



MarinTrust Standard V2

By-product Fishery Assessment

GBR37 – Cod in ICES Subarea 4, Division 3a, 7d and Subdivision 20

MarinTrust Programme

Unit C, Printworks

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Cod (<i>Gadus morhua</i>)
	Geographical area:	FAO 27 – North Sea, Eastern English Channel, Skagerrak
	Country of origin of the product:	UK
	Stock:	Subarea 4, Division 3a, 7d and Subdivision 20
Date	July 2023	
Report Code	GBR37	
Assessor	Sam Peacock	
Country of origin of the product - PASS	UK	
Country of origin of the product - FAIL	n/a	

Application details and summary of the assessment outcome			
Company Name(s): Lunar			
Country: UK			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Jose Peiro Crespo	0.2	Initial
Assessment Period	July 2023 – July 2024		

Scope Details	
Main Species	Cod (<i>Gadus morhua</i>)
Stock	Subarea 4, Division 3a, 7d and Subdivision 20
Fishery Location	FAO 27 – North Sea, Eastern English Channel, Skagerrak
Management Authority (Country/ State)	UK & EU
Gear Type(s)	Demersal gears
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Pass

Table 2. Assessment Determination

Assessment Determination
<p>Atlantic cod has been categorised by the IUCN as Vulnerable, and does not appear in the CITES appendices. Cod in ICES Subarea 4, Division 7d and Subdivision 20 is managed relative to established reference points and subject to an annual stock assessment. For this reason it was initially assessed under Category C.</p> <p>The most recent stock assessment was conducted in 2022, using all international catch and discard data. The assessment concluded that the stock biomass was below the limit reference point – although it was projected to recover above the limit reference point in 2023 – meaning that the stock does not meet the Category C requirements. As per the MT byproduct assessment methodology, it was subsequently assessed under Category D.</p> <p>Cod was awarded a Productivity score of 1.71 and a susceptibility score of 2.5, leading to a Pass rating on Table D3. For this reason the byproduct meets the MT requirements and should be approved for use as a raw material.</p>
Fishery Assessment Peer Review Comments
<p>The by-product fishery under assessment is the Atlantic cod (<i>Gadus morhua</i>) caught with demersal gears in ICES Subarea 4, Division 3a, 7d and Subdivision 20 (North Sea, Eastern English Channel, Skagerrak) in FAO area 27. The species is classified as LC by the IUCN in European waters. The stock is managed relative to biomass-based reference points.</p> <p>The stock was last assessed in 2022 by the ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK). According to that assessment, the stock biomass is below Blim. Therefore, the stock fail to pass category C and was assessed under category D. A PSA was conducted leading to a Pass rating on Table D3.</p> <p>Therefore, the peer review supports the auditor’s recommendation to pass the Atlantic cod caught with demersal gears in ICES Subarea 4, Division 3a, 7d and Subdivision 20 (North Sea, Eastern English Channel, Skagerrak) under the Marin Trust IFFO RS v2.0 by-fishery standard for the production of fishmeal and fish oil.</p>
Notes for On-site Auditor

Species Categorisation

NB: If any 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 a MarinTrust raw material.

IUCN Red list Category

By-product material from a species listed by IUCN (the International Union for Conservation of Nature) under the Red List for the following categories shall immediately fail the assessment;

- EXTINCT (E) AND EXTINCT IN THE WILD (EW)
- CRITICALLY ENDANGERED (CR) facing an extremely high risk of extinction in the wild.
- ENDANGERED (EN) facing a very high risk of extinction in the wild.

By-product material may be used from the following categories provided that all clauses in the MarinTrust standard are passed.

- VULNERABLE (VU) facing a high risk of extinction in the wild.
- NEAR THREATENED (NT) does not qualify for above now, but is close or is likely to qualify for, a threatened category in the near future.
- LEAST CONCERN (LC) Widespread and abundant.
- DATA DEFICIENT (DD) and NOT EVALUATED (NE)

Table 3 Species Categorisation Table

Common name	Latin name	Stock	Management	Category	IUCN Red List Category ¹	CITES Appendix 1 ²
Cod	<i>Gadus morhua</i>	Subarea 4, Division 7d and Subdivision 20	Yes	C	Vulnerable ³	No

¹ <https://www.iucnredlist.org/>

² <https://cites.org/eng/app/appendices.php>

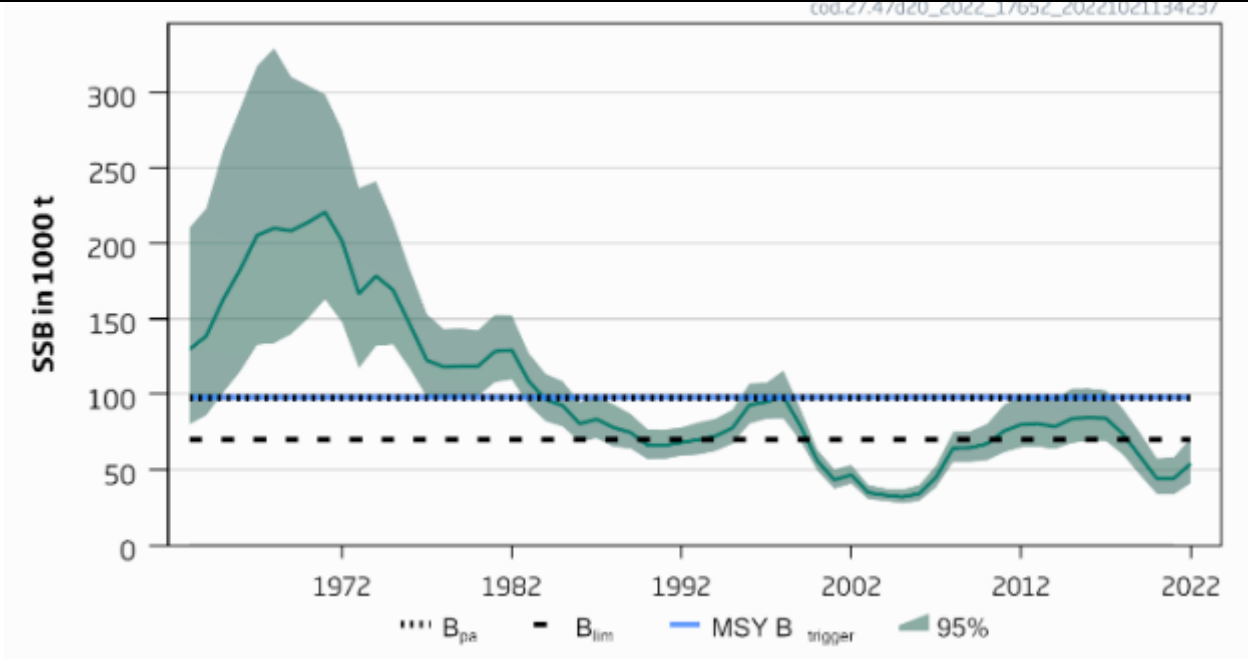
³ <https://www.iucnredlist.org/species/8784/12931575>

CATEGORY C SPECIES

In a by-product assessment, Category C species are those which are subject to a species-specific management regime and are usually targeted species in fisheries for human consumption.

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 should be assessed as a Category D species instead.

Species Name		Atlantic Cod	
C1	Category C Stock Status - Minimum Requirements		
	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.	PASS
	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.	FAIL
			Clause outcome: FAIL
<p>The byproduct does not meet the requirements of the Category C assessment, and therefore as set out in the MT byproduct assessment guidance it was subsequently assessed under Category D.</p> <p>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.</p> <p>Cod in Subarea 4, Division 7d and Subdivision 20 is subject to annual stock assessment by the ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK). The most recent assessment was conducted in 2022 and produced catch advice which was published in June 2022, and subsequently revised in November 2022. The stock assessment was an age-based analytical assessment which utilised catches in the model and the forecast; and additionally utilised three survey indices, annually varying maturity data, and natural mortality estimates from the North Sea multispecies model (ICES 2022). Discards and below minimum size landings are also included. The assessment is considered by ICES to be reliable, and C1.1 is met.</p> <p>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.</p> <p>The 2022 catch advice provides an indication of the current status of the stock relative to target and limit reference points. The target reference points $MSY B_{trigger}$, B_{pa} and $MAP MSY B_{trigger}$ have been set at 97,777t. The limit reference points B_{lim} and $MAP B_{lim}$ have been set at 69,841t. The 2022 catch advice included a projection for the 2023 SSB of 73,038t, slightly above the limit reference point level. However, at the time the advice was published it stated “spawning-stock size is below $MSY B_{trigger}$, B_{pa}, and B_{lim}” (ICES 2022). As biomass was considered by the most recent stock assessment to be below the limit reference point, C1.2 is not met.</p>			



Cod in Subarea 4, Division 7d and Subdivision 20, estimated SSB relative to current reference points (ICES 2022)

References

ICES (2022). 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, 2022. ICES Advice 2022, cod.27.47d20. <https://doi.org/10.17895/ices.advice.21406881>

Links

MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

CATEGORY D SPECIES

Category D species are those which 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.

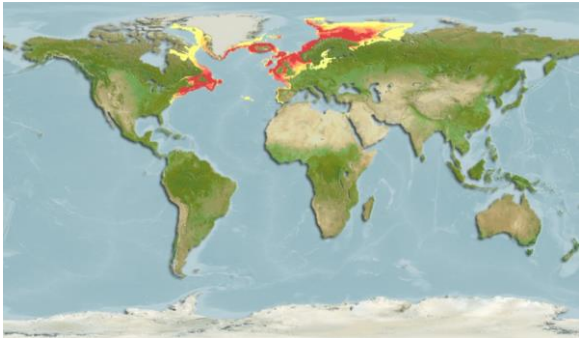
D1	Species Name		Cod		
	Productivity Attribute		Value	Score	
	Average age at maturity (years)		3.6 years	1	
	Average maximum age (years)		16.9 years	2	
	Fecundity (eggs/spawning)		1,610,435	1	
	Average maximum size (cm)		200cm	2	
	Average size at maturity (cm)		55cm	2	
	Reproductive strategy		Broadcast spawner	1	
	Mean trophic level		4.1	3	
	Average Productivity Score			1.71	
	Susceptibility Attribute		Value	Score	
	Availability (area overlap)		<10%	1	
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		Targeted	3	
	Selectivity of gear type		Retained	3	
	Post-capture mortality		Retained	3	
	Average Susceptibility Score			2.5	
	PSA Risk Rating (From Table D3)			PASS	
	Compliance rating			PASS	
	Further justification for susceptibility scoring (where relevant)				
	<i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>				
					
Atlantic cod, computer-generated native range. From fishbase (https://www.fishbase.se/summary/Gadus-morhua.html)					
References					
Fishbase, Atlantic cod. https://www.fishbase.se/summary/Gadus-morhua.html					
<i>Standard clauses 1.3.2.2</i>					

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

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

D4 Species Name		n/a	
Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements			
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.		
D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.		
			Outcome:
Evidence			
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.			
D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.			
References			
Links			
MarinTrust Standard clause		1.3.2.2, 4.1.4	
FAO CCRF		7.5.1	
GSSI		D.5.01	