



RESPONSIBLE
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IFFO RS
Global Standard for Responsible Supply
of Marine Ingredients

IFFO RS Limited

T: +44 (0) 2030 539 195
E: Standards@iffors.com
W: www.iffors.com

Unit C, Printworks | 22 Amelia Street
London, SE17 3BZ | United Kingdom



**Global Standard for
Responsible Supply
of Marine Ingredients**
Fishery Assessment
Methodology and
Template Report V2.0



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Fishery Under Assessment	Lemon sole (<i>Microstomus kitt</i>) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)
Date	April 2020
Report Code	2020-69
Assessor	Vito Romito
Stock Pass	Pass
Stock Fail	

Application details and summary of the assessment outcome				
Name: Pelagia Ireland and UK				
Address:				
Country:		Zip:		
Tel. No.:		Fax. No.:		
Email address:		Applicant Code:		
Key Contact:		Title:		
Certification Body Details				
Name of Certification Body:		SAI Global Ltd		
Assessor	Peer Reviewer	Assessment Days	Surveillance	By-product
Vito Romito	Virginia Polonio	0.5	2	By product
Assessment Period	2020			

Scope Details	
Management Authority (Country/State)	EU/CFP
Main Species	Lemon sole (<i>Microstomus kitt</i>)
Stock:	Lemon sole in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)
Fishery Location	FAO 27
Gear Type(s)	Beam, Otter, Gillnet

Outcome of Assessment	
Peer Review Evaluation	APPROVED
Recommendation	APPROVED

Assessment Determination

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 IFFO RS raw material. Lemon sole (*Microstomus kitt*) does not appear as Endangered or Critically Endangered on IUCN's Red List, nor does it appear in CITES appendices (both sites assessed on the 24th of April 2020); therefore, lemon sole is eligible for approval for use as IFFO RS by-product raw material.

One stock forms part of this assessment:

1) Lemon sole (*M. kitt*) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)

Fishery removals of the stock are considered in the various stock assessment processes so the stock **PASSES** Clause C1.1.

For lemon sole in the assessment area the most recent estimated spawning stock biomass (SSB) is likely to be above Blim and removals are not considered to be negligible therefore, the stock **PASSES** Clause C1.2.

In order to be approved, the stock assessed must pass both Clause C1.1 and C1.2; therefore:

1) Lemon sole (*M. kitt*) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel) is **APPROVED** by SAI Global assessors for the production of fishmeal and fish oil under the current IFFO RS v 2.0 by-products standard.

Peer Review Comments

Despite the fact that the last ICES report it was advised that improved information on age and length distributions in landings and discards, from most countries participating in the fishery, would be required in order to conduct a fully analytical assessment, the stock is below proxy and removals are considered in order to manage the species.

Therefore the PR recommends lemon sole in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel) is approved under the current IFFO RS v 2.0 by-products standard.

Notes for On-site Auditor

HOW TO COMPLETE THIS ASSESSMENT REPORT

By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.

2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the 'target' or 'main' species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the 'bycatch' or 'minor' species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The 'stock' column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The 'management' column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it **cannot** be approved for use as an IFFO RS raw material. This applied to whole fish as well as by-products.

TYPE 1 SPECIES (Representing 95% of the catch or more)

Category A: Species-specific management regime in place.

Category B: No species-specific management regime in place.

TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)

Category C: Species-specific management regime in place.

Category D: No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Lemon sole	<i>Microstomus kitt</i>	Lemon sole (<i>Microstomus kitt</i>) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)	N/A	EU/FCP	C

CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment. 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. A Category C species does not meet the minimum requirements of clause C1 should be re-assessed as a Category D species.

Species Name		
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. PASS
Clause outcome:		PASS
C1.1 Evidence		
This assessment covers lemon sole from the areas outlined in Figure 1 below.		

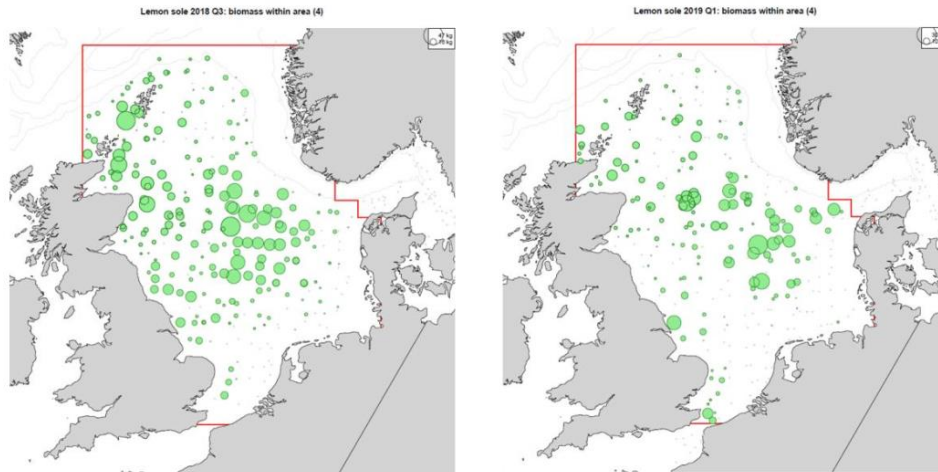


Figure 1. Lemon sole in Subarea 4, and divisions 3.a and 7.d. Distribution of lemon sole in the North Sea derived from IBTS Q3 2018 (left) and IBTS Q1 2019 (right). The sizes of the circles are proportional to the square root of the estimated weight of lemon sole caught in each haul (source ICES 2019b).

Input data used in the survey trends-based assessment (SURBAR; ICES, 2019) for this species includes commercial catches (international landings and discards), three survey indices (IBTS Q1 and Q3, BTS Q3), fixed maturity estimates, and annual weight-at-age data from the surveys. Discarding is known to take place and discards have been quantified for 2002–2018 (average rate for 2016–2018 = 15.72%) (ICES 2019a).

Consequently, fishery removals of *M.Kitt* in the fishery under assessment are included in the stock assessment process so the stock **PASSES** clause C1.1.

C1.2

Evidence

Spawning-stock biomass (SSB) increased from 2007 to 2012, and has remained stable since, albeit with a small decline in 2018. Recruitment has shown a mostly downwards trend since a peak in 2011. Total mortality Z3–5 has fluctuated without trend.

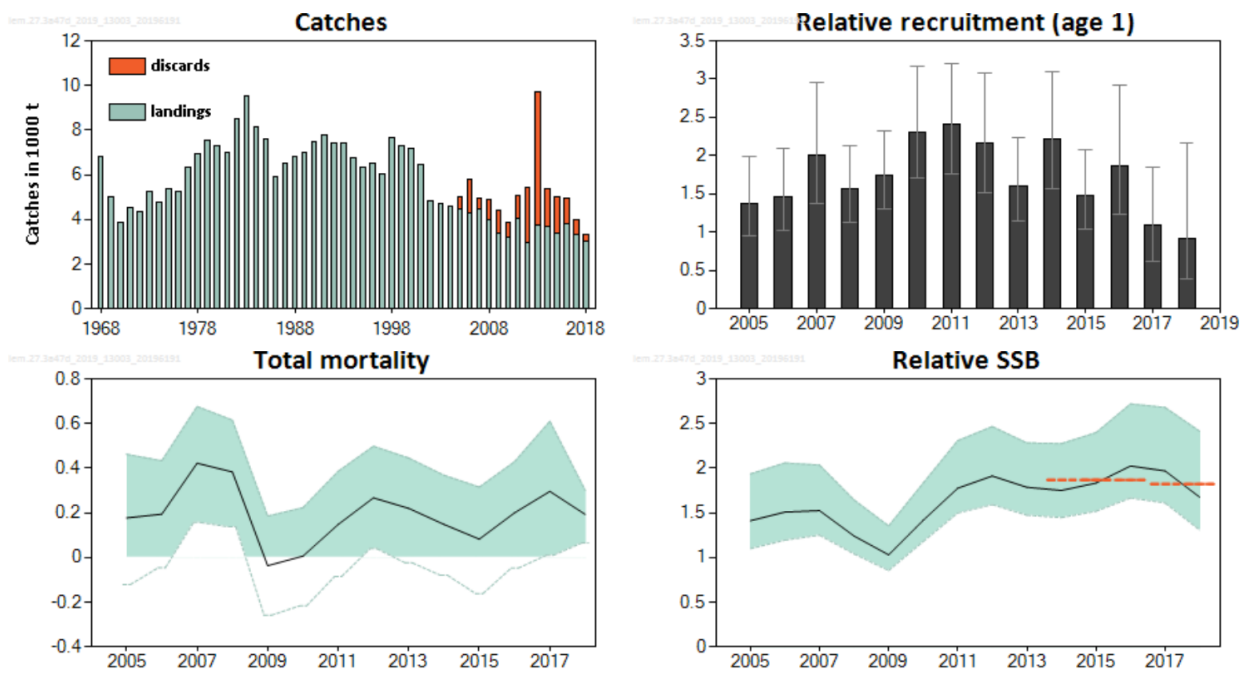


Figure 2. Lemon sole in Subarea 4 and divisions 3.a and 7.d. Summary of the stock assessment. Left: ICES estimated landings and discards (2005–2018 only). Upper right: SURBAR-estimated relative recruitment with 90% confidence intervals. Lower left: SURBAR-estimated mean Z over ages 3-5, with 90% confidence intervals. Lower right: SURBAR-estimated relative SSB with 90% confidence intervals, including horizontal lines showing the DLS 3.2 decision rule.

This species is assessed and managed through fishing mortality-based reference point proxies.

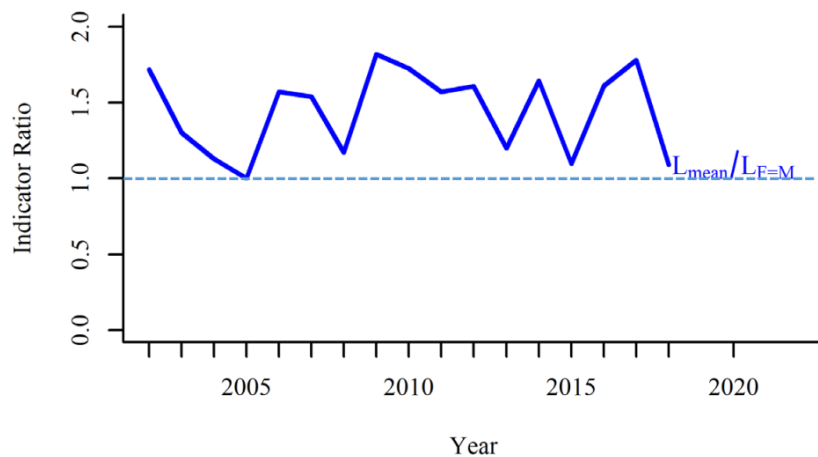


Figure 3. Lemon sole in Subarea 4 and divisions 3.a and 7.d. The index ratio $L_{mean} / L_F = M$ from the length-based indicator (LBI; ICES 2017) method is used for the evaluation of the exploitation status. The exploitation status is below the FMSY proxy when the index ratio value is higher than 1 (shown by a dotted line).

Since exploitation is considered to be below the FMSY proxy and the Flim proxy, and relative SSB is just below the all-time high, it is likely that the stock is above Blim.

References

CITES. 2020. CITES Appendices I, II and III valid from 26 November 2019. Convention on International Trade in Endangered Species of Wild Fauna and Flora. Accessed 24 April 2020.

ICES. 2019a. 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, 2019. ICES Advice 2019, lem.27.3a47d, <https://doi.org/10.17895/ices.advice.4862>

ICES. 2019b. Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK). ICES Scientific Reports. 1:7. <http://doi.org/10.17895/ices.pub.5402>

Monroe, T., Costa, M., Nielsen, J., Herrera, J. & de Sola, L. 2015. *Microstomus kitt*. The IUCN Red List of Threatened Species 2015: e.T18227047A45790333. Downloaded on 24 April 2020.

Standard clauses 1.3.2.2