MarinTrust RS V2.0

BYPRODUCT FISHERY ASSESSMENT TEMPLATE REPORT

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TABLE 1 APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME

Fishery Under Assessment	**Species:**	**Ling *Molva molva***
	Geographical area:	FAO Area 27 Atlantic Northeast
	Country of origin of the product:	FRANCE
	Stock:	Ling in ICES Divisions 3a and 4a, and in Subareas 6, 7, 8, 9, 12, and 14 (Northeast Atlantic and Arctic Ocean)
Date	November 2020	
Report Code	2020-124	
Assessor	Virginia Polonio	
Country of origin of the product - PASS	France	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Name:			
Address:			
Country: France		**Zip:**	
Tel. No.:		**Fax. No.:**	
Email address:		**Applicant Code:**	
Key Contact:		**Title:**	
Certification Body Details			
Name of Certification Body: SAI Global			
Assessor	**Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/ Re-approval**
Virginia Polonio	Géraldine Criquet	0.5	Initial
Assessment Period	November 2020		

Scope Details	
Main Species	Ling (*Molva molva*)
Stock	ICES subareas 6–9, 12, and 14, and in divisions 3.a and 4.a
Fishery Location	FAO Area 27 Atlantic Northeast
Management Authority (Country/ State)	EU/Common Fisheries Policy Direction des Pêches Maritimes et de l'Aquaculture (DPMA)
Gear Type(s)	Longline, trawl, gillnet
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's determination
Recommendation	**APPROVED**

TABLE 2. ASSESSMENT DETERMINATION

Assessment Determination
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 IFFO RS raw material. Ling does not appear as Endangered or Critically Endangered on the IUCN Red List, nor does it appear in the CITES appendices; therefore, ling is eligible for approval for use as IFFO- RS raw material. The species is not subject to a species-specific research and management regime sufficient to pass a Category C assessment. The lack of scientific information on the status of the stock in the assessment area means that a risk-assessment style approach must be taken. The fishery was assessed using the risk-based Productivity, Susceptibility Analysis (PSA) as per IFFO-RS v 2.0 procedures for Category D species. The species has passed this risk-based assessment (Table D4). Ling in in subareas 6‑9, 12, and 14, and in divisions 3.a and 4.a is **APPROVED** by SAI Global assessor for the production of fishmeal and fish oil under the IFFO-RS v 2.0 by-products standard
Peer Review Comments
The assessor correctly classified Northeast Atlantic and Arctic Ocean ling stock as category D. A PSA was performed. With an average productivity score of 2 and an average susceptibility score of 2.75, the stock was further assessed in Table 4. According to the 2019 ICES advice, F is below F_{MSY} and the biomass index shows an increasing trend since 2004. Therefore, there is no evidence that the fishery has significant negative impacts on the stock. Therefore, the peer reviewer agrees with the assessor's determination that the fishery passes Table D4 and is thus approved.
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 an MARINTRUST raw material.

IUCN Redlist Category

Byproduct 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.

Byproduct 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]
Ling	*Molva molva*	Subareas 6–9, 12, and 14, and in divisions 3.a and 4.a (Northeast Atlantic and Arctic Ocean)	EU and NEAFC DPMA	D	DD	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php

CATEGORY D SPECIES

Category D species are those which make up less than 5% of landings and 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	Ling, ***Molva molva***	
	Productivity Attribute	**Value**	**Score**
	Average age at maturity (years)	5-6	3
	Average maximum age (years)	25	2
	Fecundity (eggs/spawning)	20 – 60 million	1
	Average maximum size (cm)	106	2
	Average size at maturity (cm)	90	2
	Reproductive strategy	Demersal spawner	2
	Mean trophic level	4.4	3
		Average Productivity Score	**2.14**
	Susceptibility Attribute	**Value**	**Score**
	Overlap of adult species range with fishery	>50%	3
	Distribution	Not scored if overlap scored	-
	Habitat	Demersal, rocky bottoms	2
	Depth range	100-400m	1
	Selectivity	Up to 4m length	3
	Post-capture mortality	Retained	3
		Average Susceptibility Score	**2.75**
		PSA Risk Rating (From Table D3)	**Table D4**
		Compliance rating	

References

Fishbase. https://www.fishbase.de/Summary/SpeciesSummary.php?ID=33&AT=ling

Standard clauses 1.3.2.2

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	Ling, *Molva molva*	
	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
Outcome:			**PASS**

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

ICES provide scientific advice on the status of the stock (e.g. ICES, 2019).

The stock is classified as Category 4 in the NEAFC categorization of deep-sea species/stocks which implies that fisheries are primarily restricted to Coastal State exclusive economic zones (EEZs) and therefore management measures are not taken by NEAFC unless complementary to coastal state conservation and management measures (ICES, 2019).

Within the EU, the stock is managed within the framework of the EU CFP including through measures set out in relevant multiannual plans (e.g. as a bycatch species in the Western Waters MAP Regulation (EU) 2019/472) and technical regulations (EU) 2019/1241.

Consequently, the potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts. This ling stock **PASSES** clause D4.1.

D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.

There is no new advice for 2020. ICES produce advice for the stock and in their latest advice (ICES, 2019), note that landings since 2000 have been at a lower level than they have previously been. Landings have been slightly increasing since 2011, with higher discards in the last three years. A standardized catch per unit effort (CPUE) index based on data from the Norwegian longline fleet shows an increasing trend since 2004, with a decline in 2018 (Figure 1). Fishing mortality is below proxy reference points for F_{MSY}, F_{pa} and F_{lim}.

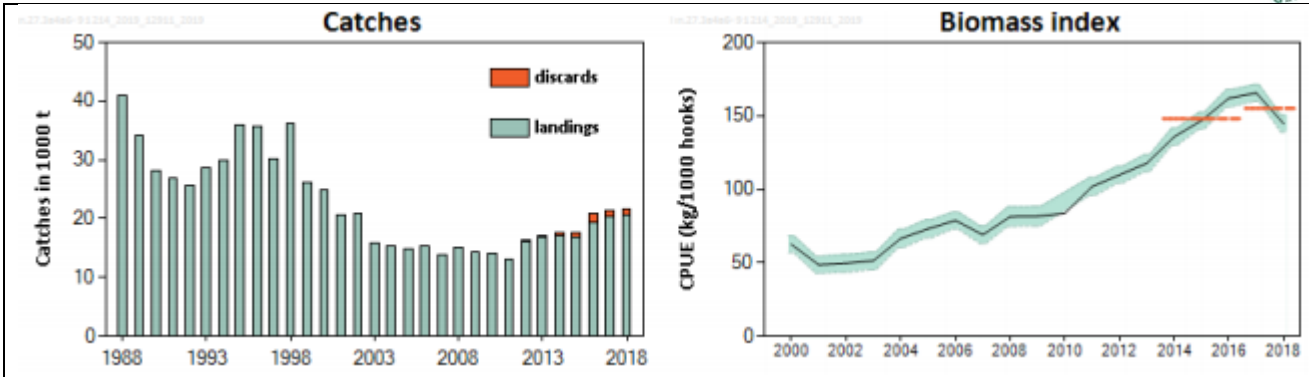

Figure 1. Ling in subareas 6‑9, 12, and 14, and in divisions 3.a and 4.a. Catches (left) and standardized biomass index from the Norwegian longline fleet targeting ling for all areas combined (kg per 1000 hooks; right). The dashed red lines indicate the average of the biomass index for 2014 to 2016 and for 2017 to 2018. The shaded areas on the biomass index plot represent 95% confidence intervals (source: ICES, 2019).

Consequently, there is no substantial evidence that the fishery has a significant negative impact on the species. The ling stock **PASSES** clause D4.2.

References

ICES. 2019. Ling (*Molva molva*) in Subareas 6-9, 12, and 14, and Divisions 3.a and 4.a (Northeast Atlantic and Arctic Ocean). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, lin.27.3a4a6-91214, https://doi.org/10.17895/ices.advice.4815

Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008.
https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32019R0472

Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1241

Links	
MARINTRUST Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01

SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.

Appendix A - Determining Resilience Ratings

The assessment of Category B species described in this assessment report template utilises a resilience rating system suggested by the American Fisheries Society. This approach was chosen because it is also used by FishBase, and so the resilience ratings for many thousands of species are freely available online. As described by FishBase, the following is the process used to arrive at the resilience ratings:

"*The American Fisheries Society (AFS) has suggested values for several biological parameters that allow classification of a fish population or species into categories of high, medium, low and very low resilience or productivity (Musick 1999). If no reliable estimate of r_m (see below) is available, the assignment is to the lowest category for which any of the available parameters fits. For each of these categories, AFS has suggested thresholds for decline over the longer of 10 years or three generations. If an observed decline measured in biomass or numbers of mature individuals exceeds the indicated threshold value, the population or species is considered vulnerable to extinction unless explicitly shown otherwise. If one sex strongly limits the reproductive capacity of the species or population, then only the decline in the limiting sex should be considered. We decided to restrict the automatic assignment of resilience categories in the Key Facts page to values of K, t_m and t_{max} and those records of fecundity estimates that referred to minimum number of eggs or pups per female per year, assuming that these were equivalent to average fecundity at first maturity (Musick 1999). Note that many small fishes may spawn several times per year (we exclude these for the time being) and large live bearers such as the coelacanth may have gestation periods of more than one year (we corrected fecundity estimates for those cases reported in the literature). Also, we excluded resilience estimates based on r_m (see below) as we are not yet confident with the reliability of the current method for estimating rm. If users have independent r_m or fecundity estimates, they can refer to Table 1 for using this information*."

Parameter	High	Medium	Low	Very low
Threshold	0.99	0.95	0.85	0.70
r_{max} (1/year)	> 0.5	0.16 - 0.50	0.05 - 0.15	< 0.05
K (1/year)	> 0.3	0.16 - 0.30	0.05 - 0.15	< 0.05
Fecundity (1/year)	> 10,000	100 - 1000	10 - 100	< 10
t_m (years)	< 1	2 - 4	5 - 10	> 10
t_{max} (years)	1 - 3	4 - 10	11 - 30	> 30

[Taken from the FishBase manual, "Estimation of Life-History Key Facts", http://www.fishbase.us/manual/English/key%20facts.htm#resilience]

Appendix B: From MARINTRUST Standard V2.0 Annex 2: Fish By-product Assessment Methodology

Definition of a Fish By-product

A by-product is a useful and marketable product that is not the primary product being produced. A marketable by-product is from a process that can technically not be avoided. This includes materials that may be traditionally defined as waste such as industrial scrap that is subsequently used as a raw material in a different manufacturing process.

"Fish By-products" refers to commodities that are manufactured from fish, including shellfish, and crustaceans in a form that is different than conventional foods and which are intended for human consumption (either directly or as a food ingredient). Fish By-products include, but are not limited to:

- By-products derived from fish, including fish cartilage, fish oils, and fish proteins; and
- By-products derived from the carapaces of crustaceans; but do not include marine plants or marine plant products.

(Canadian Food Inspection Agency Definition)

In addition, a whole fish which is rejected on an intrinsic quality ground e.g. does not meet the specification for human consumption due to physical damage or the quality is substandard. These whole fish shall in these cases be classified as a by-product from the human consumption fishery, and can be used for marine ingredients production.

A whole catch of fish that is rejected by a fish processing factory on economic grounds is not considered to be a fish by-product. This fish can only be used for marine ingredients production if the fishery has been assessed and approved under the requirements of the IFFO Responsible Sourcing Standard.

Why utilise Fish By-products?

FAO Code of Conduct for Responsible Fisheries

General Principles Article 6

6.7 The harvesting, handling, processing and distribution of fish and fishery products should be carried out in a manner which will maintain the nutritional value, quality and safety of the products, reduce waste and minimize negative impacts on the environment.

Responsible fish utilisation Article 11.1

11.1.8 States should encourage those involved in fish processing, distribution and marketing to reduce post-harvest losses and waste.

Benefits of Including Fish By-Products in the MARINTRUST Standard:

1. Improved fish resource utilisation

2. Reduction in waste for nutritional value

3. 35% of fish by-products are currently used to make quality fishmeal and oil

4. Excellent Economic return

5. Better compliance with FAO Code of Conduct for Responsible Fisheries

What Fish By-products cannot be used?

1. IUCN

Fishery By-products shall Not be taken from a species listed by IUCN (the International Union for Conservation of Nature) under the Red List for certain categories;

- 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.

Fish By-product material may be used from the vulnerable category, but it shall incur a fishery surveillance conducted by the certification body prior to it being included in the scope of this standard.

- VULNERABLE (VU) facing a high risk of extinction in the wild.

The Fish By-product material from these species will be acceptable for use in the scope of this standard;

- 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.

Fish By-product material may be used from the following category, but it shall incur a fishery surveillance prior to it being included in the scope of this standard;

- DATA DEFICIENT (DD) and NOT EVALUATED (NE)

The fishery surveillance conducted by the certification body will review the following areas:

Stock Assessment

- From a recognised Institution
- Fisheries are recognised as legal
- Fisheries do not contradict scientific opinion

2. FAO Code of Conduct for Responsible Fisheries

In addition the Fish By-products shall not come from fisheries that do not comply with the following criteria;

1. Fisheries should prohibit dynamiting, poisoning and other comparable destructive fishing practices.

2. Fishery material shall not be from IUU fishing activity nor sourced from vessels officially listed as engaging in illegal, unreported and unregulated (IUU) fishing activity.

Sources of Information

1. Food Standards Agency

2. Canadian Food Inspection Agency

3. DEFRA

4. GAA Feed mill BAP standard

5. EU Commission

6. IUCN