



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:	European Sardine, <i>Sardina pilchardus</i>
	Geographical area:	FAO Area 37 Mediterranean Sea and Black Sea
	Country of origin of the product:	Spain & Portugal
	Stock:	GFCM GSA 17 Northern Adriatic Sea & 18 Southern Adriatic Sea sardine stock
Date	12/05/2021	
Report Code	BP 81	
Assessor	Virginia Polonio	
Country of origin of the product - PASS	Spain & Portugal	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Name: Sarval Bio-industries Noroeste, S.A.U: Arteixo			
Address:			
Country: Spain & Portugal		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	To May 2021		

Scope Details	
Main Species	European Sardine, <i>Sardina pilchardus</i>
Stock	GFCM GSA 17 Northern Adriatic Sea & 18 Southern Adriatic Sea sardine stock
Fishery Location	FAO 37 Mediterranean Sea and Black Sea
Management Authority (Country/ State)	GFCM & national (Spain and Portugal)
Gear Type(s)	Purse seine and pelagic trawler
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's recommendation
Recommendation	APPROVED

Table 2. Assessment Determination

Assessment Determination
<p>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. European sardine (<i>Sardina pilchardus</i>) in the Mediterranean is not is categorised as Endangered or Critically Endangered on the IUCN Red list nor is listed in Appendix 1 of CITES and therefore is eligible for Marin Trust approval.</p> <p>The assessment covers both GSA 17 and 18. Even though some genetics different have been identified, it suggests that some of the genetic homogeneity observed could be apparent and the identification of a subtle structuring in sardine population could be limited by technical difficulties and by the incomplete knowledge of molecular mechanisms. In light of these considerations, it was decided to merge the two GSAs and thus carry out an assessment for sardine in GSA 17-18.</p> <p>Reference points are defined for this stock, thus it was assessed under category C. Removals are included in the stock assessment, it PASSES C1.1. The biomass is below Bpa but still above Blim. Therefore, it can be concluded that is above limit in the last stock assessment and it PASSES C1.2.</p> <p>Therefore, sardine in the area GSA 17 and 18 is APPROVED for the production of fishmeal and fish oil under the Marin Trust v 2.0 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified GSA 17 Northern Adriatic Sea & 18 Southern Adriatic Sea sardine as category C, reference points are defined to assess the stock status relative to.</p> <p>Removals are included in the stock assessment, it PASSES C1.1. The biomass is above Blim and it PASSES C1.2.</p> <p>The peer reviewer agrees with the assessor's determination that the fishery passes. Therefore, GSA 17 Northern Adriatic Sea & 18 Southern Adriatic Sea sardine is thus approved.</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 Redlist 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 pilchard/Sardine	<i>Sardina pilchardus</i>	GFCM GSA 17 Northern Adriatic Sea & 18 Southern Adriatic Sea sardine stock	Species-specific management regime (EU, GFCM & national)	C	LC	No

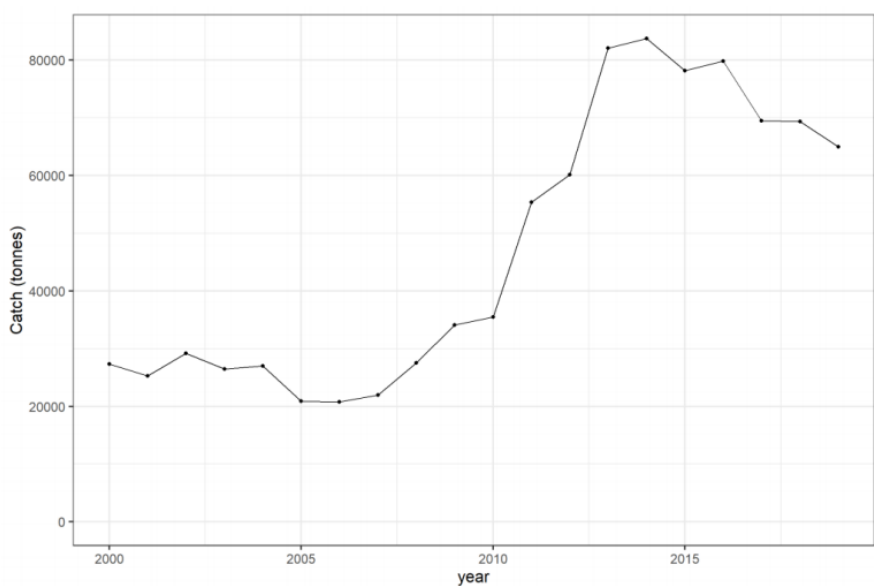
¹ <https://www.iucnredlist.org/>

² <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 may be assessed as a Category D species instead, EXCEPT if there is evidence that it is currently below the limit reference point.

Species Name		European pilchard/Sardine, <i>Sardina pilchardus</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>Evidence:</p> <p>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.</p> <p>Total catch (in tonnes) was calculated as the sum of the total catch by country, assuming no discards. Total catch kept around 20,000 and 30,000 tonnes up during 2000–2008, then started increasing up to more than 80,000 tonnes in 2014 and has been decreasing continuously in the last five years (Figure 1).</p>  <table border="1"> <caption>Data for Figure 1: Total catches (tonnes) for sardine in GSAs 17-18</caption> <thead> <tr> <th>Year</th> <th>Catch (tonnes)</th> </tr> </thead> <tbody> <tr><td>2000</td><td>28000</td></tr> <tr><td>2001</td><td>25000</td></tr> <tr><td>2002</td><td>30000</td></tr> <tr><td>2003</td><td>28000</td></tr> <tr><td>2004</td><td>28000</td></tr> <tr><td>2005</td><td>22000</td></tr> <tr><td>2006</td><td>21000</td></tr> <tr><td>2007</td><td>23000</td></tr> <tr><td>2008</td><td>35000</td></tr> <tr><td>2009</td><td>38000</td></tr> <tr><td>2010</td><td>55000</td></tr> <tr><td>2011</td><td>60000</td></tr> <tr><td>2012</td><td>82000</td></tr> <tr><td>2013</td><td>85000</td></tr> <tr><td>2014</td><td>78000</td></tr> <tr><td>2015</td><td>80000</td></tr> <tr><td>2016</td><td>70000</td></tr> <tr><td>2017</td><td>70000</td></tr> <tr><td>2018</td><td>65000</td></tr> </tbody> </table>				Year	Catch (tonnes)	2000	28000	2001	25000	2002	30000	2003	28000	2004	28000	2005	22000	2006	21000	2007	23000	2008	35000	2009	38000	2010	55000	2011	60000	2012	82000	2013	85000	2014	78000	2015	80000	2016	70000	2017	70000	2018	65000
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<p>Figure 1. Total catches (tonnes) for sardine in GSAs 17-18. Source: Benchmark session for the assessment of sardine and anchovy in GSAs 17-18, 2020.</p> <p>Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and the fishery PASSES clause C1.1.</p>																																											

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-Recruitment plot did not show any clear relationship between SSB and recruitment or any signal of impaired recruitment. Therefore, in the last benchmarking it was decided to use Bloss (lowest SSB) as a proxy for Blim. The lowest SSB in the time series 2000–2019 corresponded to 2018. However, given that this value corresponded to the most recent year in the assessment, for which uncertainty is high, the second lowest value was selected. Thus, Blim was set at 178,200 tonnes, which corresponds to the SSB in 2000. Reference points were defined as in the table below. (Table 1).

Table 1. Reference points for sardine in GSAs 17-18. Source: Benchmark session for the assessment of sardine and anchovy in GSAs 17-18, 2020

Reference point	Value	Basis
B _{lim}	178 200 t	B _{lim} = SSB ₂₀₀₀
B _{pa}	294 300 t	B _{pa} = B _{lim} * exp (1.645 * sigmaSSB)
F _{MSY}	0.47	F at E = 0.4 (Patterson, 1992)

The stock was estimated to be overexploited (SSB above Blim but below Bpa) and overfishing occurs (fishing mortality above FMSY proxy).

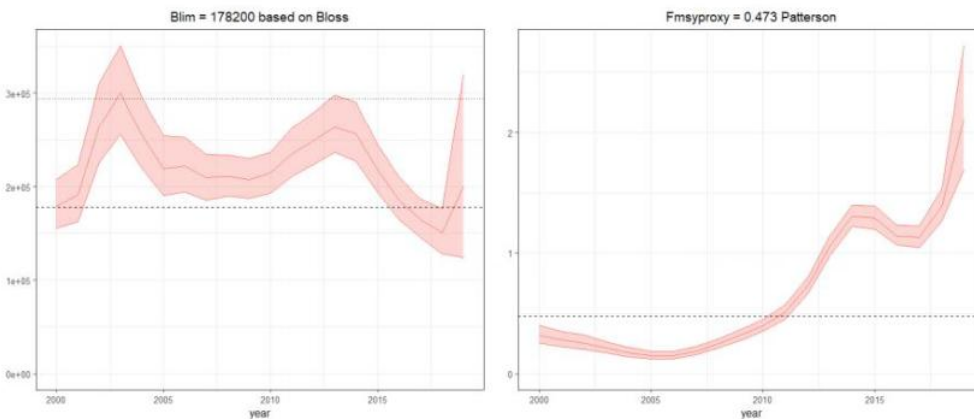


Figure 2. Stock status of sardine in GSAs 17-18 represented by SSB (left) and fishing mortality (right) with respect to the reference points. Source: Benchmark session for the assessment of sardine and anchovy in GSAs 17-18, 2020

The assessor concludes that the fishery is above Blim. Therefore, the fishery PASSES C1.2.

References

Di Natale, A., Molinari, A., Oral, M., Kada, O. & Golani, D. 2011. *Sardina pilchardus*. The IUCN Red List of Threatened Species 2011: e.T198580A9039349. Downloaded on 12 May 2021.

Working Group on Stock Assessment of Small Pelagic Species (WGSASP). 2019. European Union under grant agreement no SI2.79539

Working Group on Stock Assessment of Small Pelagic species (WGSASP). Benchmark session for the assessment of sardine and anchovy in GSAs 17-18. Second benchmark session Online sessions, June–December 2020.

Links

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