



## MarinTrust Standard V2

# By-product Fishery Assessment *Lemon sole (*Microstomus kitt*) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)*

**MarinTrust Programme**

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

Fishery Under Assessment	Species:	Lemon sole ( <i>Microstomus kitt</i> )
	Geographical area:	FAO 27 - northern Atlantic
	Country of origin of the product:	Denmark
	Stock:	Lemon sole in ICES in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)
Date	21 <sup>st</sup> September 2023	
Report Code	DNK32	
Assessor	Ana Elisa Almeida Ayres	
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): FF Skagen A/S, Thyborøn			
Country: Denmark			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		NSF	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval
Ana Elisa Almeida Ayres	Matthew Jew	0.5	Surveillance 1
Assessment Period	October 2023 – October 2024		

Scope Details	
Main Species	Lemon sole ( <i>Microstomus kitt</i> )
Stock	Lemon sole in ICES in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)
Fishery Location	FAO 27 - northern Atlantic
Management Authority (Country/ State)	European Union Common Fisheries Policy
Gear Type(s)	Demersal trawl, otter trawl, beam trawl, seine, gillnet
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's recommendation
Recommendation	Approved

**Table 2. Assessment Determination**

Assessment Determination
<p>If any species is categorised as Endangered or Critically Endangered on Union for Conservation of Nature's Red List of Threatened Species - IUCN's Red List, or if it appears in the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES appendices, it cannot be approved for use as Marin Trust raw material. Lemon sole (<i>Microstomus kitt</i>) is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, lemon sole (<i>Microstomus kitt</i>) is eligible for approval for use as Marin Trust by-product raw material.</p> <p>The EU multiannual plan (MAP) for stocks in the North Sea and adjacent waters applies to bycatches of this stock. Fisheries removals are considered in the stock assessment and the stock has been above proxy biomass reference points, so clauses C1.1 and C1.2 are met.</p> <p>Therefore, lemon sole (<i>Microstomus kitt</i>) in ICES in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel) is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified lemon sole (<i>Microstomus kitt</i>) in ICES in subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel) as Category C, the stock is subject to a specific management regime and reference points (or proxies) are defined.</p> <p>Fishery removals are considered in the stock assessment process. The most recent stock assessment shows that the stock is above <math>I_{trigger}</math> (stock size indicator proxy). Therefore, the stock is considered to have biomass above the limit reference point (or proxy).</p> <p>Lemon sole (<i>Microstomus kitt</i>) in ICES in subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel) passes both clauses (C1.1 and C1.2) and therefore should be approved under the MarinTrust Standard v2.3.</p>
Notes for On-site Auditor
N/A

## 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>
Lemon sole	<i>Microstomus kitt</i>	Lemon sole in ICES in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)	European Union Common Fisheries Policy	C	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		Lemon sole ( <i>Microstomus kitt</i> )	
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.	Yes
	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.	Yes
			Clause outcome: Pass
<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>According to ICES (2023):</p> <p>“ICES advice on fishing opportunities</p> <p>ICES advises that when the MSY approach is applied, catches in 2024 should be no more than 2 072 tonnes. The use of a combined species TAC for lemon sole and witch flounder prevents effective control of the single-species exploitation rates and could lead to the overexploitation of either species. ICES advises that management should be implemented at the species level and cover the entire stock distribution area (Subarea 4 and divisions 3.a and 7.d).</p> <p>(..)</p> <p>Input data</p> <p>Commercial catches (international landings and discards), two survey indices (IBTS Q1 [G1022] for 2007–2022 and combined index for IBTS Q3 [G2829] and BTS Q3 [B2453] for 2005–2022), and fixed maturity estimates and annual stock weight-at-age data from three surveys (IBTS Q1 [G1022], IBTS Q3 [G2829], and BTS Q3 [B2453]).</p> <p>Discards and bycatch</p> <p>Discarding is known to take place, and discards have been quantified for 2002–2022 (rate for 2022 = 18.6%)”.</p> <p>Latest data of catches is shown in Figure 1 below.</p>			

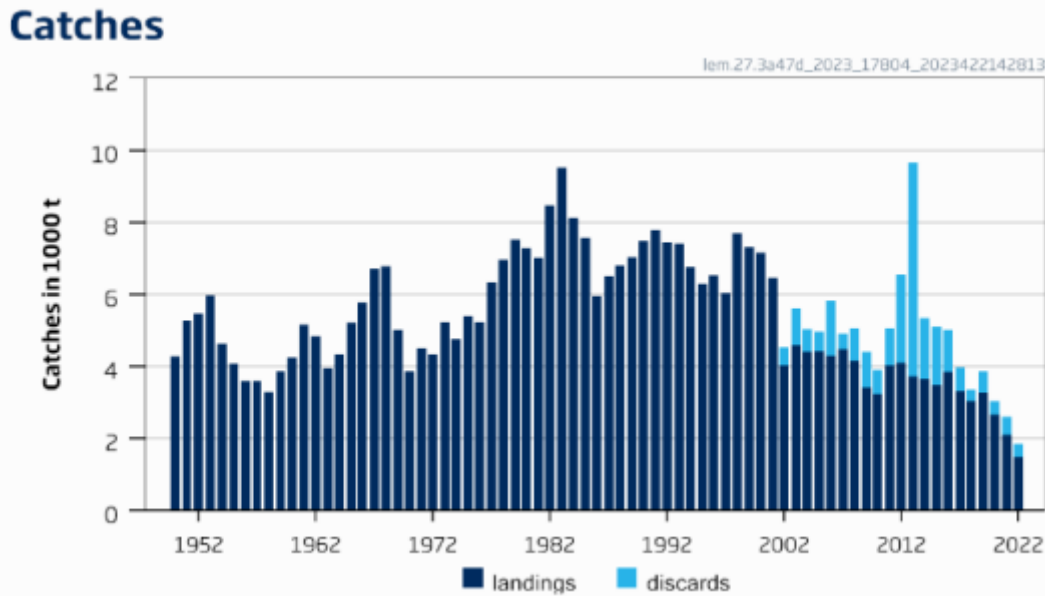
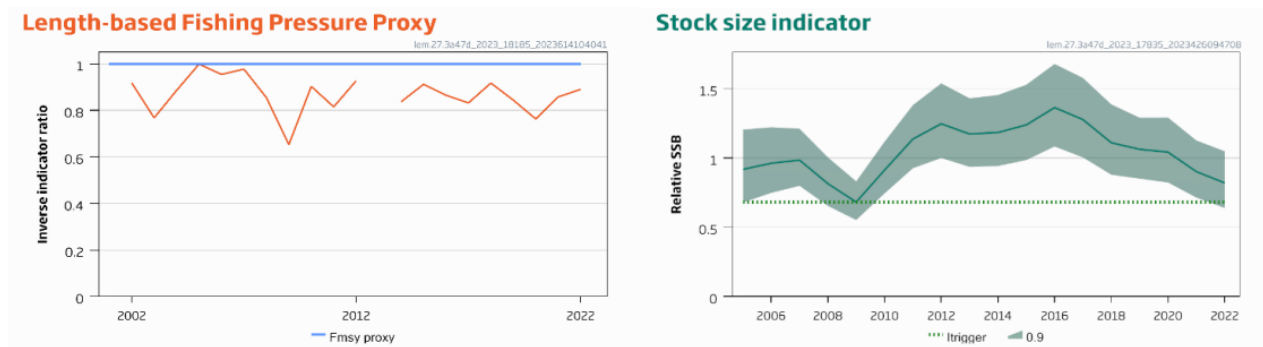


Figure 1. Catches of lemon sole in subarea 4 and divisions 3.a and 7.d (ICES, 2023).

Fishery removals of the species in the fishery under assessment are included in the stock assessment. C.1.1 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.

Fishing pressure on the stock is below the fishing mortality at maximum sustainable yield -  $F_{MSY\ proxy}$ , and the stock size indicator is above the Index trigger value -  $I_{trigger}$  (Figure 2). There is no sign of overexploitation.



**Figure 1** Lemon sole in Subarea 4 and divisions 3.a and 7.d. Summary of the stock assessment. Discards are available since 2002. Indicator ratio  $L_F = M/L_{mean}$  (inverse of the indicator ratio,  $f$ ) from the length-based indicator (LBI) method is used for the evaluation of the exploitation status. The proxy fishing pressure is less than that corresponding to the  $F_{MSY\ proxy}$  ( $L_F = M$ ) when the indicator ratio value is lower than 1 (shown by the horizontal blue line). Stock size indicator expressed as relative SSB based on survey based assessment (SURBAR).

Figure 2. Source: (ICES, 2023).

Relative biomass spawning - SSB is fluctuating around the mean stock indicators and it could be assumed that the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy). C1.2. is met.

References

ICES. 2023. Lemon sole (*Microstomus kitt*) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, lem.27.3a47d. <https://doi.org/10.17895/ices.advice.21840915>

**Links**

<b>MarinTrust Standard clause</b>	1.3.2.2
<b>FAO CCRF</b>	7.5.3
<b>GSSI</b>	D.3.04, D5.01