



## MarinTrust Standard V2

### By-product Fishery Assessment *Report Template (Anglerfish in Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat))*

**MarinTrust Programme**

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**Table 1 Application details and summary of the assessment outcome**

Fishery Under Assessment	Species:	Anglerfish <i>Lophius budegassa/ Lophius piscatorius</i>
	Geographical area:	FAO Area 27 Northeast Atlantic
	Country of origin of the product:	Norway
	Stock:	Anglerfish in ICES Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)
Date	23 May 2022	
Report Code	NOR07	
Assessor	Léa Lebechnech	
Country of origin of the product - PASS	Norway	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Prima Protein			
Country: Norway			
Email address: post@primaprotein.as		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Léa Lebechnech	Géraldine Criquet	0,5 days	Initial
Assessment Period	To May 2022		

Scope Details	
Main Species	Anglerfish ( <i>Lophius budegassa/ Lophius piscatorius</i> )
Stock	FAO Area 27 Northeast Atlantic Ocean
Fishery Location	Anglerfish in ICES Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)
Management Authority (Country/ State)	Norway / European Union
Gear Type(s)	Demersal trawls, Gillnets, Norway lobster trawls
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's determination of approval
Recommendation	APPROVE

## Table 2. Assessment Determination

Assessment Determination
<p>If any species is categorised as Endangered or Critically Endangered on IUCN's Red List, or if it appears in the CITES appendices, it cannot be approved for use as Marin Trust raw material.</p> <p>Anglerfish (<i>Lophius budegassa</i>, <i>Lophius piscatorius</i>) is neither listed as Endangered or Critically Endangered on IUCN's Red List ("least concern"), nor listed in CITES appendices; therefore, Anglerfish is eligible for approval for use as Marin Trust by-product raw material.</p> <p>ICES is aware of a precautionary management plan: an EU multiannual management plan, MAP, agreed in 2018 by the EU, which is one of the relevant management authorities for this stock. However, there is no agreed shared management plan with the UK or Norway for this stock, and ICES provides advice according to ICES precautionary approach. ICES recommends implementing the management at the stock level.</p> <p>As the reference points are undefined, the stock cannot be assessed as Category C.</p> <p>Consequently, this fishery has been assessed under Category D.</p> <p>The Anglerfish stock complex is composed of 2 anglerfish species (<i>Lophius budegassa</i> and <i>Lophius piscatorius</i>), so a PSA has been conducted for each species. The 2 species failed the PSA risk rating from Table D3.</p> <p>Consequently, they both have been further assessed in Clause D4 and have passed it.</p> <p>Therefore, Anglerfish in ICES Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat) is <b>APPROVED</b> for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified anglerfish in ICES Subareas 4 and 6, and Division 3.a as Category D. Although the anglerfish stock complex is subject to a precautionary management plan, reference points are undefined defined.</p> <p>A PSA was conducted for each species. I agree with the score assigned for each productivity and susceptibility attribute. With an average productivity score of 2 and an average susceptibility score of 2.5, both species did not pass the PSA and were further assessed in Claude D4.</p> <p>Reasonable measures are taken to minimise the impacts of the fishery. An annual TAC is agreed and can considered to be in line with the ICES advice. There is no substantial evidence that the fishery has a significant negative impact on the species., Norway catches representing less than 10% of the total catches for the 2018-2020 period. Therefore, it passes Clause D4.</p> <p>Therefore, Anglerfish in ICES Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat) should be approved for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products.</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 <sup>1</sup>	CITES Appendix 1 <sup>2</sup>
Anglerfish	<i>Lophius budegassa</i> / <i>Lophius piscatorius</i>	Anglerfish in ICES Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	Norway / European Union	D	LC	No

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

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

## CATEGORY C SPECIES

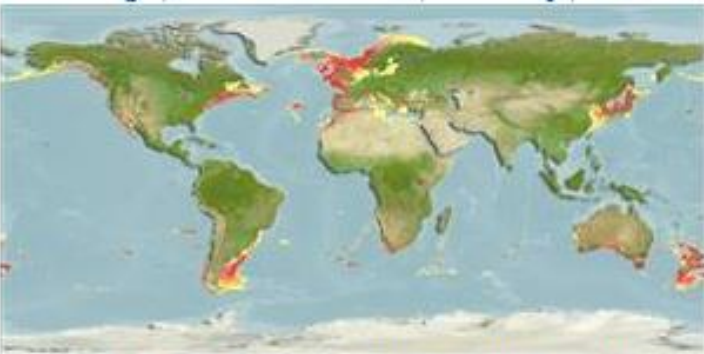
In a by-product assessment, Category C species are those which are subject to a species-specific management regime and are usually targeted species in fisheries for human consumption.

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		
<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.
	<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.
		<b>Clause outcome:</b>
<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><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>		
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.

<b>D1</b>	<b>Species Name</b>	Anglerfish <i>Lophius piscatorius</i>	
	<b>Productivity Attribute</b>	<b>Value</b>	<b>Score</b>
	Average age at maturity (years)	8 (females) / 5 (males)	3
	Average maximum age (years)	12	2
	Fecundity (eggs/spawning)	300,000 to 2,800,000 eggs	1
	Average maximum size (cm)	110	2
	Average size at maturity (cm)	50	2
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	4.5	3
	<b>Average Productivity Score</b>		<b>2</b>
	<b>Susceptibility Attribute</b>	<b>Value</b>	<b>Score</b>
	Availability (area overlap)	<25% of stock occurs in the area fished and global distribution	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	Depth range 20-1000m. Habitat preference of species makes it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	3
	Selectivity of gear type	Species > 2 times mesh size or up to 4 m length	3
	Post-capture mortality	Most dead or retained trawl tow > 3 hours	3
	<b>Average Susceptibility Score</b>		<b>2.5</b>
	<b>PSA Risk Rating (From Table D3)</b>		<b>TABLE D4</b>
	<b>Compliance rating</b>		<b>TABLE D4</b>
	<b>Further justification for susceptibility scoring (where relevant)</b>		
	<p>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision.</p> <ul style="list-style-type: none"> <li>- According to the distribution map below, it can be considered that less than 25% of stock occurs in ICES Subareas 4 and 6, and Division 3.a</li> </ul>		
			
<p>This map was computer-generated and has not yet been reviewed.  <i>Lophius piscatorius</i> AquaMaps Data sources: GBIF OBIS</p>			

- The species lives at depths of 0-1000m, rarely dropping below the continental slope. They mostly lie half-buried in the sediment (sand or mud) as they wait for prey as low as the continental shelf. The fishing gears used are mainly demersal trawls, gillnets. It can then be considered that habitat preference of the species makes it highly likely to encounter trawl gear and that there is a high overlap with trawl fishing gear.
- As regards as selectivity of fishing gear, given the types of fishing gears used, the species measure more than two times their mesh size and less than 4m.
- As regards as post-capture mortality, knowing that angler being a commercially valuable fish and without any more information found, it can be considered that this species will be mostly dead or retained by fishing gear during more than three hours.

### References

Fishbase. *Lophius piscatorius* Linnaeus, 1758, Angler:

<https://fishbase.mnhn.fr/Summary/SpeciesSummary.php?ID=716&AT=Anglerfish>

ICES CM 2001/J:27. C. Laurenson., I.G. Priede., L.W. Bullough., I.R. Napier. Where are the mature anglerfish? – The population biology of *Lophius piscatorius* in Northern European waters: [chrome-](#)

<extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ices.dk/sites/pub/CM%20Documents/2001/J/J2701.pdf>


ICES CM 2007/K:07. C. Laurenson., L. H. Ofstad. Biology of anglerfish *Lophius piscatorius* in Faroese waters: [chrome-](#)

<extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ices.dk/sites/pub/CM%20Documents/CM-2007/K/K0707.pdf>

Coleman, K. 2019. "*Lophius piscatorius*" (On-line), Animal Diversity Web. Accessed May 24, 2022 at

[https://animaldiversity.org/accounts/Lophius\\_piscatorius/](https://animaldiversity.org/accounts/Lophius_piscatorius/)

Standard clauses 1.3.2.2

<b>D1</b>	<b>Species Name</b>	<b>Anglerfish (Blackbellied angler) <i>Lophius budegassa</i></b>	
	<b>Productivity Attribute</b>	<b>Value</b>	<b>Score</b>
	Average age at maturity (years)	7 (females) / 5 (males)	3
	Average maximum age (years)	10	2
	Fecundity (eggs/spawning)	NA but >10 000	1
	Average maximum size (cm)	65	2
	Average size at maturity (cm)	59 (females) / 43 (males)	2
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	4.4	3
	<b>Average Productivity Score</b>		<b>2</b>
	<b>Susceptibility Attribute</b>	<b>Value</b>	<b>Score</b>
	Availability (area overlap)	<25% of stock occurs in the area fished and global distribution	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	From shallow, inshore waters to 650m depth (usually 100-500m). Habitat preference of species makes it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	3
	Selectivity of gear type	Species > 2 times mesh size or up to 4 m length	3
	Post-capture mortality	Most dead or retained trawl tow > 3 hours	3
	<b>Average Susceptibility Score</b>		<b>2.5</b>
	<b>PSA Risk Rating (From Table D3)</b>		<b>TABLE D4</b>
	<b>Compliance rating</b>		<b>TABLE D4</b>
	<p><b>For Productivity attribute:</b> There is no data on the number of eggs, but it can be reasonably considered that <i>Lophius budegassa</i>, as <i>Lophius piscatorius</i>, produces more than 10 000 eggs during spawning.</p> <p><b>Further justification for susceptibility scoring (where relevant)</b> <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision.</i></p> <ul style="list-style-type: none"> <li>- According to the distribution map below, it can be considered that less than 25% of stock occurs in ICES Subareas 4 and 6, and Division 3.a</li> </ul>		
			
	<p>This map was computer-generated and has not yet been reviewed. <i>Lophius budegassa</i> AquaMaps Data sources: GBIF OBIS</p>		



	<ul style="list-style-type: none"> <li>- The species lives mostly until 650m depth. The individuals mostly lie half-buried in the sediment (sand or mud) as they wait for prey as low as the continental shelf. The fishing gears used are mainly demersal trawls, gillnets. It can then be considered that habitat preference of the species makes it highly likely to encounter trawl gear and that there is a high overlap with trawl fishing gear.</li> <li>- As regards as selectivity of fishing gear, given the types of fishing gears used, the species measure more than two times their mesh size and less than 4m.</li> <li>- As regards as post-capture mortality, knowing that angler being a commercially valuable fish and without any more information found, it can be considered that this species will be mostly dead or retained by fishing gear during more than 3 hours.</li> </ul>
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<p><b>References</b></p> <p>Fishbase. <i>Lophius budegassa</i> Spinola, 1087, Blackbellied angler:  <a href="https://fishbase.mnhn.fr/summary/Lophius-budegassa.html">https://fishbase.mnhn.fr/summary/Lophius-budegassa.html</a></p> <p>ICES. 2021. Anglerfish (<i>Lophius budegassa</i>, <i>Lophius piscatorius</i>) in Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, anf.27.3a46. <a href="https://doi.org/10.17895/ices.advice.7723">https://doi.org/10.17895/ices.advice.7723</a></p>	
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<p><i>Standard clauses 1.3.2.2</i></p>	
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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.

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		Anglerfish <i>Lophius piscatorius</i> , <i>Lophius budegassa</i>	
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.				PASS
D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.				PASS
<b>Outcome:</b>					Pass
<p><b>Evidence</b></p> <p><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>            An EU multiannual management plan (MAP) has been agreed by the EU for this stock (EU, 2018). The MAP stipulates that when the FMSY ranges are not available, fishing opportunities should be based on the best available scientific advice. There is no agreed shared management plan with the UK or Norway for this stock, and ICES provides advice for total catches according to ICES precautionary approach.            In 2021, the agreed TAC has been 700 tons higher than the advice. However, between 2017 and 2020, the agreed TAC was in line with ICES catch advice.</p> <p><i>Therefore, the potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.</i></p> <p><b>D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.</b>            Total catches of Norway for the 3 last years (2018, 2019, 2020) in Subareas 4 and 6, and Division 3.a, where of 4 084 tonnes. They represent only 6.6% of the total catches made in the three zones during the same period.</p> <p><i>Therefore, it can reasonably be considered that there is no substantial evidence that the fishery has a significant negative impact on the species.</i></p>					
<p><b>References</b></p> <p>ICES. 2021. Anglerfish (<i>Lophius budegassa</i>, <i>Lophius piscatorius</i>) in Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, anf.27.3a46. <a href="https://doi.org/10.17895/ices.advice.7723">https://doi.org/10.17895/ices.advice.7723</a></p>					
<b>Links</b>					
<b>MarinTrust Standard clause</b>				1.3.2.2, 4.1.4	

FAO CCRF	7.5.1
GSSI	D.5.01