



MarinTrust Standard V2

By-product Fishery Assessment *European squid (Loligo vulgaris), in FAO 27 Northeast Atlantic, ICES Divisions 4.a-c, 6.a, 7.a-b,d-h,j)*

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	European Squid (<i>Loligo vulgaris</i>)
	Geographical area:	FAO 27 Northeast Atlantic
	Country of origin of the product:	Flag country not supplied by client
	Stock:	Squid in ICES Divisions 4.a-c, 6.a, 7.a-b,d-h,j
Date	25 July 2022	
Report Code	FRA19	
Assessor	Matthew Jew	
Country of origin of the product - PASS	Flag country not supplied by client	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Bioceval			
Country: France			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Matthew Jew	Léa Lebechnech	0.5	Re-approval
Assessment Period	Up to July 2022		

Scope Details	
Main Species	European Squid (<i>Loligo vulgaris</i>)
Stock	Squid in ICES Divisions 4.a-c, 6.a, 7.a-b,d-h,j
Fishery Location	FAO 27 Northeast Atlantic
Management Authority (Country/ State)	European Union (Common Fisheries Policy)
Gear Type(s)	Demersal trawls, beam trawls
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's recommendation of approval
Recommendation	APPROVED

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. European Squid (<i>Loligo vulgaris</i>) do not appear as Endangered or Critically Endangered on IUCN’s Red List, nor do they appear in CITES appendices; therefore, <i>Loligo vulgaris</i> is eligible for approval for use as Marin trust by-product raw material.</p> <p>European squid is a largely unmanaged species with undetermined stock structure. Therefore, for the purpose of the assessment, the squid ‘stock’ assessed is defined by ICES Divisions 4a-c, 6a, 7a-b, d-h, j.</p> <p>Squid are not subject to species-specific management regimes that are required to be assessed under Category C (e.g. No established limit reference points). Therefore, all stocks occurring in relevant subareas/divisions are assessed as Category D.</p> <p>Table D1 (PSA) shows that the stock as an average productivity score of 1.57 and an average susceptibility score of 3. The PSA risk rating results (Table D3) determined that the species passes.</p> <p>Therefore, European squid in FAO 27 ICES Divisions 4a-c, 6a, 7a-b, d-h, j is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.0 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The internal peer reviewer agrees with the assessor’s determination, who correctly classified European squid in ICES Divisions 4a – c, 6a, 7a, b, d – h, j as category D, reference points are undefined to assess status of the stock relative to.</p> <p>With an average productivity score of 1.57 and an average susceptibility score of 3, it PASSES the PSA as per Table D3.</p> <p>Therefore, European squid in ICES Divisions 4a – c, 6a, 7a, b, d – h, j is APPROVED.</p>
Notes for On-site Auditor
<p>Determine which flag state(s) the plant is sourcing its Squid from.</p>

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

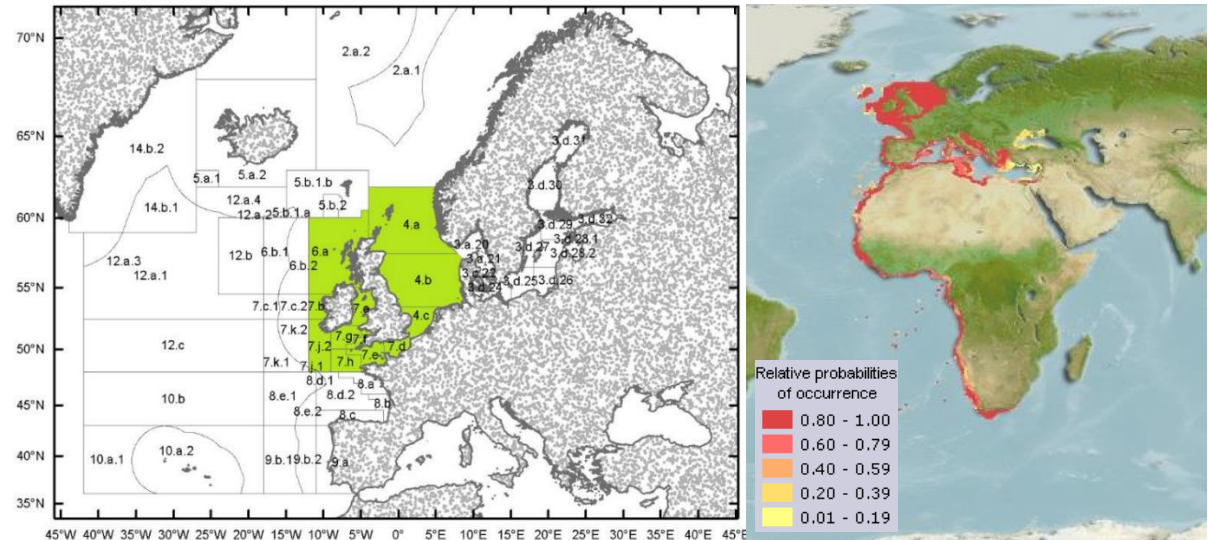
Common name	Latin name	Stock	Management	Category	IUCN Red List Category ¹	CITES Appendix 1 ²
European Squid	<i>Loligo vulgaris</i>	Squid in ICES Divisions 4.a-c, 6.a, 7.a-b,d-h,j	European Union (Common Fisheries Policy)	D	DD	No

¹ <https://www.iucnredlist.org/>

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

CATEGORY D SPECIES

Category D species are those which 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	European Squid (<i>Loligo vulgaris</i>)	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	<1 year	1
	Average maximum age (years)	3.5 years	1
	Fecundity (eggs/spawning)	5388-6180	2
	Average maximum size (cm)	64 cm	1
	Average size at maturity (cm)	9-23 cm	1
	Reproductive strategy	Demersal Egg Layer	2
	Mean trophic level	>3.25	3
	Average Productivity Score		1.57
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	>30%	3
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	Targeted	3
	Selectivity of gear type	High Capture Rate	3
	Post-capture mortality	Retained	3
	Average Susceptibility Score		3
	PSA Risk Rating (From Table D3)		Pass
	Compliance rating		PASS
<p>Further justification for productivity scoring (where relevant) <i>Species feeds on fish and other carnivorous prey. Trophic level was assumed to be greater than 3.25.</i></p> <p>Further justification for susceptibility scoring (where relevant) <i>At least 30% of the geographic range of the species occurs in the area under assessment (Figure 1). The stock is targeted catch, thus is has high encounterability, high capture/retention, and high post-capture mortality.</i></p>			
			
<p>Figure 1. Range of fishery under assessment (left) and geographic range of species (right).</p>			

References

Allcock, A.L. & Taite, M. 2019. *Loligo vulgaris*. The IUCN Red List of Threatened Species 2019: e.T190946A1961958. <https://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T190946A1961958.en>. Accessed 25 July 2022.

AquaMaps (2019, October). Computer generated distribution maps for *Loligo vulgaris* (European squid), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario. Retrieved from <https://www.aquamaps.org>.

Coelho ML, Quintela J, Bettencourt V, Olavo G, Villa H. 1994. Population structure, maturation patterns and fecundity of the squid *Loligo vulgaris* from southern Portugal. *Fisheries Research* 21(1-2):87-102.

Sealifebase. 2021. *Loligo vulgaris*. <https://www.sealifebase.ca/summary/Loligo-vulgaris>. Accessed 25 July 2022.

Standard clauses 1.3.2.2

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

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