status of the stock relative to proxies such that **the fishery passes Clause A2.2.**

**A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.**

The ICES advice that follows the stock assessments, provides an indication of the volume of fishery removals which is appropriate for the current stock status in the form of recommended catches in the coming year. In the latest advice<sup>12</sup>, ICES advises that when the MSY approach is applied, catches from 1 November 2020 to 31 October 2021 should be no more than 254,038 mt.

As the assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status, **the fishery passes Clause A2.3.**

**A2.4 The assessment is subject to internal or external peer review.**

Norway pout was last ICES benchmarked in 2016 (ICES, 2016)<sup>13</sup>. ICES Benchmarks are a process for evaluating the current data and assessment methodology and proposed improvements for a particular stock which take place periodically outside of the regular (generally annual) assessment environment and include experts and stakeholders from outside the ICES community. One of the goal of benchmarks related to the relevant stocks is to identify the ‘best available’. assessment methodology that is to be used in future update assessments and on which future ICES advice can be based.

Overall, the assessment is subject to internal and external peer review such that **the fishery passes Clause A2.4.**

**A2.5 The assessment is made publicly available.**

<sup>11</sup> Ibid.

<sup>12</sup> ICES. 2020. Norway pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, nop.27.3a4. <https://doi.org/10.17895/ices.advice.5885>.

<sup>13</sup> ICES. 2016. Report of the Benchmark Workshop on Norway Pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat), 23–25 August 2016, Copenhagen, Denmark. ICES CM 2016/ACOM:35. 396 pp. <https://doi.org/10.17895/ices.pub.5599>.



<b>A2</b>	<b>Stock Assessment - Minimum Requirements</b>		
	<b>A2.1</b>	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	PASS
	<b>A2.2</b>	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	PASS
	<b>A2.3</b>	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	PASS
	<b>A2.4</b>	The assessment is subject to internal or external peer review.	PASS
	<b>A2.5</b>	The assessment is made publicly available.	PASS
<b>Clause outcome:</b>			PASS
<p>Assessments, working group reports and other documents associated with the Norway pout stock are all made publicly available via the ICES website (<a href="https://www.ices.dk/advice/Pages/Latest-Advice.aspx">https://www.ices.dk/advice/Pages/Latest-Advice.aspx</a>) such that <b>the fishery passes Clause A2.5.</b></p>			
<p><b>References</b> See footnotes.</p>			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>		1.3.2.1.2, 1.3.2.1.4, 1.3.1.2	
<b>FAO CCRF</b>		12.3	
<b>GSSI</b>		D.5.01, D.6.02, D.3.14	

A3 Harvest Strategy - Minimum Requirements			
	<b>A3.1</b>	There is a mechanism in place by which total fishing mortality of this species is restricted.	PASS
	<b>A3.2</b>	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	PASS
	<b>A3.3</b>	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	PASS
<b>Clause outcome:</b>			PASS
<b>A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.</b>			
<p>The primary mechanism by which total fishing mortality on the Norway pout stock is restricted comes in the form of Total Allowable Catches (TACs) which are set based on stock assessments and according to the ICES MSY approach<sup>14</sup>.</p> <p>Additional technical measures which also act to limit total fishing mortality of the stock include the closed Norway pout box and minimum mesh sizes in the fishery; a detailed description of regulations and their background can be found in Nielsen et al., (2016a).</p> <p>All-in-all, there is a mechanism in place by which total fishing mortality of the stock is restricted such that <b>the fishery passes Clause A3.1.</b></p>			
<b>A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.</b>			
<p>Stock assessments for Norway pout have been indicating appropriate levels of fishery removals since 2007<sup>15</sup>. In the 13 years to date (2007 – 2019) where both an advised catch and actual catches are available, catches have only exceeded advised levels in 2 years (2007 and 2011) and not at all since 2011. Note both years had comparatively low TACs with a zero TAC in 2007 and a TAC of 6,000 mt in 2011 whereas the average annual advised catch for the period has been almost 250,000 mt.</p> <p>All-in-all, it can be said that fishery removals do not regularly exceed recommended levels such that <b>the fishery passes Clause A3.2.</b></p>			
<b>A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).</b>			
<p>Norway pout is a short-lived species. Recruitment is highly variable, and strongly influences the spawning stock and total biomass. The ICES approach to MSY-based management for short-lived species has been used here in the form of an escapement strategy based on a stochastic forecast, i.e. to maintain, with 95% probability, SSB above <math>B_{lim}</math> after the fishery has taken place. Advice for the sustainable exploitation of the Norway pout stock is given based on the MSY approach (escapement strategy based on stochastic projections) with an <math>F_{cap}</math> (<math>F_{bar(1-2)}</math>) = 0.7.</p> <p>The history of the Norway pout fishery includes a number of instances where the fishery has been effectively closed (see 2005, 2007 and 2011 in Figure 1) due to low stock levels. Note in some instances additional in-year measurements have permitted some level of fishing. Therefore, history shows that commercial fishery removals are prohibited where it has been estimated that a fishery would result in the stock falling below <math>B_{lim}</math>; therefore, <b>the fishery passes Clause A3.3.</b></p>			
<b>References</b>			
See footnotes.			
<b>Links</b>			

<sup>14</sup> ICES. 2020. Norway pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, nop.27.3a4. <https://doi.org/10.17895/ices.advice.5885>.

<sup>15</sup> *Ibid.*

MARINTRUST Standard clause	1.3.2.1.3, 1.3.2.1.4
FAO CCRF	7.2.1, 7.22 (e), 7.5.3
GSSI	D3.04, D6.01

A4 Stock Status - Minimum Requirements																					
	<b>A4.1</b>	<p>The stock is at or above the target reference point, OR IF NOT:</p> <p>The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:</p> <p>The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.</p>	PASS																		
<b>Clause outcome:</b>			PASS																		
<p><b>A4.1 The stock is at or above the target reference point, OR IF NOT:</b></p> <p><b>The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:</b></p> <p><b>The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.</b></p> <p>As discussed previously, ICES defines various reference points for the Norway pout stock but does not define an explicit target reference point (Table 6)<sup>16</sup>.</p> <p><b>TABLE 7. NORWAY POUT IN SUBAREA 4 AND DIVISION 3.A. REFERENCE POINTS, VALUES, AND THEIR TECHNICAL BASIS.</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #c6e0b4;">Ref. point</th> <th style="background-color: #c6e0b4;">Value</th> <th style="background-color: #c6e0b4;">Technical basis</th> </tr> </thead> <tbody> <tr> <td>F<sub>cap</sub></td> <td>0.70</td> <td>A long-term management strategy evaluation, indicating that an escapement strategy for Norway pout is only precautionary with the addition of an F<sub>cap</sub> (F<sub>bar(1-2)</sub>) at 0.7.</td> </tr> <tr> <td>B<sub>lim</sub></td> <td>42,573 mt (4<sup>th</sup> quarter)</td> <td>B<sub>lim</sub> = B<sub>loss</sub>, the lowest observed biomass in 2005 (as estimated in the updated benchmark assessment).</td> </tr> <tr> <td>B<sub>pa</sub></td> <td>69,736 mt (4<sup>th</sup> quarter)</td> <td>B<sub>pa</sub> = B<sub>lim</sub>e<sup>0.3 × 1.645</sup></td> </tr> </tbody> </table> <p>As of the latest assessment, SSB in the 4<sup>th</sup> quarter of 2020 was estimated at 230,750 mt, substantially above the corresponding limit of 42,573 mt and there is evidence, from the past performance of the fishery, that a fall below that limit would result in fishery closure such that <b>the fishery passes Clause A4.1.</b></p> <p><b>References</b> See footnotes.</p> <p><b>Links</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;"><b>MARINTRUST Standard clause</b></td> <td><b>1.3.2.1.4</b></td> </tr> <tr> <td><b>FAO CCRF</b></td> <td><b>7.2.1, 7.2.2 (e)</b></td> </tr> <tr> <td><b>GSSI</b></td> <td><b>D6 01</b></td> </tr> </table>				Ref. point	Value	Technical basis	F <sub>cap</sub>	0.70	A long-term management strategy evaluation, indicating that an escapement strategy for Norway pout is only precautionary with the addition of an F <sub>cap</sub> (F <sub>bar(1-2)</sub> ) at 0.7.	B <sub>lim</sub>	42,573 mt (4 <sup>th</sup> quarter)	B <sub>lim</sub> = B <sub>loss</sub> , the lowest observed biomass in 2005 (as estimated in the updated benchmark assessment).	B <sub>pa</sub>	69,736 mt (4 <sup>th</sup> quarter)	B <sub>pa</sub> = B <sub>lim</sub> e <sup>0.3 × 1.645</sup>	<b>MARINTRUST Standard clause</b>	<b>1.3.2.1.4</b>	<b>FAO CCRF</b>	<b>7.2.1, 7.2.2 (e)</b>	<b>GSSI</b>	<b>D6 01</b>
Ref. point	Value	Technical basis																			
F <sub>cap</sub>	0.70	A long-term management strategy evaluation, indicating that an escapement strategy for Norway pout is only precautionary with the addition of an F <sub>cap</sub> (F <sub>bar(1-2)</sub> ) at 0.7.																			
B <sub>lim</sub>	42,573 mt (4 <sup>th</sup> quarter)	B <sub>lim</sub> = B <sub>loss</sub> , the lowest observed biomass in 2005 (as estimated in the updated benchmark assessment).																			
B <sub>pa</sub>	69,736 mt (4 <sup>th</sup> quarter)	B <sub>pa</sub> = B <sub>lim</sub> e <sup>0.3 × 1.645</sup>																			
<b>MARINTRUST Standard clause</b>	<b>1.3.2.1.4</b>																				
<b>FAO CCRF</b>	<b>7.2.1, 7.2.2 (e)</b>																				
<b>GSSI</b>	<b>D6 01</b>																				

<sup>16</sup> ICES. 2020. Norway pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, nop.27.3a4. <https://doi.org/10.17895/ices.advice.5885>.

## CATEGORY B SPECIES

There are no Category B species of relevance to the fishery under assessment.

## CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment.

Clause C1 should be completed for **each** Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. Where a species fails this Clause, it may be assessed as a Category D species instead, EXCEPT if there is evidence that it is currently below the limit reference point.

<b>Species Name</b>		<b>Herring (<i>Clupea harengus</i>):</b> 1. Herring in ICES Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel) 2. Herring in ICES subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b>			
<b>1. Herring in ICES Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel)</b> The stock is assessed using an age-based analytical assessment that uses catches in the model and the forecast; input data includes <sup>17</sup> : <ul style="list-style-type: none"> <li>▪ Commercial catches</li> <li>▪ Five survey indices (IBTS Q1 1-ringer, IBTSO, LAI as SSB index, HERAS 1-8 ringers, IBTS Q3 0-5-ringers)</li> <li>▪ Annual maturity data from HERAS survey</li> <li>▪ Natural mortalities from SMS North Sea multispecies model.</li> <li>▪ Discarding is considered to be negligible.</li> </ul>			
<b>2. Herring in ICES subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean)</b> The stock is assessed using a statistical assessment model (XSAM; ICES, 2019) that uses catches in the model and in the forecast and also includes error structures in catches and abundance indices; input data includes <sup>18</sup> : <ul style="list-style-type: none"> <li>▪ Assessment period 1988–2019:</li> <li>▪ Commercial catches-at-age (stock weight-at-age from surveys and, since 2009, from catch sampling)</li> <li>▪ Three survey indices:             <ol style="list-style-type: none"> <li>1. Norwegian acoustic survey on spawning grounds in February/March (NASF, 1994 – 2005, 2015 – 2019)</li> <li>2. International Ecosystem Survey in the Nordic Seas (IESNS) covering the adult stock in the Nordic seas (1996 – 2019)</li> <li>3. The juvenile stock in the Barents Sea (1991 – 2019)</li> </ol> </li> <li>▪ Maturity ogive variable by year-class strength</li> <li>▪ Natural mortalities are fixed values from historical analyses (age 2 = 0.9; ages greater than 2 = 0.15)</li> </ul>			

<sup>17</sup> ICES. 2020. Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, her.27.3a47d, <https://doi.org/10.17895/ices.advice.6026>.

<sup>18</sup> ICES. 2020. Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, her.27.3a47d, <https://doi.org/10.17895/ices.advice.6026>.

<b>Species Name</b>		Herring ( <i>Clupea harengus</i> ): 1. Herring in ICES Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel) 2. Herring in ICES subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<ul style="list-style-type: none"> <li>Discarding is considered negligible such that discards are not included</li> </ul> <p>Overall, given the datasets included in the stock assessment for both herring stocks, removals of herring in the fishery under assessment are included in the stock assessment process such that <b>the fishery passes Clause C1.1.</b></p> <p><b>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</b></p> <p><b>1. Herring in ICES Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel)</b> ICES defines a limit reference point for this stock of <math>B_{lim} = 800,000</math> mt based on the breakpoint in the segmented regression of the stock-recruitment time-series (1947 – 2016)<sup>19</sup>. Based on the latest assessment, <math>SSB_{2020}</math> is estimated at 1,287,790 mt well above the limit reference point for the stock such that <b>the stock passes Clause C1.2.</b></p> <p><b>2. Herring in ICES subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean)</b> ICES defines a limit reference point for this stock of <math>B_{lim} = 2,500,000</math> mt<sup>20</sup>. Based on the latest assessment, <math>SSB_{2020}</math> is estimated at 3,504,683 mt again well above the limit reference point for the stock such that <b>the stock passes Clause C1.2.</b></p>			
<b>References</b> See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>		1.3.2.2	
<b>FAO CCRF</b>		7.5.3	
<b>GSSI</b>		D.3.04, D5.01	

<sup>19</sup> ICES. 2020. Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, her.27.3a47d, <https://doi.org/10.17895/ices.advice.6026>.

<sup>20</sup> ICES. 2020. Herring (*Clupea harengus*) in subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, her.27.1-24a514a. <https://doi.org/10.17895/ices.advice.5876>.

<b>Species Name</b>		Blue whiting ( <i>Micromesistius poutassou</i> ) in ICES subareas 1 – 9, 12, and 14 (Northeast Atlantic and adjacent waters)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	PASS	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b>			
<p>The blue whiting stock is assessed via an age-based analytical assessment that uses catches in the model and the forecast; input data includes<sup>21</sup>:</p> <ul style="list-style-type: none"> <li>– Commercial catches</li> <li>– Preliminary estimate of catch-at-age in the year (Q1-Q2) in which the assessment is carried out.</li> <li>– One survey index (International Blue Whiting Spawning Stock Survey (IBWSS) ages 1 – 8, 2004 – 2019, excluding 2010, and no survey in 2020).</li> <li>– Fixed maturity estimated in 1994 by combining maturity ogives from the southern and northern areas.</li> <li>– Natural mortality fixed at 0.2, derived in the 1980s from age compositions before the targeted fishery started.</li> <li>– Discards and bycatch which since 2014 have been included in the assessment.</li> </ul> <p>Given the inclusion of bycatch in the assessment since 2014, removals of blue whiting in the fishery under assessment are included in the stock assessment process such that <b>the fishery passes Clause C1.1.</b></p>			
<b>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</b>			
<p>ICES defines a biomass limit reference point for the stock of <math>B_{lim}</math> of 1,500,000 mt based on <math>B_{loss}</math> (i.e. the lowest observed value in the time series. Based on the latest assessment<sup>22</sup>, <math>SSB_{2021}</math> is projected to be 3,248,023 mt, substantially above the limit reference point such that <b>the fishery passes Clause C1.2.</b></p>			
<b>References</b>			
See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>	1.3.2.2		
<b>FAO CCRF</b>	7.5.3		
<b>GSSI</b>	D.3.04, D5.01		

<sup>21</sup> ICES. 2020. Blue whiting (*Micromesistius poutassou*) in subareas 1 – 9, 12, and 14 (Northeast Atlantic and adjacent waters). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, whb.27.1-91214. <https://doi.org/10.17895/ices.advice.5881>.

<sup>22</sup> *Ibid.*



<b>Species Name</b>		Cod ( <i>Gadus morhua</i> ) in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b>			
<p>The cod stock in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak) is assessed via an age-based analytical assessment that uses catches in the model and the forecast; input data includes<sup>23</sup>:</p> <ul style="list-style-type: none"> <li>– Commercial catches (international landings and ages from catch sampling by métier)</li> <li>– Two survey indices (NS IBTS Q1, NS IBTS Q3) derived by a Delta-GAM approach, assuming a stationary spatial model with ship effect.</li> <li>– Smoothed annually varying maturity data from NS IBTS Q1 (1978–2019).</li> <li>– Annually varying natural mortalities from multispecies model (1974–2016).</li> <li>– Discards included (78% reported, 22% raised), data series from the main fleets (in 2018, covering 76% of the landings).</li> <li>– Below minimum size (BMS) landings, where reported, are included with discards as unwanted catch in the assessment from 2016.</li> </ul> <p>Given the inclusion of catches, discards and below minimum size landings, removals of cod in the fishery under assessment are included in the stock assessment process such that <b>the fishery passes Clause C1.1.</b></p>			
<b>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</b>			
<p>ICES defines a biomass limit reference point (<math>B_{lim}</math>) for the stock of 107,000 mt based on the SSB associated with the last above-average recruitment (1996 year class). Based on the latest assessment<sup>24</sup>, SSB<sub>2021</sub> is projected to be 78,300 mt, which is below the limit reference point for the stock. Consideration must therefore move to whether removals by the fishery under assessment are negligible.</p> <p>According to the most recent review of the Norway pout fishery, bycatches of juvenile haddock and cod as well as larger saithe have been in focus but bycatches have been low in the recent decade, and in general, have decreased over the years. Table 5 of Nielsen 2016a presents bycatch levels in the period 2002 – 2005 by species in the Danish and Norwegian small meshed industrial trawl fishery targeting Norway pout in the North Sea and Skagerrak and estimates cod bycatch at 0.01% – 0.07% of total annual landings. Based on average annual Norway pout landings in the period 1987 – 2019, this would suggest that cod removals by the Norway pout fishery are between 10 mt and 70 mt annually which, when considered in the context of total removals from the North sea cod stock (average annual landing 1987 – 2019 = 62,910 mt), may be considered negligible.</p> <p>Overall, while the North Sea cod stock is not estimated above its limit reference point, removals by the fishery under assessment may be considered negligible such that <b>the fishery passes Clause C1.2.</b></p>			
<b>References</b>			
See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>		1.3.2.2	

<sup>23</sup> ICES. 2020. Cod (*Gadus morhua*) in Subarea 4, Division 7.d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, cod.27.47d20. <https://doi.org/10.17895/ices.advice.5891>.

<sup>24</sup> *Ibid.*

<b>Species Name</b>		Cod ( <i>Gadus morhua</i> ) in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<b>FAO CCRF</b>		7.5.3	
<b>GSSI</b>		D.3.04, D5.01	

<b>Species Name</b>		Haddock ( <i>Melanogrammus aeglefinus</i> ) in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b>			
<p>The haddock stock in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak) is assessed via an age-based analytical assessment that uses catches in the model and the forecast; input data includes<sup>25</sup>:</p> <ul style="list-style-type: none"> <li>– Commercial catches (international landings, ages from catch sampling)</li> <li>– Two survey indices: IBTS Q1, IBTS Q3.</li> <li>– Maturity data are assumed fixed over time and knife-edged at age 3</li> <li>– Natural mortality data vary with age and over time.</li> <li>– Discards, BMS landings and bycatch</li> </ul> <p>Given the inclusion of catches, discards and below minimum size landings, removals of haddock in the fishery under assessment are included in the stock assessment process such that <b>the fishery passes Clause C1.1.</b></p>			
<b>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</b>			
<p>ICES defines a biomass limit reference point (<math>B_{lim}</math>) for the stock of 94,000 mt based on the lowest estimated SSB that resulted in high recruitment (1979). Based on the latest assessment, <math>SSB_{2020}</math> is estimated at 206,064 mt, which is well above the limit reference point for the stock<sup>26</sup>.</p> <p>Therefore, the haddock stock is estimated above its limit reference point such that <b>the fishery passes Clause C1.2.</b></p>			
<b>References</b>			
See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>	1.3.2.2		
<b>FAO CCRF</b>	7.5.3		
<b>GSSI</b>	D.3.04, D5.01		

<sup>25</sup> ICES. 2020. Haddock (*Melanogrammus aeglefinus*) in Subarea 4, Division 6.a, and Subdivision 20 (North Sea, West of Scotland, Skagerrak). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, had.27.46a20. <https://doi.org/10.17895/ices.advice.5884>.

<sup>26</sup> *Ibid.*

<b>Species Name</b>		Saithe ( <i>Pollachius virens</i> ) in ICES subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b>			
<p>The saithe stock in ICES Subarea 4, Division 7d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak) is assessed via an age-based analytical assessment that uses catches in the model and the forecast; input data includes<sup>27</sup>:</p> <ul style="list-style-type: none"> <li>– Commercial catches (international landings, BMS landings, and discards, age frequencies from catch sampling)</li> <li>– Survey index (IBTS Q3, ages 3–8)</li> <li>– Combined commercial index scaled to the exploitable biomass (French, German, and Norwegian trawler fleets).</li> <li>– Maturity-at-age and natural mortality are assumed to be constant.</li> <li>– Stock weights are catch weights.</li> <li>– Discards were included and 46% of the landings had associated discarding information; 85% of the discards were observed and 15% were raised. Of the imported discards, 99% had been sampled for age information. BMS landings for Norway are included with landings in the assessment since 2016; all other BMS landings are included with the discards. Logbook-registered discards were 0 kg.</li> </ul> <p>Given the inclusion of catches, discards and below minimum size landings, removals of saithe in the fishery under assessment are included in the stock assessment process such that <b>the fishery passes Clause C1.1.</b></p>			
<b>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</b>			
<p>ICES defines a biomass limit reference point (<math>B_{lim}</math>) for the stock of 107,297 mt based on <math>B_{loss}</math> (i.e. the lowest observed value in the time series). Based on the latest assessment, <math>SSB_{2021}</math> is estimated at 151,404 mt, which is above the limit reference point for the stock<sup>28</sup>.</p> <p>Therefore, the saithe stock is estimated above its limit reference point such that <b>the fishery passes Clause C1.2.</b></p>			
<b>References</b>			
See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>	1.3.2.2		
<b>FAO CCRF</b>	7.5.3		
<b>GSSI</b>	D.3.04, D5.01		

<sup>27</sup> ICES. 2020. Saithe (*Pollachius virens*) in subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, pok.27.3a46. <https://doi.org/10.17895/ices.advice.5830>.

<sup>28</sup> *Ibid.*

<b>Species Name</b>		Whiting ( <i>Merlangius merlangus</i> ) in ICES Subarea 4 and Division 7.d (North Sea and eastern English Channel)	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
			<b>Clause outcome:</b> PASS
<p><b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b></p> <p>The stock is assessed via an age-based analytical assessment that uses catches in the model and the forecast; input data includes<sup>29</sup>:</p> <ul style="list-style-type: none"> <li>– Commercial catches (international catches, ages from catch sampling by métier, since 1978)</li> <li>– Two survey indices (IBTS Q1 &amp; Q3; ages 0 to 5; since 1983)</li> <li>– Time-varying maturity estimated from NS IBTS Q1 data</li> <li>– Time-varying natural mortalities from the SMS multispecies model (ICES, 2019b).</li> <li>– The proportion of landings with associated discards was 73%. 55% of the discards were sampled. No biological samples were available for age allocations from the industrial bycatch, therefore samples of total catches were used and mean weight-at-age is assumed equal to catch weights-at-age. Below minimum size (BMS) landings, where reported to ICES, are included with discards as unwanted catch in the assessment since 2015.</li> </ul> <p>Given the inclusion of catches, discards and below minimum size landings, removals of whiting in the fishery under assessment are included in the stock assessment process such that <b>the fishery passes Clause C1.1.</b></p>			
<p><b>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</b></p> <p>ICES defines a biomass limit reference point (<math>B_{lim}</math>) for the stock of 119,708 mt based on <math>B_{loss}</math> (i.e. the lowest observed biomass in the time series (SSB in 2007), as estimated in the 2018 benchmark assessment). Based on the latest assessment, <math>SSB_{2021}</math> is estimated at 180,147 mt, which is above the limit reference point for the stock<sup>30</sup>.</p> <p>Therefore, the whiting stock is estimated above its limit reference point such that <b>the fishery passes Clause C1.2.</b></p>			
<b>References</b>			
See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>	1.3.2.2		
<b>FAO CCRF</b>	7.5.3		
<b>GSSI</b>	D.3.04, D5.01		

<sup>29</sup> ICES. 2020. Whiting (*Merlangius merlangus*) in Subarea 4 and Division 7.d (North Sea and eastern English Channel). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, whg.27.47d. <https://doi.org/10.17895/ices.advice.5935>.

<sup>30</sup> *Ibid.*

## CATEGORY D SPECIES

Category D species are those which make up less than 5% of landings and are not subject to a species-specific management regime. In the case of mixed trawl fisheries, Category D species may make up the majority of landings. The comparative lack of scientific information on the status of the population of the species means that a risk-assessment style approach must be taken.

D1	Species Name	Anglerfish/Monkfish (Blackbellied) ( <i>Lophius budegassa</i> )	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	7.7. years	3
	Average maximum age (years)	21 years	2
	Fecundity (eggs/spawning)	46K to 400K	1
	Average maximum size (cm)	100 cm	2
	Average size at maturity (cm)	53.2	2
	Reproductive strategy	Demersal spawner	2
	Mean trophic level	4.4	3
		<b>Average Productivity Score</b>	2.14
	Susceptibility Attribute	Value	Score
	Overlap of adult species range with fishery	<25% of the stock occurs in the area fished	1
	Distribution	Throughout region	1*
	Habitat	Habitat preference makes species moderately likely to encounter gear	2*
	Depth range	Species distribute in depth range 20 – 1000 m. Majority of depth distribution occurs in the Low susceptibility bin (i.e. 0 – 10 m; >70 m)	1*
	Selectivity	Species >2 times mesh size	3
	Post-capture mortality	Species retained; therefore, most dead or retained.	3
		<b>Average Susceptibility Score</b>	2.25*
		<b>PSA Risk Rating (From Table D3)</b>	TABLE D4
		<b>Compliance rating</b>	TABLE D4
<b>References</b>			
<ul style="list-style-type: none"> <li>ICES. 2020. Anglerfish (<i>Lophius budegassa</i>, <i>Lophius piscatorius</i>) in subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, anf.27.3a46. <a href="https://doi.org/10.17895/ices.advice.5926">https://doi.org/10.17895/ices.advice.5926</a>.</li> <li>Fishbase. 2021. <i>Lophius budegassa</i>, Spinola 1807, Blackbellied angler: <a href="https://www.fishbase.se/summary/5094">https://www.fishbase.se/summary/5094</a></li> </ul>			
<i>Standard clauses 1.3.2.2</i>			
*Availability 2 not used as information available for Availability 1 and most conservative score of Encounterability 1 ad 2 used; therefore, average susceptibility score = average of 1, 2, 3, 3 = 2.25.			

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

**Note:** Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

<b>D3</b>	Average Susceptibility Score		
	1 - 1.75	1.76 - 2.24	2.25 - 3
	1 - 1.75	PASS	PASS

Average Productivity Score	1.76 - 2.24	PASS	PASS	TABLE D4
	2.25 - 3	PASS	TABLE D4	TABLE D4



<b>D1</b>	<b>Species Name</b>	Anglerfish/Monkfish ( <i>Lophius piscatorius</i> )	
	<b>Productivity Attribute</b>	<b>Value</b>	<b>Score</b>
	Average age at maturity (years)	3.4 years	2
	Average maximum age (years)	16 years	2
	Fecundity (eggs/spawning)	1,000,000	1
	Average maximum size (cm)	200 cm	3
	Average size at maturity (cm)	55 cm	1
	Reproductive strategy	Demersal spawner	2
	Mean trophic level	4.5	3
	<b>Average Productivity Score</b>		<b>2.0</b>
	<b>Susceptibility Attribute</b>	<b>Value</b>	<b>Score</b>
	Overlap of adult species range with fishery	<25% of the stock occurs in the area fished	1
	Distribution	Throughout region	1*
	Habitat	Habitat preference makes species moderately likely to encounter gear	2*
	Depth range	Species distribute in depth range 20 – 1000 m. Majority of depth distribution occurs in the Low susceptibility bin (i.e. 0 – 10 m; >70 m)	1*
	Selectivity	Species >2 times mesh size	3
Post-capture mortality	Species retained; therefore, most dead or retained.	3	
<b>Average Susceptibility Score</b>		<b>2.25*</b>	
<b>PSA Risk Rating (From Table D3)</b>		<b>TABLE D4</b>	
<b>Compliance rating</b>		<b>TABLE D4</b>	
<b>References</b>			
<ul style="list-style-type: none"> <li>ICES. 2020. Anglerfish (<i>Lophius budegassa</i>, <i>Lophius piscatorius</i>) in subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, anf.27.3a46. <a href="https://doi.org/10.17895/ices.advice.5926">https://doi.org/10.17895/ices.advice.5926</a>.</li> <li>Fishbase. 2021. <i>Lophius piscatorius</i>, Linnaeus 1758, Angler: <a href="https://www.fishbase.se/summary/lophius-piscatorius.html">https://www.fishbase.se/summary/lophius-piscatorius.html</a></li> </ul>			
<i>Standard clauses 1.3.2.2</i>			
*Availability 2 not used as information available for Availability 1 and most conservative score of Encounterability 1 ad 2 used; therefore, average susceptibility score = average of 1, 2, 3, 3 = 2.25.			

<b>D3</b>	<b>Average Susceptibility Score</b>			
		<b>1 - 1.75</b>	<b>1.76 - 2.24</b>	<b>2.25 - 3</b>
	<b>Average Productivity Score</b>	<b>1 - 1.75</b>	PASS	PASS
		<b>1.76 - 2.24</b>	PASS	PASS
	<b>2.25 - 3</b>	PASS	TABLE D4	TABLE D4

<b>D4</b>	<b>Species Name</b>	1. Anglerfish/Monkfish (Black bellied) ( <i>Lophius budegassa</i> ) 2. Anglerfish/Monkfish (White bellied) ( <i>Lophius piscatorius</i> )	
	<b>Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements</b>		
	<b>D4.1</b>	The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.	PASS
	<b>D4.2</b>	There is no substantial evidence that the fishery has a significant negative impact on the species.	PASS
			<b>Outcome: PASS</b>
<b>Evidence</b>			
<b>D4.1: The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.</b>			
ICES provides specific management advice for this stock-complex via a survey trends based assessment and the ICES framework for category 3 stocks <sup>31</sup> where input data includes International catch information and a dedicated Scottish–Irish Anglerfish and Megrin Industry–Science Survey in Subarea 6 and Division 4.a (SIAMISS–Q2). Discard estimates are also available from 2009 onwards for most of the fleets (83% of the landings).			
Given the inclusion of catch information in the assessment, the impacts of the fishery under assessment here in terms of direct removals, the potential impacts of the fishery on this species are considered during the management process but management has not yet deemed measures are taken to minimise these impacts to be necessary. <b>Overall, the fishery meets Clause D4.1.</b>			
<b>D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.</b>			
Overall, ICES does not express particular concern about the impacts of the Norway pout fishery on anglerfish such that <b>the fishery passes Clause D4.2</b> <sup>32</sup> .			
<b>References</b> See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>		1.3.2.2, 4.1.4	
<b>FAO CCRF</b>		7.5.1	
<b>GSSI</b>		D.5.01	

<sup>31</sup> ICES. 2020. Anglerfish (*Lophius budegassa*, *Lophius piscatorius*) in subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, anf.27.3a46. <https://doi.org/10.17895/ices.advice.5926>.

<sup>32</sup> *Ibid.*

D1	Species Name	Greater silver smelt ( <i>Argentina silus</i> )	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	5.0 – 6.0 years unsexed, north-eastern North Sea and Skagerrak (1984 – 1987), 7.00 (male), 6.0 (female) Norwegian waters (1981 – 1983) <sup>33</sup> . Overall, 5.0 – 7.0 years.	3
	Average maximum age (years)	Max. reported age: 35 years	3
	Fecundity (eggs/spawning)	>10,000 based on other smelts/herrings	1
	Average maximum size (cm)	L <sub>inf</sub> estimated as 42.6 (females) and 40.3 cm (males) <sup>34</sup>	1
	Average size at maturity (cm)	L <sub>m</sub> = 26.0	2
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	3.3 ± 0.3 se; based on diet studies.	3
	<b>Average Productivity Score</b>		<b>2.0</b>
	Susceptibility Attribute	Value	Score
	Overlap of adult species range with fishery	Eastern Atlantic: Svalbard to west coasts of Scotland and Ireland, deeper parts of North Sea and across the Wyville Thomson ridge to Denmark Strait. Western Atlantic: Davis Strait to George's Bank in Canada. Arctic Ocean: east to Finnmark, Norway, Barents Sea.	1*
	Distribution		1
	Habitat	Habitat preference makes species moderately likely to encounter gear	2*
	Depth range	Depth range 140 m – 1440 m, usually 55 m – 550 m. Majority of depth distribution occurs in the Low (0 – 10 m; >70 m) and High susceptibility (20 – 60 m) bins. Overall medium.	2
	Selectivity	Species .2 times mesh size	3
	Post-capture mortality	Species retained; therefore, most dead or retained.	3
	<b>Average Susceptibility Score</b>		<b>2.25</b>
	<b>PSA Risk Rating (From Table D3)</b>		
	<b>Compliance rating</b>		
<b>References</b>			
<a href="https://www.fishbase.de/Summary/SpeciesSummary.php?ID=2700&amp;AT=Great+silver+smelt">https://www.fishbase.de/Summary/SpeciesSummary.php?ID=2700&amp;AT=Great+silver+smelt</a>			
<i>Standard clauses 1.3.2.2</i>			
*Availability 2 not used as information available for Availability 1 and most conservative score of Encounterability 1 ad 2 used; therefore, average susceptibility score = average of 1, 2, 3, 3 = 2.25.			

D3	Average Susceptibility Score			
		1 - 1.75	1.76 - 2.24	2.25 - 3
Average Productivity Score	1 - 1.75	PASS	PASS	PASS
	1.76 - 2.24	PASS	PASS	TABLE D4
	2.25 - 3	PASS	TABLE D4	TABLE D4

<sup>33</sup> Fishbase – Maturity studies for *Argentina silus*: <https://www.fishbase.de/Reproduction/MaturityList.php?ID=2700>

<sup>34</sup> O. A. Bergstad, Distribution, population structure, growth, and reproduction of the greater silver smelt, *Argentina silus* (Pisces, Argentinidae), of the Skagerrak and the north-eastern North Sea, ICES Journal of Marine Science, Volume 50, Issue 2, 1993, Pages 129–143, <https://doi.org/10.1006/jmsc.1993.1015>

<b>D4</b>	<b>Species Name</b>	Greater silver smelt ( <i>Argentina silus</i> )	
	<b>Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements</b>		
	<b>D4.1</b>	The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.	PASS
<b>D4.2</b>	There is no substantial evidence that the fishery has a significant negative impact on the species.	PASS	
			<b>Outcome: PASS</b>
<b>Evidence</b>			
<b>D4.1: The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.</b>			
ICES provides specific management advice for the stock via a survey trends based assessment and the ICES framework for category 3 stocks <sup>35</sup> .			
The latest advice states that there has been a marked increase in catches in Subarea 4 (where the fishery under assessment here takes place) in the last three years, and these are all bycatch in other fisheries and that bycatch of greater silver smelt in the industrial fisheries in Subarea 4 and Division 3.a has been increasing rapidly since 2012. Therefore, potential impacts of the fishery on this species are considered during the management process but management has not yet deemed measures are taken to minimise these impacts to be necessary. <b>Overall, the fishery meets Clause D4.1.</b>			
<b>D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.</b>			
Overall, ICES does not express particular concern about the impacts of the Norway pout fishery on greater silver smelt such that <b>the fishery passes Clause D4.2</b> <sup>36</sup> .			
<b>References</b> See footnotes.			
<b>Links</b>			
<b>MARINTRUST Standard clause</b>		1.3.2.2, 4.1.4	
<b>FAO CCRF</b>		7.5.1	
<b>GSSI</b>		D.5.01	

<sup>35</sup> ICES. 2019. Greater silver smelt (*Argentina silus*) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, aru.27.123a4, <https://doi.org/10.17895/ices.advice.4808>.

<sup>36</sup> *Ibid.*

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

**Note:** Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

## FURTHER IMPACTS

The three clauses in this section relate to impacts the fishery may have in other areas. A fishery must meet the minimum requirements of all three clauses before it can be recommended for approval.

<b>F1</b>	<b>Impacts on ETP Species - Minimum Requirements</b>	
	<b>F1.1</b>	Interactions with ETP species are recorded.
	<b>F1.2</b>	There is no substantial evidence that the fishery has a significant negative effect on ETP species.
	<b>F1.3</b>	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.
		<b>Clause outcome:</b> PASS
<b>F1.1 Interactions with ETP species are recorded.</b>		
<p>A landing obligation, which was implemented in Norway in 1984, requires vessels to land any dead animal, be it ETP species or otherwise. Landing records show the Norway pout fishery to have some limited impacts on the ETP species European eel (<i>Anguilla anguilla</i>) with bottom trawls fishing Norway pout in the North Sea landing 780 kg of eels in 2016. As evidenced by the existence of these data, interactions with ETP species are recorded such that <b>the fishery meets Clause F1.1.</b></p>		
<b>F1.2 There is no substantial evidence that the fishery has a significant negative effect on ETP species.</b>		
<p>As mentioned above, the sole ETP species identified as impacted by this fishery was European eel (<i>Anguilla anguilla</i>). Nonetheless, being a demersal trawl fishery, the ETP species spurdog (<i>Squalus acanthias</i>) could also be impacted by this fishery.</p> <p><b>European eel</b></p> <p>As of the latest ICES advice<sup>37</sup>, the status of European eel remains critical and ICES advises that all anthropogenic impacts (including <i>inter alia</i> commercial fishing) should be reduced to, or kept as close as possible to, zero in 2020. The advice also reports official commercial catches of eel in Norway which in recent years have been approx. zero. Given that ICES estimates there to be approximately zero commercial catches in Norway in recent years, there is no substantial evidence that the fishery has a significant negative effect on European eel.</p> <p><b>Spurdog (<i>Squalus acanthias</i>)</b></p> <p>While the TAC for the spurdog stock was reduced to zero in 2011 and has remained there since, it remains as bycatch in the mixed demersal and gillnet fisheries. According to the latest ICES advice<sup>38</sup>, ICES continues to advise no targeted fisheries of the stock in 2019 and 2020 but that, based on medium-term projections, annual catches at the recent assumed level (2,468 mt) would allow the stock to increase at a rate close to that estimated with zero catches. <b>Furthermore, while</b> total biomass declined substantially since the 1960s to the lowest level observed, it appears to have stabilised in the last decade and the harvest rate has declined substantially and is estimated to be well below the MSY level (<math>HR_{MSY}</math>). Given that ICES estimates that annual catches at the recent assumed level, which have been bycatch only, would allow the stock to increase at a rate close to that estimated with zero catches, there is no substantial evidence that the fishery has a significant negative effect on the spurdog stock.</p> <p>Overall, there is no substantial evidence that the fishery has a significant negative effect on ETP species such that <b>the fishery passes Clause F1.2.</b></p>		
<b>F1.3 If the fishery is known to interact with ETP species, measures are in place to minimise mortality.</b>		
<p>As outlined above, there is no evidence that the fishery has a significant negative effect on ETP species that would require measures to minimise mortality over and above the manner in which the fishery currently operates. With this being said,</p>		

<sup>37</sup> ICES. 2019. European eel (*Anguilla anguilla*) throughout its natural range. In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, ele.2737.nea. <https://doi.org/10.17895/ices.advice.4825>.

<sup>38</sup> ICES. 2020. Spurdog (*Squalus acanthias*) in subareas 1 – 10, 12, and 14 (the Northeast Atlantic and adjacent waters). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, dgs.27.nea. <https://doi.org/10.17895/ices.advice.5820>.

<b>F1</b>	<b>Impacts on ETP Species - Minimum Requirements</b>	
	<b>F1.1</b>	Interactions with ETP species are recorded.
	<b>F1.2</b>	There is no substantial evidence that the fishery has a significant negative effect on ETP species.
	<b>F1.3</b>	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.
<b>Clause outcome:</b>		PASS
<p>technical measures such as selection grids and spatial and temporal closures should act to reduce what ETP species mortality exists. Overall, measures to minimise mortality are not required (because it already appears minimised) such that <b>the fishery meets Clause F1.3.</b></p>		
<p><b>References</b> See footnotes.</p>		
<p><b>Links</b></p>		
<b>MARINTRUST Standard clause</b>	1.3.3.1	
<b>FAO CCRF</b>	7.2.2 (d)	
<b>GSSI</b>	D4.04, D.3.08	

F2 Impacts on Habitats - Minimum Requirements		
F2.1	Potential habitat interactions are considered in the management decision-making process.	PASS
F2.2	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.	PASS
F2.3	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.	PASS
<b>Clause outcome:</b>		PASS
<p><b>F2.1 Potential habitat interactions are considered in the management decision-making process.</b></p> <p>Norway pout are primarily caught using two métiers, demersal/bottom trawls and pelagic/mid-water trawls.</p> <p><u><b>Pelagic/mid-water trawls</b></u> Pelagic trawls operate entirely in the water column and as such do not impact physical habitats; therefore, it is not necessary that potential habitat interactions are considered by management (because there are none).</p> <p><u><b>Demersal/bottom trawls</b></u> By their nature demersal trawls contact the seabed such that they physical habitats requiring potential habitat interactions to be considered in management decision-making processes.</p> <p>The latest ICES Ecosystem Overview for the Greater North Sea Ecoregion<sup>39</sup> presents extensive information in relation to habitats and fishing pressures in the region and the European Marine Observation and Data Network (EMODnet) has mapped seabed habitats in the region with a map of the region being present in the Ecosystem Overview; therefore, extensive habitat information is available to management for consideration when making decisions.</p> <p>Wider Norwegian fishery management includes the regulation of bottom trawling along the Norwegian continental slope through closed areas to avoid damaging fragile and vulnerable benthic communities and reef-building organisms. These regulations which were established in 2011 restrict the use of bottom trawls in areas with coral reefs and at depths exceeding 1,000 m. Based on the closure of various areas to bottom trawling precise due to potential habitat impacts, potential interactions are clearly considered in management decision-making processes such that <b>the fishery passes Clause F2.1.</b></p>		
<p><b>F2.2 There is no substantial evidence that the fishery has a significant negative impact on physical habitats.</b></p> <p>As above, Norway pout are primarily caught using two métiers, demersal/bottom trawls and pelagic/mid-water trawls.</p> <p><u><b>Pelagic/mid-water trawls</b></u> Pelagic trawls operate entirely in the water column and do not impact physical habitats.</p> <p><u><b>Demersal/bottom trawls</b></u> In contrast, by their nature demersal trawls contact the seabed. As before, the latest ICES Ecosystem Overview<sup>40</sup> presents extensive information in relation to habitats and fishing pressures. According to the overview, North Sea benthic substrates are characterised by soft sediments with sediments from mobile muds to coarse sands present throughout the region and gravel beds mainly distributed in the English Channel and the southern North Sea. Furthermore, the North Sea contains limited biogenic and geogenic reefs, except for patches of <i>Sabellaria spinulosa</i> reefs and scattered boulder fields and oysters and sea grass which were common long ago in the central part of the North Sea have mostly disappeared.</p> <p>Several closed areas are also in place that serve to limit the extent, and therefore the potential habitat impacts, of the fishery under assessment. The “Norway pout box” is a large spatial closure in the Northwest North Sea established in 1977 where</p>		

<sup>39</sup> ICES. 2020. Greater North Sea Sea Ecoregion – Ecosystem overview. *In* Report of the ICES Advisory Committee, 2020. ICES Advice 2020, Section 9.1, <https://doi.org/10.17895/ices.advice.7632>.

<sup>40</sup> *Ibid.*



<b>F2</b>	<b>Impacts on Habitats - Minimum Requirements</b>	
	<b>F2.1</b>	Potential habitat interactions are considered in the management decision-making process.
	<b>F2.2</b>	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.
	<b>F2.3</b>	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.

**Clause outcome:** PASS

fishing with small meshed trawls is banned while additional spatial closures specifically targeted at the Norway pout fishery in Norwegian waters include the Patch Bank (closed to industrial trawling since 2002) and the Egersund Bank (closed in one form or another since 2003 with a current closed season of 01 October – 31 May). Elsewhere, and outside the area of operations of the fishery under assessment, bottom trawling is regulated along the Norwegian continental slope through closed areas to avoid damaging fragile and vulnerable benthic communities and reef-building organisms with regulations established in 2011 having restricted the use of bottom trawls in areas with coral reefs and at depths exceeding 1,000 m. Finally, targeted trawling for Norway pout is prohibited north of 62°N as the Norwegian regulations prohibit trawling with small meshed trawls for species such as cod, haddock, whiting and saithe north of this latitude. Therefore, the Norwegian industrial trawling for Norway pout can be carried out in Skagerrak and south of 64°N in the North Sea.

Given the relative distributions of the fishery under assessment and benthic habitats in the North Sea, the fishery can be expected to impact primarily sandy and muddy bottoms. With this in mind, Kaiser et al. (2006) concluded that impacts on muddy and sandy bottoms are lighter than on harder bottoms, and the areas recover more readily. Additionally, According to Meenakumari et al (2008), and Gordon et al (2002) sandy habitats can recover after trawling disturbance in less than 5 years. An additional factor to be considered is that the foot rope used by bottom trawlers targeting Norway pout tends to be relatively light and without heavy bobbins such that it should impact encountered habitats less than other bottom trawls might. Based on the above, there is no substantial evidence that the bottom trawl portion of the fishery under assessment has a significant negative impact on physical habitats.

Overall, there is no substantial evidence that the fishery has a significant negative impact on physical habitats such that **the fishery passes Clause F2.2.**

**F2.3 If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.**

As described above, the fishery has numerous spatial closures which serve to minimise and mitigate negative impacts on physical habitats such that **the fishery passes Clause F2.3.**

**References**

- Gordon, D.C., Gilkinson, K.D., Kenchington, E.L.R., Prena, J., Bourbonnais, C, Maclsaac, K., McKeown, D.L. and Vass, W.P., 2002. Summary of the Grand Banks otter trawling experiment (1993-1995): Effects on benthic habitat and communities. Canadian Technical Report on Fisheries Aquatic Sciences. No. 2416, 72 pp. <http://www.dfompo.gc.ca/Library/336797.pdf>
- Hiddink J.G., Jennings S., and Kaiser M.J (2006). Indicators of the Ecological Impact of Bottom-Trawl Disturbance on Seabed Communities. Ecosystems (2006) 9: 1190– 1199. <https://link.springer.com/content/pdf/10.1007%2Fs10021-005-0164-9.pdf>
- Kaiser, M.J., Clarke, K.R., Hinz, H., Austen, M.C.V., Somerfield, P.J., Karakassis, I. Global analysis of response and recovery of benthic biota to fishing. Marine Ecology Progress Series. 311:1-14 (2006). <http://www.int-res.com/articles/feature/m311p001.pdf>
- Meenakumari, B., Bhagirathan, U. and Pravin, P. Impact of Bottom Trawling on Benthic Communities: A Review. Fishery Technology 2008, Vol. 45(1) pp: 1 – 22.: [https://www.researchgate.net/publication/259979122\\_Impact\\_of\\_bottom\\_trawling\\_on\\_benthic\\_communities\\_a\\_review](https://www.researchgate.net/publication/259979122_Impact_of_bottom_trawling_on_benthic_communities_a_review)

<b>Links</b>	
<b>MARINTRUST Standard clause</b>	1.3.3.2
<b>FAO CCRF</b>	6.8
<b>GSSI</b>	D.2.07, D.6.07, D3.09



<b>F3</b>	<b>Ecosystem Impacts - Minimum Requirements</b>	
	<b>F3.1</b>	The broader ecosystem within which the fishery occurs is considered during the management decision-making process.
	<b>F3.2</b>	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.
	<b>F3.3</b>	If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.
<b>Clause outcome:</b>		PASS

**F3.1 The broader ecosystem within which the fishery occurs is considered during the management decision-making process.**

The report of the latest Norway pout benchmark<sup>41</sup> specifically notes that in previous ICES stock assessments it has been noted that there is a need to ensure that the Norway pout stock remains high enough to provide food for a variety of predator species and that the stock is among other important as food source for the species saithe, haddock, cod, whiting, and western mackerel and predation mortality is significant. To date the benchmark group has not recommend revised reference points for the stock but has stated that higher escapement targets could be considered in future based on the importance of Norway pout as a forage species in the ecosystem. The broader impacts on non-target species and habitats are considered and accounted for by bycatch regulations, spatial closures and technical measures including sorting/selection grids.

Overall, the broader ecosystem within which the fishery occurs is considered during management decision-making processes such that **the fishery passes Clause F3.1.**

**F3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.**

During the 1960s when it first developed the small-mesh fishery for Norway pout and blue whiting in the northern North Sea was characterised by relatively large bycatches, especially of haddock and whiting. In general, and as a result of a raft of management measures including spatial closures, bycatch regulations, minimum mesh sizes, selective grids/panels and minimum landing sizes, bycatch levels have decreased in the Norway pout fishery over the years to a present level of 5 – 10%<sup>42</sup>.

According to the latest ICES Ecosystem Overview<sup>43</sup>, the North Sea foodweb is one of the most studied ones in the ICES area and can now be considered as perturbed due to many larger fishes being either absent or present only in reduced numbers. ICES has developed a large fish indicator (LFI) index can be used to monitor changes in the fish populations which shows a declining index in the mid-1980s followed by an increase since the time series low of 2001. As these big fish populations recover this will likely have consequences for the forage fish populations such as Norway pout.

According to the latest ICES Working Group on the assessments of demersal stocks in the North Sea And Skagerrak (WGNSSK)<sup>44</sup>, the analysis of biological interactions (predator-prey relationships) among species has been a central theme in ICES over the last 30 years, primarily for the Baltic Sea and the North Sea. The 2011, 2014 and 2017 North Sea key run performed by the multispecies group WGSAM represents the current state of the art in terms of multispecies assessment, with the dynamic estimation of predation mortality. Additionally, while the assessment of Norway pout is single stock in nature, it uses natural mortality estimates that take into account multi-species interactions; therefore, the assessment of Norway pout and the ICES advice that flows from it does at least in part account for predation mortality on Norway cod.

Additionally, the relationships of forage species such as sandeel, Norway pout and sprat with predators of the North Sea have been studied through various ecosystem models that have shown that there are other species, such as herring and small

<sup>41</sup> ICES. 2016. Report of the Benchmark Workshop on Norway Pout (*Trisopterus esmarkii*) in Subarea 4 and Division 3.a (North Sea, Skagerrak, and Kattegat), 23–25 August 2016, Copenhagen, Denmark. ICES CM 2016/ACOM:35. 396 pp. <https://doi.org/10.17895/ices.pub.5599>.

<sup>42</sup> *Ibid.*

<sup>43</sup> ICES. 2020. Greater North Sea Sea Ecoregion – Ecosystem overview. In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, Section 9.1, <https://doi.org/10.17895/ices.advice.7632>.

<sup>44</sup> ICES. 2020. ICES Working Group on the Assessments of Demersal Stocks in the North Sea and Skagerrak (WGNSSK). ICES Scientific Reports. 2:61. 1353 pp. <http://doi.org/10.17895/ices.pub.6092>.

F3 Ecosystem Impacts - Minimum Requirements		
F3.1	The broader ecosystem within which the fishery occurs is considered during the management decision-making process.	PASS
F3.2	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.	PASS
F3.3	If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.	PASS
<b>Clause outcome:</b>		PASS
<p>gadoids, which also hold the same position in the North Sea trophic chain as Norway pout and which share energy transfer from low to high trophic levels (e.g. Mackinson and Daskalov, 2007; Christensen, 1995).</p> <p>Overall, there is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem such that <b>the fishery passes Clause F3.2.</b></p> <p><b>F3.3 If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.</b></p> <p>Of the species identified during species categorisation, herring (<i>Clupea harengus</i>) and Norway pout (<i>Trisopterus esmarkii</i>) likely play key roles in the marine ecosystem. As discussed previously, the assessment of Norway pout upon which advice related to total removals is based, uses natural mortality estimates that take into account multi-species interactions while the ecosystem roles of relevant herring stocks are accounted for in recommendations relating to total permissible fishery removals from those stocks (of which removals in the fishery under assessment here are a negligible proportion)<sup>45,46</sup>.</p> <p>For species/stocks identified during species categorisation that play a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals of those species/stocks such that <b>the fishery passes Clause F3.3.</b></p>		
<b>References</b>		
<ul style="list-style-type: none"> <li>▪ Christensen, V., 1995. A model of trophic interactions in the North Sea in 1981, the year of the stomach. <i>Dana</i>, 11(1): 1-28.</li> <li>▪ Mackinson, S. and Daskalov, G., 2007. An ecosystem model of the North Sea to support an ecosystem approach to fisheries management: description and parameterisation. <i>Sci. Ser. Tech Rep.</i>, Cefas Lowestoft, 142: 196pp.</li> <li>▪ See also footnotes.</li> </ul>		
<b>Links</b>		
<b>MARINTRUST Standard clause</b>	1.3.3.3	
<b>FAO CCRF</b>	7.2.2 (d)	
<b>GSSI</b>	D.2.09, D3.10, D.6.09	

<sup>45</sup> ICES. 2020. Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, her.27.3a47d, <https://doi.org/10.17895/ices.advice.6026>.

<sup>46</sup> ICES. 2020. Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, her.27.3a47d, <https://doi.org/10.17895/ices.advice.6026>.

## SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.

**Social Criterion are not assessed by Global Trust Certification as part of MarinTrust fisheries assessments.**

## Appendix A - Determining Resilience Ratings

The assessment of Category B species described in this assessment report template utilises a resilience rating system suggested by the American Fisheries Society. This approach was chosen because it is also used by FishBase, and so the resilience ratings for many thousands of species are freely available online. As described by FishBase, the following is the process used to arrive at the resilience ratings:

*“The American Fisheries Society (AFS) has suggested values for several biological parameters that allow classification of a fish population or species into categories of high, medium, low and very low resilience or productivity (Musick 1999). If no reliable estimate of  $r_m$  (see below) is available, the assignment is to the lowest category for which any of the available parameters fits. For each of these categories, AFS has suggested thresholds for decline over the longer of 10 years or three generations. If an observed decline measured in biomass or numbers of mature individuals exceeds the indicated threshold value, the population or species is considered vulnerable to extinction unless explicitly shown otherwise. If one sex strongly limits the reproductive capacity of the species or population, then only the decline in the limiting sex should be considered. We decided to restrict the automatic assignment of resilience categories in the Key Facts page to values of  $K$ ,  $t_m$  and  $t_{max}$  and those records of fecundity estimates that referred to minimum number of eggs or pups per female per year, assuming that these were equivalent to average fecundity at first maturity (Musick 1999). Note that many small fishes may spawn several times per year (we exclude these for the time being) and large live bearers such as the coelacanth may have gestation periods of more than one year (we corrected fecundity estimates for those cases reported in the literature). Also, we excluded resilience estimates based on  $r_m$  (see below) as we are not yet confident with the reliability of the current method for estimating  $r_m$ . If users have independent  $r_m$  or fecundity estimates, they can refer to Table 1 for using this information.”*

Parameter	High	Medium	Low	Very low
Threshold	0.99	0.95	0.85	0.70
$r_{max}$ (1/year)	> 0.5	0.16 - 0.50	0.05 - 0.15	< 0.05
$K$ (1/year)	> 0.3	0.16 - 0.30	0.05 - 0.15	< 0.05
Fecundity (1/year)	> 10,000	100 - 1000	10 - 100	< 10
$t_m$ (years)	< 1	2 - 4	5 - 10	> 10
$t_{max}$ (years)	1 - 3	4 - 10	11 - 30	> 30

[Taken from the FishBase manual, “Estimation of Life-History Key Facts”, <http://www.fishbase.us/manual/English/key%20facts.htm#resilience>]

## Glossary

**Non-target:** Species for which the gear is not specifically set, although they may have immediate commercial value and be a desirable component of the catch. OECD (1996), Synthesis report for the study on the economic aspects of the management of marine living resources. AGR/FI(96)12

**Target:** In the context of fishery certification, the target catch is the catch of stock under consideration by the unit of certification – i.e. the fish that are being assessed for certification and ecolabelling. (GSSI)

## Appendix

### MarinTrust Fishery Assessment Peer Review Template

This section comprises a summary of the fishery being assessed against version 2 of the MarinTrust Standard.

<b>Fishery under assessment</b>	Norway pout in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat).
<b>Management authority (Country/State)</b>	Norway
<b>Main species</b>	Norway pout ( <i>Trisopterus esmarkii</i> )  Stock = Norway pout in ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat).
<b>Fishery location</b>	FAO Area 27 (Atlantic, Northeast), ICES Subarea 4 and Division 3a (North Sea, Skagerrak, and Kattegat)
<b>Gear type(s)</b>	<ol style="list-style-type: none"> <li>1. Demersal/Bottom trawls</li> <li>2. Pelagic/Mid-water trawls</li> </ol>

**Summary:** in this section, provide any additional information about the fishery that the reviewers feel is significant to their decision.

Norway pout's stock status is assessed and presented relative to  $B_{lim}$  and  $B_{pa}$ , these values are far above the current removal by the fishery.

The Institute of Marine Research (IMR) is one of the most reputed entities whose core activity is fish stock assessment of many fishing resources and the production of technology, especially acoustic devices used in stock assessment. Currently, as some other similar institutions affiliated to ICES, IMR is committed to identify the best available assessment methodology to assess fish abundance, including the development and use of unsupervised multifrequency algorithms for an automated classification of fish identity, which is the most delicate aspect in acoustic assessments.

However, there is a discussable sentence in the report: "Based on the above, there is no substantial evidence that the bottom trawl portion of the fishery under assessment has a significant negative impact on physical habitats", being the truth that the fishery has numerous spatial closures which serve to minimise and mitigate negative impacts on physical habitats.

[See specific responses below.](#)



## Summary of Peer Review Outcomes

Peer reviewers should review the fishery assessment report with the primary objective of answering the key questions listed in the table below. Where the situation is more complicated, reviewers may instead answer “See Notes”.

	YES	NO	See Notes
<b>A – Fishery Assessment</b>			
1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	X		
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	X		
3. Are the scores in the following sections accurate (i.e. do the scores reflect the evidence provided)?			
Section M - Management	X		
Category A Species	X		
Category B Species	X		
Category C Species	X		
Category D Species	X		
Section F – Further Impacts	X		X

## Detailed Peer Review Justification

Peer reviewers should provide support for their answers in the boxes provided, by referring to specific scoring issues and any relevant documentation as appropriate.

Detailed justifications are only required where answers given are one of the ‘No’ options. In other (Yes) cases, either confirm ‘scoring agreed’ or identify any places where weak rationales could be strengthened (without any implications for the scores).

Boxes may be extended if more space is required.

1. Is the scoring of the fishery consistent with the MarinTrust standard, and clearly based on the evidence presented in the assessment report?

Yes

2. Has the fishery assessment been fully completed, using the recognised MARINTRUST fishery assessment methodology and associated guidance?

Yes

3. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?

Yes

3M. Are the scores in “Section M – Management” clearly justified?

Yes

3A. Are the “Category A Species” scores clearly justified?

Yes

3B. Are the “Category B Species” scores clearly justified?

Yes

3C. Are the “Category C Species” scores clearly justified?

Yes

3D. Are the “Category D Species” scores clearly justified?

Yes

3F. Are the scores in “Section F – Further Impacts” clearly justified?

Yes.

**CAB response in blue (Sam Dignan, Assessor – 28 May 2021)**

It would be help if the reviewer—and the peer review template for that matter—was clearer about which specific clause they were commenting on. With no evidence to the contrary, I will respond as if the commentary is related to F2.2.

However it is a matter of concern the sentence about: “Furthermore, the North Sea contains limited biogenic and geogenic reefs, except for patches of *Sabellaria spinulosa* reefs and scattered boulder fields and oysters and sea grass which were common long ago in the central part of the North Sea have mostly disappeared”, though it is unclear if these impacts are only due to the fishery or if added impacts of climate change ?

The quoted sentence is taken from the latest ICES Ecosystem Overview for the Greater North Sea Ecoregion<sup>47</sup> which is referenced in the report. The report has been amended to add some more detail including that oysters most likely disappeared due to changes in currents and overfishing.

Besides, there is no indication on the use of new less destructive bottom trawl gears and devices. Norway is closing areas (boxes) and protecting habitats below 1,000 m, but from the reading of the report it is not clear what is exactly done to limit damages in areas where the bottom trawl fleets operate.

There is no evidence of technical measures (less destructive bottom trawl gears and devices) to limit the habitat impacts of bottom trawl gears targeting Norway pout. Any such measures there are appear directed towards reducing bycatch. It is also not clear if such less destructive gears exist.

There is no requirement in the MSC Standard to limit benthic impacts in areas where a fishery under assessment operates. There is a requirement that there be measures in place to minimise and mitigate negative impacts which might include excluding the fleet from particular areas.

In the case of this fishery, the spatial closures serve to limit the gears’ habitat impacts by ‘restraining’ impacts to within their historical footprint.

<sup>47</sup> ICES. 2020. Greater North Sea Sea Ecoregion – Ecosystem overview. In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, Section 9.1, <https://doi.org/10.17895/ices.advice.7632>.

Finally, there is a discussable sentence in the report: “Based on the above, there is no substantial evidence that the bottom trawl portion of the fishery under assessment has a significant negative impact on physical habitats”, being the truth that the fishery has numerous spatial closures which serve to minimise and mitigate negative impacts on physical habitats.

It is not clear why this sentence is discussable? The assessor evaluated the available evidence and adjudged there to be no substantial evidence that the bottom trawl portion of the fishery under assessment has a significant negative impact on physical habitats.

In the context of this clause, MarinTrust does not define either ‘substantial’ or ‘significant’ so it is left to the assessor to judge what these might mean. Of course a bottom trawl will have ‘significant’ impacts at a localised level but not so when these are considered at the level of the wider North Sea and in the context of all the other fishery-related and other (aggregate and oil extraction, offshore renewable energy projects etc.) impacts on habitats in the region.

The reviewer might view it as a ‘discussable’ sentence, but it is the position of the assessor that the bottom trawl portion of the fishery under assessment has a significant negative impact on physical habitats. Of course, this would be easier to judge if any information were available as to how ‘substantial’ or ‘significant’ should be interpreted.

Optional: General comments on the Peer Review Draft Report