



## MarinTrust Standard V2

# By-product Fishery Assessment Report Template

**MarinTrust Programme**

Unit C, Printworks

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

Fishery Under Assessment	Species:	Red-eye round herring, <i>Etrumeus sardina</i>
	Geographical area:	FAO Area 87 Pacific Southeast
	Country of origin of the product:	Ecuador
	Stock:	FAO Area 87 Pacific Southeast
Date	19/08/2021	
Report Code	BP165	
Assessor	Virginia Polonio	
Country of origin of the product - PASS	Ecuador	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Name:			
Address:			
Country: Ecuador		Zip:	
Tel. No.:		Fax. No.:	
Email address:		Applicant Code:	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Virginia Polonio	Geraldine Criquet	0.5	Surveillance 2
Assessment Period	August 2021		

Scope Details	
Main Species	Red-eye round herring, <i>Etrumeus sardina</i>
Stock	FAO Area 87 Pacific Southeast
Fishery Location	FAO Area 87 Pacific Southeast
Management Authority (Country/ State)	Ministerio de Acuicultura y Pesca of Ecuador
Gear Type(s)	Purse seines and pelagic trawls
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's recommendation of approval
Recommendation	<b>APPROVED</b>

**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. Red-eye round herring, <i>Etrumeus sardina</i> do not appear as Endangered or Critically Endangered on IUCN’s Red List, nor do they appear in CITES appendices; therefore, Red-eye round herring is eligible for approval for use as Marin Trust by-product raw material.</p> <p>One stock forms part of this assessment:</p> <ol style="list-style-type: none"> <li>1. Red-eye round herring, <i>Etrumeus sardina</i></li> </ol> <p>The National Institute of Fisheries of Ecuador (INP) is responsible for assessing the status of the stock of all small pelagic fishes in Ecuador. A formal stock assessment was carried out in 2018 using an expert panel and in 2020 the second stock assessment was realised included the advices done in the previous assessment by peer-reviews. Therefore, reference point relative to the stock status for this species were defined and reviewed. Consequently, the stock is managed under the INP and national regulations and polices and it is assessed under Clause C.</p> <p>Fishery removals of the stock are included in the stock assessment process so the stock <b>PASSES</b> Clause C1.1. However, in its most recent stock assessment, the stock has a biomass below reference points and therefore the stock <b>FAILS</b>. Where a species fails this Clause C, it is assessed as a Category D species instead.</p> <p>Therefore, the species has passed, with an average productivity and susceptibility of 1.4, it meets the criteria to pass category D.</p> <p>Red-eye round herring, <i>Etrumeus sardina</i> in FAO Area 87 Pacific Southeast is <b>APPROVED</b> for the production of fishmeal and fish oil under the current Marin Trust v 2.0 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified Southeast Pacific red-eye round herring stock as category C, reference points are defined to assess status of stock relative to.</p> <p>Fishery removals are included in the stock assessment process so it PASSES Clause C1.1. However, the stock is considered, in its most recent stock assessments, to have biomasses below the limit reference points (or proxies), preventing it from meeting Clause C1.2.</p> <p>The fishery stock was further assessed as Category D. With an average productivity and susceptibility of 1.4, it passes D1.</p> <p>Therefore, Southeast Pacific red-eye round herring should be <b>APPROVED</b>.</p>
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 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>
Red-eye round herring	<i>Etrumeus sardina</i>	FAO 87 Pacific Southeast	The National Institute of Fisheries of Ecuador (INP Instituto Nacional de Pesca)	C	DD	No

<sup>1</sup> <https://www.iucnredlist.org/>

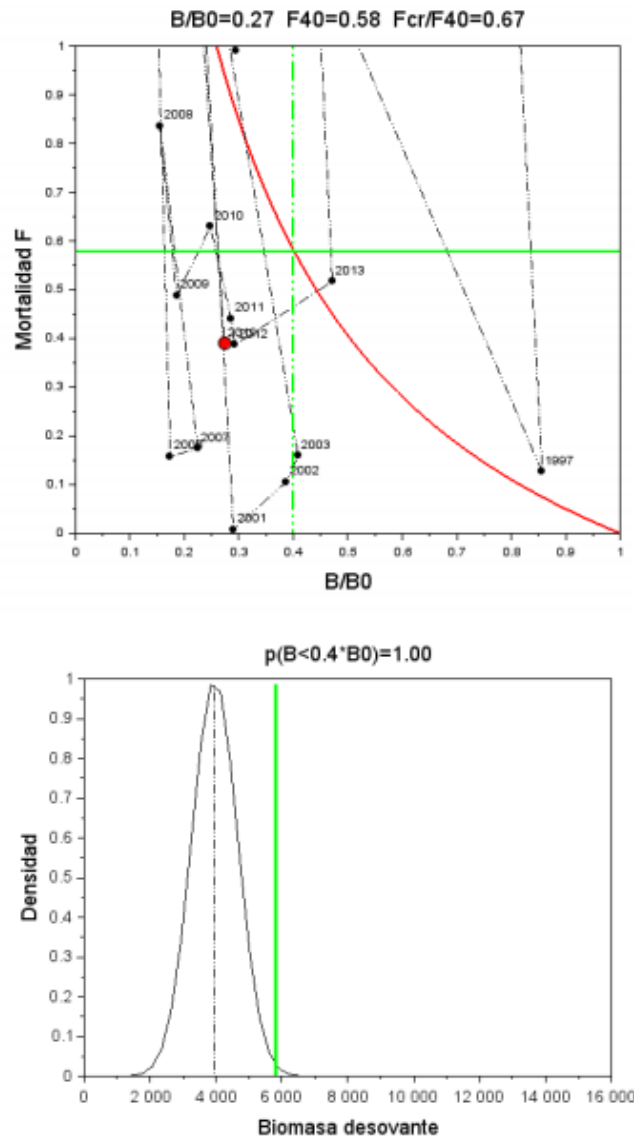
<sup>2</sup> <https://cites.org/eng/app/appendices.php>

## 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.

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		Red-eye round herring, <i>Etrumeus sardina</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>There is no new stock assessment published in 2021. The information from the last stock assessment carried out in 2020 (Canales et al., 2020) has been used to assess this by-product.</p> <p>In 2020 a MESTOCKL model was used, including the following sources of data: landings for the period 1975-2019, information on the fishery collected at the landing sites (This information includes data on fishing spots, the proportion of species, number of hauls, etc... from interviews), biological information on the catch based on biological samplings (Data include body size, weight and sex), Abundance index based on CPUE data, abundance from acoustic surveys for different periods of time between 1991 and 2019 and Life-history information on the species, based on the bibliography and other sources.</p> <p>Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and the fishery <b>PASSES</b> clause C1.1.</p>			
<p><b>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.</b></p> <p>The results of the 2020 stock assessment conducted (Canales et al. 2020) suggested that the stock was overexploited but not overfished. The report stated that the fishing mortality in 2019 was defined at 0.389, below the target reference point F40% set at 0.58. SSB (2019) was 3,964 tonnes which represent 27% of B0, whereas the reference point was set at 14,400 tonnes, which corresponds to 40%B0 (Figure 1).</p> <p>Therefore, the stock has the biomass below limits and clause C1.1 is <b>FAILED</b>.</p>			



**Figure 1.** Top: Kobe diagram. The red circle is the current condition. Bottom: Distribution probability of spawning biomass in 2020, and risk of being below the reference PBR (40% B0) for red-eye round sardine.

Therefore, following the requirements state for category C the stock is now assessed under category D as per guidance.

**References**

Canales, C. M., V. Jurado, M. Peralta, D. Chicaiza, E. Elías, and A. Romero. 2020. Informe tecnico, Evaluación del stock de recursos pelagicos pequeños del Ecuador, año 2020.  
[http://www.institutopesca.gob.ec/wp-content/uploads/2015/11/INFORME-EVAL\\_STOCK\\_PP\\_ECUADOR\\_2020\\_WEB.pdf](http://www.institutopesca.gob.ec/wp-content/uploads/2015/11/INFORME-EVAL_STOCK_PP_ECUADOR_2020_WEB.pdf)

Di Dario, F. 2018. *Etrumeus golanii* (errata version published in 2019). The IUCN Red List of Threatened Species 2018: e.T99167321A143843370. <https://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T99167321A143843370.en>

**Links**

MARINTRUST Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

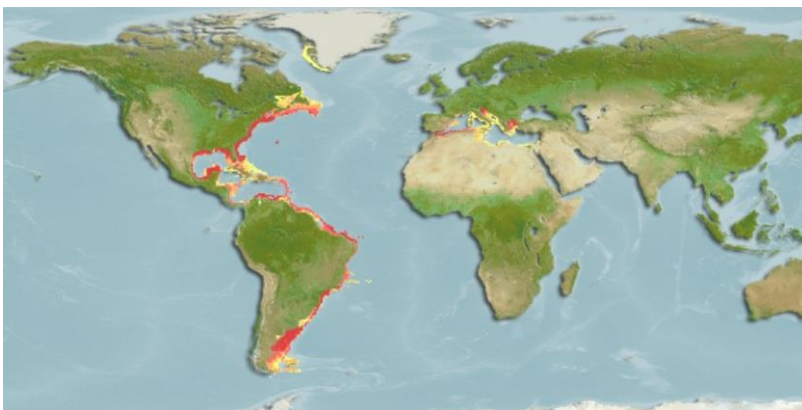
## CATEGORY D SPECIES

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	Red-eye round herring, <i>Etrumeus sardina</i>	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	0.5	1
	Average maximum age (years)	1.7	1
	Fecundity (eggs/spawning)	No value	Not scored
	Average maximum size (cm)	33	1
	Average size at maturity (cm)	13.8	1
	Reproductive strategy	nonguarders: open water/substratum egg scatterers	1
	Mean trophic level	3.6	3
	<b>Average Productivity Score</b>		<b>1.4</b>
	Susceptibility Attribute	Value	Score
	Overlap of adult species range with fishery	Not scored	Not scored
	Distribution	Throughout region*	1
	Habitat	Pelagic	1
	Depth range	0-125 m	1
	Selectivity	Species <mesh size	1
	Post-capture mortality	Mostly dead	3
	<b>Average Susceptibility Score</b>		<b>1.4</b>
	<b>PSA Risk Rating (From Table D3)</b>		<b>PASS</b>
	<b>Compliance rating</b>		<b>PASS</b>

### References

#### \*Distribution



**Figure 2.** Computer generated distribution maps for *Etrumeus sardina* (Red-eye round herring), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario. Source: Fishbase

<https://www.fishbase.se/summary/Etrumeus-sardina.html>

Scarponi, P., G. Coro, and P. Pagano. A collection of Aquamaps native layers in NetCDF format. Data in brief 17 (2018): 292-296.

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			
<b>Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements</b>			
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.		
D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.		
<b>Outcome:</b>			
<b>Evidence</b>			
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.			
D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.			
<b>References</b>			
<b>Links</b>			
MARINTRUST Standard clause	1.3.2.2, 4.1.4		
FAO CCRF	7.5.1		
GSSI	D.5.01		