



MarinTrust Standard V2

By-product Fishery Assessment, DNK31 *Cod in ICES Subarea 4, Divisions 6a and 7d, and Subdivision 3.a.20*

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

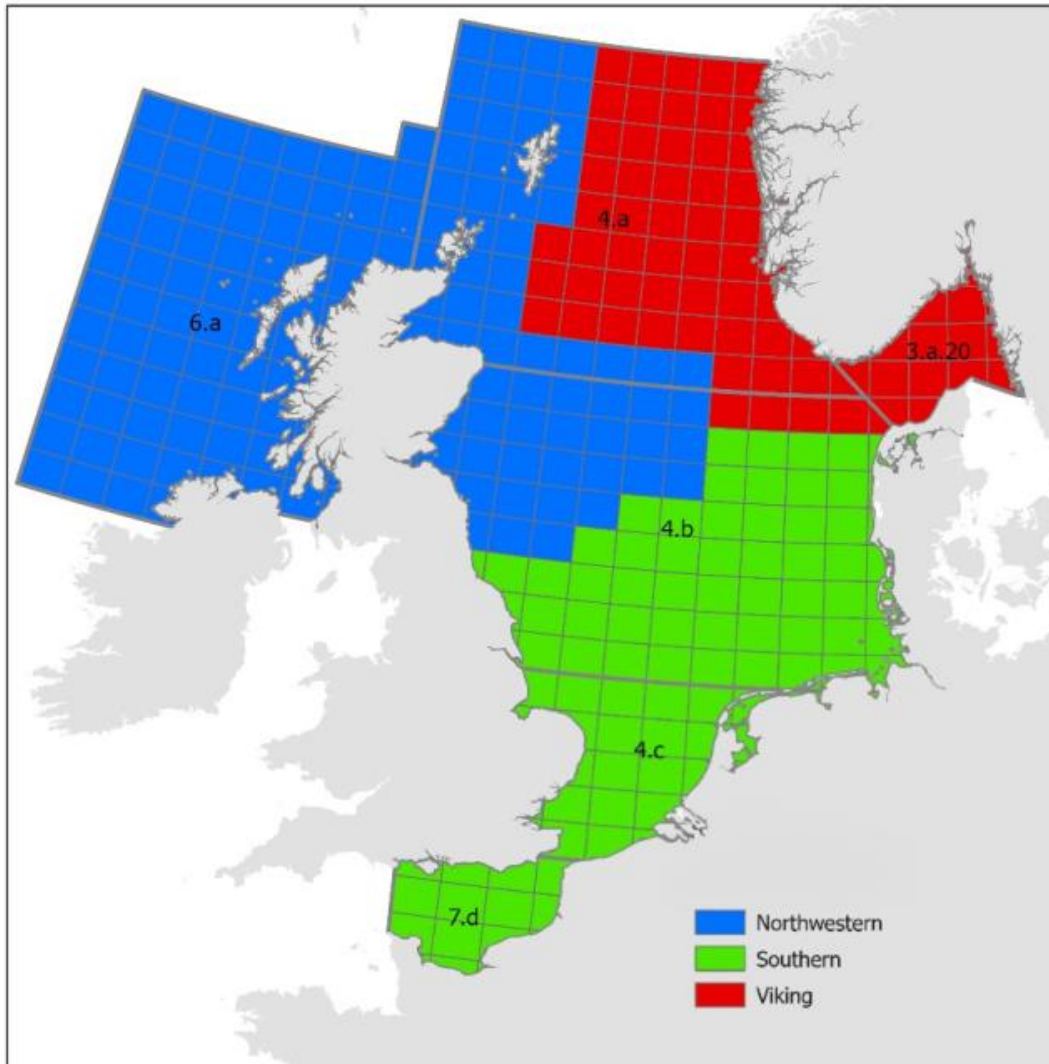
Fishery Under Assessment	Species:	Cod (<i>Gadus morhua</i>)
	Geographical area:	North Sea, Eastern English Channel, and Skagerrak
	Country of origin of the product:	Denmark
	Stock:	ICES Subarea 4, Divisions 6a and 7d, and Subdivision 3.a.20
Date	November 2023	
Report Code	DNK31	
Assessor	Sam Peacock	
Country of origin of the product - PASS	Denmark	
Country of origin of the product - FAIL	n/a	

Application details and summary of the assessment outcome			
Company Name(s): Skagen; Triple Nine			
Country:			
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	Jose Peiro Crespo	0.2	Surveillance 2
Assessment Period	November 2023 – October 2024		

Scope Details	
Main Species	Cod (<i>Gadus morhua</i>)
Stock	ICES Subarea 4, Divisions 6a and 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	Approve
Recommendation	Approve byproduct

Table 2. Assessment Determination

Assessment Determination
<p>Cod has been categorised by the IUCN Red List as Least Concern and does not appear in the CITES appendices.</p> <p>Previously cod in this area has been assessed by ICES as a single stock defined as “Cod in ICES Subarea 4, Division 7d, and Subdivision 20”. As a result of a benchmark assessment in 2023, the 2023 stock assessment combined this with cod in Division 6a (West of Scotland), and subdivided the combined stock into three substocks: a Southern substock, a Northwestern substock, and a Viking substock. This MT assessment considers all three substocks.</p> <p>Cod in ICES Subarea 4, Divisions 6a and 7d, and Subdivision 20 is assessed relative to formal reference points, and for this reason was assessed under Category C. All three substocks are subjected to a regular and robust stock assessment. Biomass of the Northwestern and Viking substocks was considered in the 2023 stock assessment to be above the limit reference point; however biomass of the Southern substock was below the limit reference point. As the three substocks mix during the year, it is not possible to determine from which substock a particular catch originated; therefore the decision was taken, for the purposes of this MT assessment, to treat all three substocks as a single assessment unit with the characteristics of the most vulnerable stock. The byproduct was therefore considered to have failed the Category C assessment, and as per the MT assessment guidance was subsequently assessed under Category D.</p> <p>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.</p>



Cod in Subarea 4, Divisions 6a and 7d, and Subdivision 20, distribution of substocks at spawning time¹.

Fishery Assessment Peer Review Comments

The by-product fishery under assessment is the Atlantic cod (*Gadus morhua*) caught with trawls in ICES Subarea 4, Division 3a, 7d and Subdivision 20 (North Sea, Eastern English Channel and Skagerrak) in FAO area 27. The species is classified as LC by the IUCN in European waters. As indicated by the assessor, in the last (2023) stock assessment the stock in the North Sea was combined this with cod in Division 6a (West of Scotland), and subdivided into three substocks: a Southern substock, a Northwestern substock, and a Viking substock. This MT assessment considers all three substocks. These three (sub)stocks are managed relative to biomass-based reference points and they are assessed under category C.

In the 2023 stock assessment, biomass of the Northwestern and Viking substocks was considered to be above the limit reference point whereas the biomass of the Southern substock was below the limit reference point. As the three substocks mix during the year, it is not possible to determine from which substock a particular catch originated, and it is considered that all three substocks fail under category C. Following the MT assessment guidance they are then assessed under Category D.

¹ ICES (2023). Cod (*Gadus morhua*) in Subarea 4, divisions 6.a and 7.d, and Subdivision 20 (North Sea, West of Scotland, eastern English Channel, and Skagerrak). ICES Advice: Recurrent Advice. Report. <https://doi.org/10.17895/ices.advice.21840765.v1>

A Productivity Susceptibility Assessment was conducted leading to a Pass rating on Table D3.

Therefore, the peer review supports the auditor's recommendation to pass the Atlantic cod caught with trawls in ICES Subarea 4, Division 3a, 7d and Subdivision 20 (North Sea, Eastern English Channel and Skagerrak) 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 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 ²	CITES Appendix 1 ³
Cod	<i>Gadus morhua</i>	ICES Subarea 4, Division 7d, and Subdivision 20	Yes	C	Least Concern ⁴	No

² <https://www.iucnredlist.org/>

³ <https://cites.org/eng/app/appendices.php>

⁴ <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
<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>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 2023, was an age-based analytical assessments using catches and surveys in the model and the forecast. The assessment was substantially different to previous stock assessments as a result of the 2023 benchmarking of North Sea cod stocks. The 2023 ICES catch advice states that “The area corresponding to the North Sea, West of Scotland, the eastern English Channel, and the Skagerrak is now considered to contain three reproductively isolated substocks—defined as northwestern, Viking, and southern cod (Figure 2)—with separate spawning grounds and different biological characteristics (growth, sexual maturation)” (ICES 2023).</p> <p>All international catch data were incorporated into the stock assessment, plus discards. Fishery removals are included in the assessment process, therefore 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 2023 ICES catch advice provides an indication of the status of the stock relative to the formally established reference points for each substock. The catch advice summarises the stock status as follows:</p> <p>“The spawning-stock size is:</p> <ul style="list-style-type: none"> below $MSY B_{trigger}$, B_{pa}, and B_{lim} for the southern substock above $MSY B_{trigger}$, B_{pa}, and B_{lim} for the northwestern substock below $MSY B_{trigger}$ and between B_{pa} and B_{lim} for the Viking substock” <p>The advice also notes that “the substocks dynamically mix during quarters 2 to 4” and that “ICES is not in a position to provide area-specific catch advice” (ICES 2023). As catch in this area cannot be determined to be from a specific substock, a reasonable approach for the purposes of this MT assessment is to treat all three substocks according to the status of the most vulnerable. Therefore, as the southern substock is below the limit reference point, the byproduct fails to meet the requirements of this Category C assessment and should be assessed under Category D.</p>		
<p>References</p> <p>ICES (2023). Cod (<i>Gadus morhua</i>) in Subarea 4, divisions 6.a and 7.d, and Subdivision 20 (North Sea, West of Scotland, eastern English Channel, and Skagerrak). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.21840765.v1</p>		

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