MarinTrust Standard V2

By-product Fishery Assessment

Cod in ICES Subarea 4, Division 7d, and Subdivision 20

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Cod (*Gadus morhua*)
	Geographical area:	North Sea, Eastern English Channel, and Skagerrak
	Country of origin of the product:	Denmark
	Stock:	ICES Subarea 4, Division 7d, and Subdivision 20
Date		November 2022
Report Code		DNK31
Assessor		Sam Peacock
Country of origin of the product - PASS		Denmark
Country of origin of the product - FAIL		NONE

Application details and summary of the assessment outcome			
Company Name(s): Skagen; Triple Nine			
Country: Denmark			
Email address: sap@maring.org, mid@maring.org		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Kate Morris	0.2	Surveillance
Assessment Period		November 2022 – November 2023	

Scope Details	
Main Species	Cod (*Gadus morhua*)
Stock	ICES Subarea 4, Division 7d, and Subdivision 20
Fishery Location	North Sea, Eastern English Channel, and Skagerrak
Management Authority (Country/ State)	EU
Gear Type(s)	Trawls
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Maintain approval

Table 2. Assessment Determination

Assessment Determination
Cod has been categorised by the IUCN Red List as Least Concern and does not appear in the CITES appendices. Cod in ICES Subarea 4, Division 7d, and Subdivision 20 is managed via a TAC set relative to formal reference points, and for this reason was assessed under Category C.

Cod is subjected to an annual stock assessment by ICES which incorporates all landings and discard data. The most recent stock assessment was conducted in 2022 and concluded that the stock biomass is currently below the limit reference point. As fishery landings are not considered negligible by ICES, the stock failed to meet the requirements of C1.2. As per the MT by-product assessment guidance, it was subsequently assessed under Category D.

Under Category D, cod was awarded a Productivity score of 1.71 and a Susceptibility score of 2, leading to an outcome of Pass against Table D3. For this reason, the by-product should remain approved for use as a raw material in MT-Certified marine ingredients.

Fishery Assessment Peer Review Comments
The by-product fishery under assessment here is the North Sea cod (*Gadus morhua*) fishery is pursued by EU vessels in FAO fishing area 27 ICES 4, 7d, 20. North Sea Cod is managed by the EU common fisheries policy and UK fisheries act in UK water. For this Marin Trust assessment, the North Sea cod stock is scored as a category D species. The North Sea cod stock failed against the MT requirements for category C but passed under category D.
All species scoring tables have been completed by the auditor with sufficient evidence presented to support their final determination.
The peer review supports the auditor's recommendation to Pass both stocks of the fishery under the Marin Trust IFFO RS v2.0 by-fishery standard for the production of fishmeal and fish oil.

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 an 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	*Gadus morhua*	ICES Subarea 4, Division 7d, and Subdivision 20	Yes	C	Least Concern[3]	No

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[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
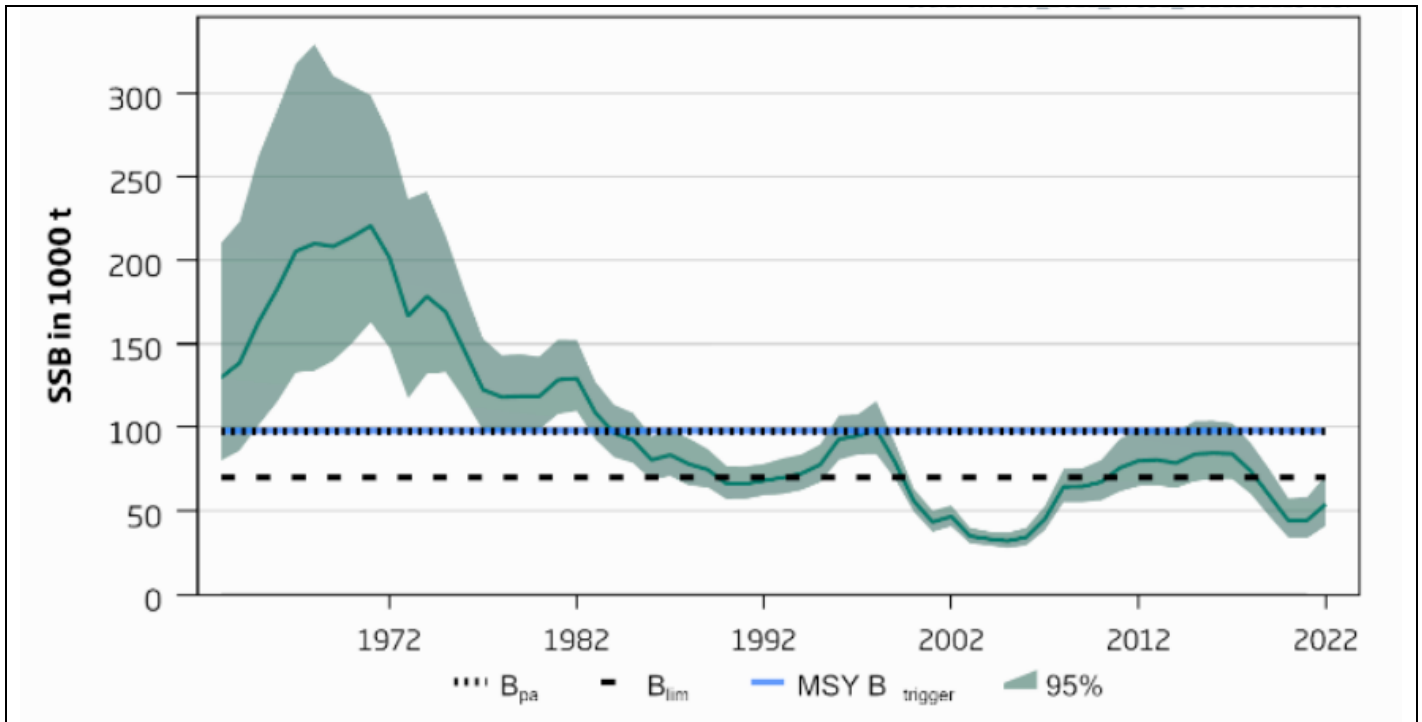[3] https://www.iucnredlist.org/species/8784/45097319

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	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

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.

An annual stock assessment is conducted by the ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK). The most recent assessment, carried out in 2022, was an age-based analytical assessments using catches in the model and the forecast. All international catch data were incorporated, plus discards. Fishery removals are included in the assessment process, therefore C1.1 is met.

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.

The 2022 ICES catch advice provides an indication of the status of the stock relative to the formally established reference points. Biomass-based target and limit reference points have been established as follows: MSY $B_{trigger}$ and B_{pa} are set at 97,777t; B_{lim} is set at 69,841t. The 2022 catch advice states that "spawning-stock size is below MSY $B_{trigger}$, B_{pa}, and B_{lim}" (ICES, 2022). The stock is therefore currently estimated to have a biomass below the limit reference point. Additionally, fishery removals are not negligible, and in fact have sometimes exceeded the ICES advice in recent years. Overall, the fishery does not mee the requirements of C1.2, and therefore should be assessed under Category D.

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Cod in ICES Subarea 4, Division 7d, and Subdivision 20, 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		Undersized individuals rarely caught	1
	Post-capture mortality		Retained	3
			Average Susceptibility Score	**2**
			PSA Risk Rating (From Table D3)	**PASS**
			Compliance rating	**PASS**

Further justification for susceptibility scoring (where relevant)

For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision

Computer-generated map of cod distribution. From Fishbase, https://www.fishbase.se/summary/69

References

Fishbase, cod: https://www.fishbase.se/summary/69

Standard clauses 1.3.2.2

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	
	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