

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:	Bali sardinella, <i>Sardinella lemuru</i>
	Geographical area:	FAO Area 61, Pacific Northwest
	Country of origin of the product:	Thailand
	Stock:	Pacific NW
Date	January 2021	
Report Code	184-2020	
Assessor	Virginia Polonio	
Country of origin of the product - PASS	Thailand	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Name:			
Address:			
Country: Thailand		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	SURV 1
Assessment Period		January 2021	

Scope Details	
Main Species	Bali sardinella, <i>Sardinella lemuru</i>
Stock	Pacific Northwest
Fishery Location	FAO 61, Pacific Northwest
Management Authority (Country/ State)	International management bodies and Thailand
Gear Type(s)	Purse seines and gillnets
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 IUCN’s Red List, or if it appears in the CITES appendices, it cannot be approved for use as MarinTrust raw material of Bali sardinella (<i>Sardinella lemuru</i>), do not appear as Endangered or Critically Endangered on IUCN’s Red List, nor do they appear in CITES appendices; therefore, of Bali sardinella in FAO 61 is eligible for approval for use as MarinTrust by-product raw material.</p> <p>There is a fishery management framework at the national level (Thailand) although this is not applied specifically to Bali sardinella. Fisheries management in general is supported by data collection and stock assessment, but species-specific research is extremely limited. There is no evidence of any specific management measures for Bali sardinella in FAO Area 61.</p> <p>Hence, due to the lack of scientific information on the status of the stock, a risk-assessment style approach was taken. The fishery was assessed using the risk-based Productivity, Susceptibility Analysis (PSA) approach as per MarinTrust v 2.0 procedures for Category D species. Therefore, following Marin Trust criteria, the stock is classified as Category D.</p> <p>Table D1 (PSA) has achieved a PASS therefore, the average for the PSA risk rating results in the stock passing Table D1.</p> <p>Therefore, Bali sardinella stock in FAO 61 is APPROVED by Global Trust Certification’s assessor in the assessment area for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products standard.</p>
Peer Review Comments
<p>The assessor correctly classified Pacific Northwest Bali sardinella stock as category D, there is no stock specific management measures in place and reference points are not defined.</p> <p>A PSA was performed. With an average productivity score of 1.25 and an average susceptibility score of 2, the stock passes the risk-based assessment.</p> <p>Therefore, the peer reviewer agrees with the assessor’s determination that the fishery passes Table D3 and is thus approved.</p>
Notes for On-site Auditor
Empty space for on-site auditor notes

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 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
Bali sardinella	<i>Sardinella lemuru</i>	Pacific Northwest	Thailand and international entities	D	NT	No

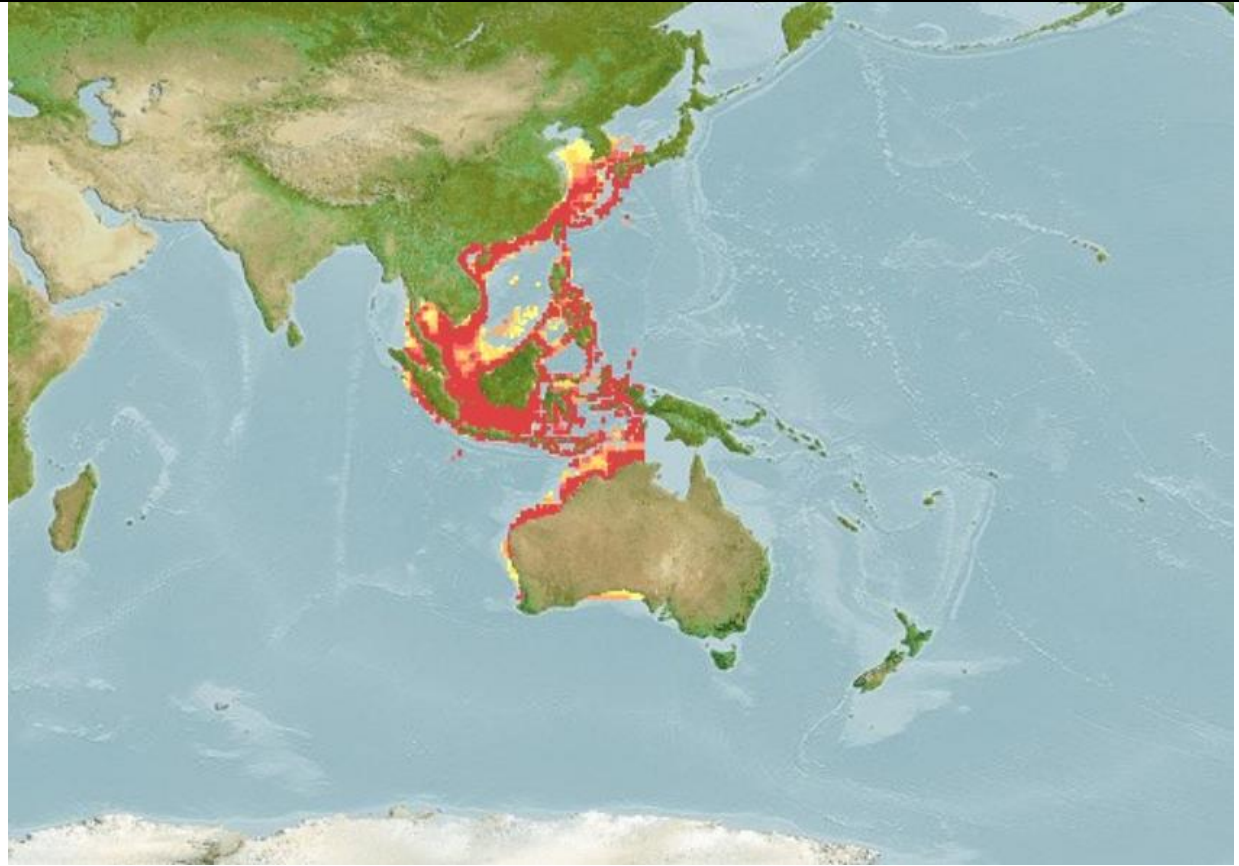
¹ <https://www.iucnredlist.org/>

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	Bali sardinella (<i>Sardinella lemuru</i>)	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	3.3	1
	Average maximum age (years)	0.9	1
	Fecundity (eggs/spawning)	No value	-
	Average maximum size (cm)	23	1
	Average size at maturity (cm)	14	1
	Reproductive strategy	Non-guarders: open water/substratum scatterers egg	1
	Mean trophic level	2.5	2
	Average Productivity Score		1.25
	Susceptibility Attribute	Value	Score
	Overlap of adult species range with fishery	Not scored	Not scored
	Distribution	Limited range in the region*	2
	Habitat	Pelagic	1
	Depth range	15-100	2
	Selectivity	1 to 2 times mesh size	2
	Post-capture mortality	Most dead / retained	3
	Average Susceptibility Score		2
	PSA Risk Rating (From Table D3)		PASS
	Compliance rating		PASS
References			



***Figure 1.** Distribution maps for *Sardinella lemuru* (Bali sardinella), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario. www.aquamaps.org, version 10/2019.

Santos, M. 2018. *Sardinella lemuru* (errata version published in 2019). The IUCN Red List of Threatened Species 2018: e.T75154879A143836046. <https://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T75154879A143836046.en>

CITES <http://checklist.cites.org/#/en>

https://www.fishsource.org/stock_page/1823

[Sardinella lemuru, Bali sardinella : fisheries \(fishbase.se\)](#)

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

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 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