



MarinTrust Standard V2

By-product Fishery Assessment, NOR10 *Cod (Gadus morhua), FAO 27, ICES 1,2*

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:	FAO 27, Atlantic Northeast
	Country of origin of the product:	Norway
	Stock:	ICES 1, 2. Norwegian coastal cod
Date	October 2023	
Report Code	NOR10	
Assessor	Blanca Gonzalez	
Country of origin of the product - PASS	Norway	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Pelagia Bodø Sildoljefabrikk, Pelagia Egersund Sildoljefabrikk, Pelagia Karmsund Fiskemel, Pelagia Måløy Sildoljefabrikk, Prima Protein AS, Scanbio Ingredients AS, TripleNine Vedde AS			
Country: Norway			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Blanca Gonzalez	Jose Peiro Crespo	0.4	Surveillance 2
Assessment Period	October 2023 – October 2024		

Scope Details	
Main Species	Cod (<i>Gadus morhua</i>)
Stock	ICES 1, 2. Norwegian coastal cod
Fishery Location	FAO 27, Atlantic Northeast
Management Authority (Country/ State)	Norway
Gear Type(s)	Gillnets, Danish seine, bottom trawl and longline
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Approve

Table 2. Assessment Determination

Assessment Determination
<p>Cod is a Least Concern species by the IUCN in European waters, it is not included in any CITES Appendixes, however, it was assessed as a category D species considering that there are not established reference points for the stock.</p> <p>Since 2021, the cod stock from ICES 1 and 2 was split in two units: 1) northern Norwegian coastal cod, and 2) Southern Norwegian coastal. The differentiation was based on the quality of the available data for the stock assessment and genetic studies, which allows the improvement of the fishery management. However, the ICES Arctic Fisheries Working Group (AFWG) 2023 scientific report indicates that for the northern stock it was not possible to set a Blim with the certainty required to use it as a basis for estimating reference points; while for the southern stock, mentions that no biological reference points are established except the SPR and F/M reference levels often referred to in literature, and the biomass index is a composite standardized CPUE index from the coastal reference fleet in areas 6 and 7 (ICES 2023).</p> <p>In the Productivity-Susceptibility Analysis (PSA) the cod was awarded an average productivity score of 1.71 and an average susceptibility score of 2.5, and it passed against Table D3, indicating that cod is not vulnerable to this fishery.</p> <p>The cod Byproduct meets the Marin Trust requirements and it should be approved for use as a raw material.</p> <p>ICES (2023). Arctic Fisheries Working Group (AFWG). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.23267150.v1</p>
Fishery Assessment Peer Review Comments
<p>The by-product fishery under assessment is the Atlantic Cod (<i>Gadus morhua</i>) gillnets, Danish seine, bottom trawl and longline fisheries in the Atlantic Northeast (FAO 27) ICES subareas 1 and 2. The species is classified as LC by the IUCN in European waters. The cod stock from ICES 1 and 2 was recently split in two units: 1) northern Norwegian coastal cod, and 2) Southern Norwegian coastal. The advice for both stocks is given by ICES. In both cases, no Blimit is provided, and a precautionary approach has been taken by the assessor (the stock has been assessed under category D, using a PSA analysis).</p> <p>In the Productivity-Susceptibility Analysis (PSA) the Atlantic cod awards an average productivity score of 1.71 and an average susceptibility score of 2.5, and therefore it passed category D.</p> <p>The peer review supports the auditor’s recommendation to pass the Atlantic cod gillnets, Danish seine, bottom trawl and longline fisheries in ICES subareas 1 and 2 (northern and southern Norwegian coastal cod) (FAO area 27), 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
<p>There are no concerns that requires attention from the on-site assessor.</p>

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>	ICES 1, 2. Norwegian coastal cod	No	D	Least Concern ³	No

¹ <https://www.iucnredlist.org/>

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

³ <https://www.iucnredlist.org/species/8784/45097319#assessment-information>

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		NA
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.
	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.
		Clause outcome:
<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>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>		
References		
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 (<i>Gadus morhua</i>)	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	3.6 ¹	1
	Average maximum age (years)	16.9 ¹	2
	Fecundity (eggs/spawning)	1,610,435 ¹	1
	Average maximum size (cm)	200 ¹	2
	Average size at maturity (cm)	55 ¹	2
	Reproductive strategy	Broadcast spawner ¹	1
	Mean trophic level	4.1 ¹	3
	Average Productivity Score		1.71
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	>30% overlap ¹⁻³	3
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	High overlap with fishing gear ¹	3
	Selectivity of gear type	Individuals < size at maturity are rarely caught ²	1
	Post-capture mortality	Retained ²	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>		
References			
1 https://www.fishbase.se/summary/Gadus-morhua.html			
2 ICES (2023). Stock annex: Cod (<i>Gadus morhua</i>) in subareas 1 and 2, north of 67°N (Norwegian Sea and Barents Sea), northern Norwegian coastal cod. ICES Stock Annexes. Report. https://doi.org/10.17895/ices.pub.24411667.v2			
3 https://www.fao.org/fishery/en/area/27/en			
<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			
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	