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

Fishery Under Assessment	**Horse mackerel *Trachurus Trachurus* Norway**
Date	**February 2019**
Assessor	**V.Polonio**

Application details and summary of the assessment outcome				
Name: Pelagia AS- Egersund Sildoljefabrikk. IFFO127e. 13/03/2018. Pelagia AS- Bodo Sildoljefabrikk AS- IFFO127c. 09/03/2018. Pelagia AS- Karmsund Fiskemel AS. IFFO127b. 12/03/2018. Vedde AS. IFFO135. 14.07.2020; Karmsund Protein IFFO199				
Address:				
Country: Norway		**Zip:**		
Tel. No.:		**Fax. No.:**		
Email address:		**Applicant Code**		
Key Contact:		**Title:**		
Certification Body Details				
Name of Certification Body:		**SAI Global Ltd**		
Assessor Name	**Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/Re-approval**	**Whole fish/ By-product**
V. Polonio	J. Daly	1	Surveillance 2	By-product
Assessment Period	2018			

Scope Details	
Management Authority (Country/State)	Norway
Main Species	Horse mackerel (*Trachurus trachurus*)
Fishery Location	North East Atlantic (NEA)
Gear Type(s)	Trawl/Purse seine
Outcome of Assessment	
Overall Outcome	Pass
Clauses Failed	None
Peer Review Evaluation	Approve by-product
Recommendation	Approve

Assessment Determination

Horse mackerel is taken in a variety of fisheries, generally for the human consumption market, with the smallest sizes (juveniles) destined for the Japanese market and adult fish destined mostly for African markets. The minimum landing size of horse mackerel (EU fleet) is 15cm (10% undersized allowed in the catches). In Norwegian waters there is no quota but existing regulations on bycatch proportions as well as a general discard prohibition (for all species) apply. Not all countries provide data on discards, but discards are considered negligible (at 3%).

There is a robust fishery management framework at both EU and Norway levels, which is applied specifically to the horse mackerel stock in the assessment area (NEA). While the stock is currently at its historical low, ICES (2018) advice is for a substantial increase in catches compared to 2017 due to a revision of biomass estimates. While a mismatch between management areas and ICES advice resulted in an overshoot of advised catch levels prior to 2007, since 2012 (up to 2014) catches have been below the agreed TAC'S reflecting fishers best practice (ICES, 2014). Fishery removals of the species in the fishery under assessment are included in the stock assessment process.

Given recent higher recruitments, the stock is predicted to increase in 2019 to 8% above the current historical low (SSB_{2017}). This increase will continue if the 2018 advice is followed (assuming SSB_{2020} is 13% higher than SSB_{2017}).

Reference points were revised in March 2017. B_{lim} and B_{pa} were derived from the B_{loss} that corresponded to SSB in 2015. The subsequent updated assessments in 2017 and 2018 rescaled upwards biomass estimates. Advice based on the updated 2018 assessment would result in similar level of catches (i.e. ~10% lower catches). The increased advice is mainly because the stock size is increasing.

Due to the fact that the trends have shown a slightly increasing, catch advice for 2019 is 24% higher than that for 2018. This is due to an upward revision in the perception of the stock biomass from the assessment, combined with the results of the short-term forecast which includes an increase in biomass to above MSY $B_{trigger}$ and hence no reduction in F to be applied based on the ICES F_{MSY} advice rule. The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy)

The species is categorised as vulnerable by IUCN Red list; the population trend was decreasing until the biomass estimates were upscaled.

The assessment team recommends the approvals of this by- product against IFFO RS v 2.0 by-products standard.
Peer Review Comments
Agree
Notes for On-site Auditor

Note: This table should be completed for whole fish assessments only.

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A			A1	
			A2	
			A3	
			A4	
Category B				
Category C	Horse mackerel (*Trachurus trachurus*)	N/A	Pass	
Category D				

[List all Category A and B species. List approximate total %age of landings which are Category C and D species; these do not need to be individually named here]

HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** of the minimum requirements.

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
Horse mackerel	*Trachurus trachurus*	EU/Norway NEA	N/A	EU/Norway	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		**Horse mackerel** ***Trachurus trachurus***	
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**

Evidence

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.

The species has a strong management system and all catches are taken into account to define the stock status. There is a TAC set up for all countries member in EU, the EU TAC – which is also the expected catch.

The catches since 2007 – with few exceptions – have been below the total TAC (EU TAC plus national quotas of other countries) and closer to the EU TAC. Commercial catches, international catches, length and age data from catch sampling and three survey indices (Triennial egg survey index (1992–2016); IBTS recruitment index; PELACUS acoustic biomass index) are taken into account in the stock assessment.

Length frequency distribution from the PELACUS survey are also included and the constant maturity at age and natural mortalities are constantly defined at 0.15. Therefore, the assessment team can conclude that the fishery removals are included in the stock assessment process and **clause C1.1 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.

The stock and the fishery are very dependent on occasional high recruitments. After a series of low recruitments, the estimates since 2014 are above average (1983–2017). SSB has been declining since 2007 and had been around MSY Btrigger since 2014. Fishing mortality has decreased since 2013 and is currently below F_{MSY}. **Figure 1** shows the results of the last assessment (ICES 20180:

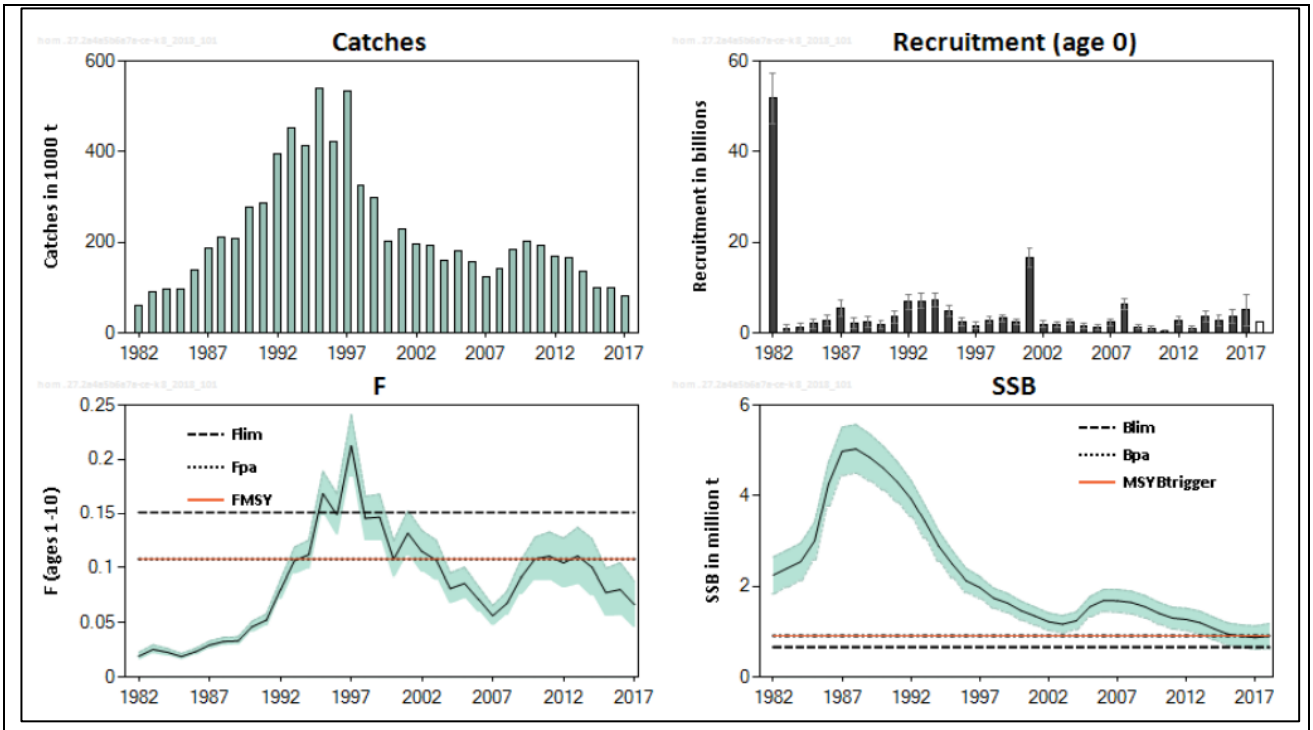

Figure 1. Horse mackerel in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a–c, and 7.e–k. Summary of the stock assessment. Plots show 95% confidence intervals (shaded area). Assumed recruitment value for 2018 is unshaded. Source. ICES advice **R1**

ICES assesses that fishing pressure on the stock is below F_{MSY} and Fpa and Flim; and spawning stock size is below MSY $B_{trigger}$ and between Bpa and Blim. **Table 1** shows the results from the last assessment of the reference points established for this species:

Table 1. Horse mackerel in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a–c, and 7.e–k. State of the stock and fishery relative to reference points. Source. ICES advice **R1**

		Fishing pressure				Stock size			
		2015	2016	2017		2016	2017	2018	
Maximum sustainable yield	F_{MSY}	✓	✓	✓	Below	MSY $B_{trigger}$	✗	✗	✗ Below trigger
Precautionary approach	F_{pa},F_{lim}	✓	✓	✓	Harvested sustainably	B_{pa},B_{lim}	o	o	o Increased risk
Management plan	F_{MGT}	–	–	–	Not applicable	B_{MGT}	–	–	– Not applicable

Following the results shown above the assessment team can conclude that the species is around limits, however recruitment has not been high in recent years and **clause C1.2 is met.**

References

R1 Horse mackerel (*Trachurus trachurus*) in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a-c, and 7.e-k (the Northeast Atlantic) ICES Advice on fishing opportunities, catch, and effort. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/hom.27.2a4a5b6a7a-ce-k8.pdf

R2 ICES (2014) Report of the ICES Advisory Committee, Western horse mackerel (*Trachurus trachurus*) (Divisions IIa, IVa, Vb, VIa, VIIa-c,e-k, VIIIa-e) Http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2014/2014/hom-west.pdf

R3 IUCN- https://www.iucnredlist.org/species/198647/43157137

R4 Fishsource Horse mackerel NE Atlantic https://www.fishsource.org/stock_page/2194

Standard clauses 1.3.2.2