



MarinTrust Standard V2

By-product Fishery Assessment THA02 – Pacific Saury (*Cololabis saira*) in FAO Area 61

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Pacific saury, <i>Cololabis saira</i>
	Geographical area:	FAO 61, Pacific Northwest
	Country of origin of the product:	Thailand
	Stock:	Northwest Pacific
Date	February 2024	
Report Code	THA02	
Assessor	Sam Peacock	
Country of origin of the product - PASS	Thailand	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): TC Union Argotech No Ltd			
Country: Thailand			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification Ltd. / NSF	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Léa Lebechnech	0.2	Surveillance
Assessment Period	February 2024 – February 2025		

Scope Details	
Main Species	Pacific saury, <i>Cololabis saira</i>
Stock	Northwest Pacific
Fishery Location	FAO 61, Pacific Northwest
Management Authority (Country/ State)	North Pacific Fisheries Commission (NPFC)
Gear Type(s)	Stick-held dip nets and lift nets ¹
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's recommendation
Recommendation	APPROVED

¹ <https://www.npfc.int/fisheries-overview>

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. Pacific saury, <i>Cololabis saira</i>, has not been assessed by the IUCN Red List, and it does not appear in the CITES appendices. Therefore, this byproduct is eligible for approval for use as Marin trust by-product raw material.</p> <p>Pacific saury is assessed and managed by the North Pacific Fisheries Commission, and as such was initially assessed under Category C.</p> <p>A stock assessment is conducted annually using all available catch data. Although no limit reference points are formally established, the biomass was estimated in 2023 to be around $0.43B_{MSY}$, which is below the default limit reference point of $0.5B_{MSY}$ set out in the MT byproduct assessment guidance. Therefore while the byproduct meets the requirements of C1.1, it does not meet the requirements of C1.2. As per the assessment guidance, the byproduct was further assessed under Category D.</p> <p>Pacific saury was awarded a Productivity score of 1.29 and a Susceptibility score of 3, leading to a Pass rating on Table D3.</p> <p>Therefore, Pacific saury (<i>Cololabis saira</i>) in FAO Area 61 is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products.</p>
Fishery Assessment Peer Review Comments
<p>The assessor initially correctly classified Pacific saury (<i>Cololabis saira</i>) in FAO 61 (Pacific Northwest) as Category C, the stock being subject to a specific management regime, although no limit reference points are formally established.</p> <p>Fishery removals are considered in the stock assessment process. However, as the most recent stock assessment shows that the stock is below limit reference point. Therefore, the stock failed Category C and had to be assessed under Category D, as per MT guidance. The stock passed the PSA risk-rating (Table D3).</p> <p>In conclusion, Pacific saury (<i>Cololabis saira</i>) in FAO 61 (Pacific Northwest) passes Category D and therefore should be approved under the MarinTrust Standard v2.3.</p>
Notes for On-site Auditor
N/A

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 ²	CITES Appendix 1 ³
Pacific saury	<i>Cololabis saira</i>	Northwest Pacific	Yes	Failed C -> D	Not Listed	No

² <https://www.iucnredlist.org/>

³ <https://cites.org/eng/app/appendices.php>

CATEGORY C SPECIES

In a by-product assessment, Category C species are those which are subject to a species-specific management regime and are usually targeted species in fisheries for human consumption.

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		Pacific Saury (<i>Cololabis saira</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.	PASS
	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.	FAIL
Clause outcome:			FAIL

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.

Pacific saury is subjected to regular stock assessment by the North Pacific Fisheries Commission (NPFC), specifically the Small Scientific Committee on Pacific Saury. The most recent stock assessment was published and discussed by the committee in 2023, with the outcomes of the discussion and the details of the stock assessment published in early 2024 (NPFC 2024). The stock assessment applied a Bayesian state-space production model which incorporated landings from participating nations, with the most substantial catches taken by China, Japan, and Chinese Taipei. Catches can be seen below in Figure 1.

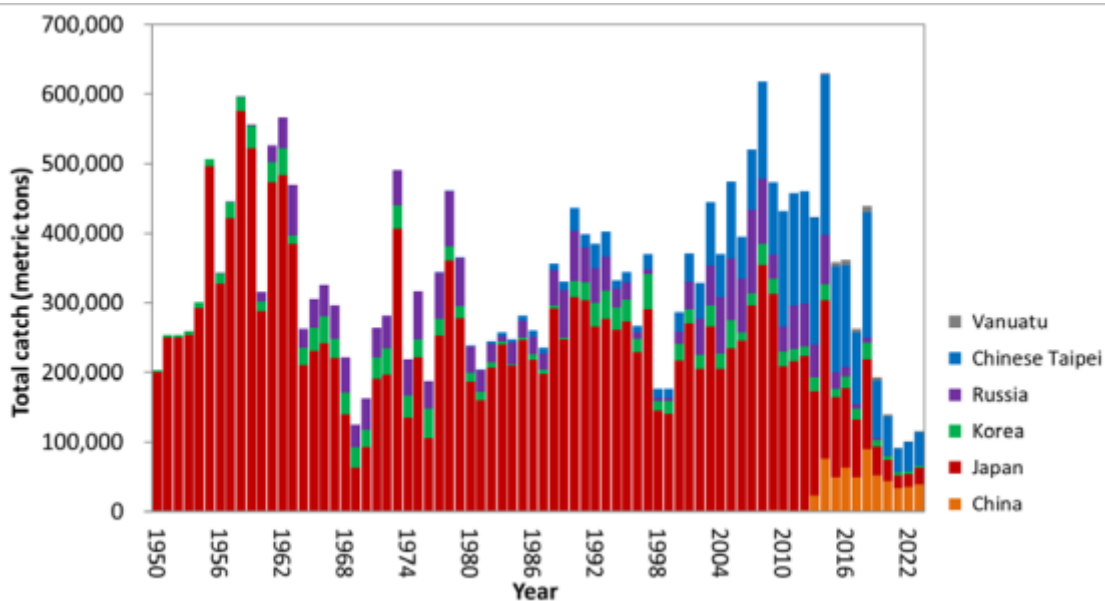


Figure 1. Pacific saury, catches (NPFC 2024)

Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and therefore the stock PASSES clause C1.1.

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 NPFC report on the most recent meeting of the Small Scientific Committee on Pacific Saury, published in 2024, provides a summary of the outcomes of the most recent stock assessment process. The stock is managed relative to target reference points

F_{MSY} and B_{MSY} . There are currently no formally established reference points; however, potential values for B_{lim} are under discussion by managers and range from $0.2B_{MSY}$ to $0.5B_{MSY}$. The median estimate for B_{MSY} is 1,281,000t. The median estimate for biomass in 2023 was 549,400t (80% CI 332,270t – 1,083,000t) (NPFC 2024). This places B/B_{MSY} at 0.43, within the range of potential values of B_{lim} (See Figure 1).

As there is no formally established limit reference point, and biomass is estimated to be below the target reference point with a high degree of confidence, the appropriate action is to apply the default limit reference point described in the MT byproduct fishery assessment guidance, this being $0.5B_{MSY}$. As biomass was estimated in the 2023 stock assessment to be around $0.43B_{MSY}$, the stock is below this default limit reference point level.

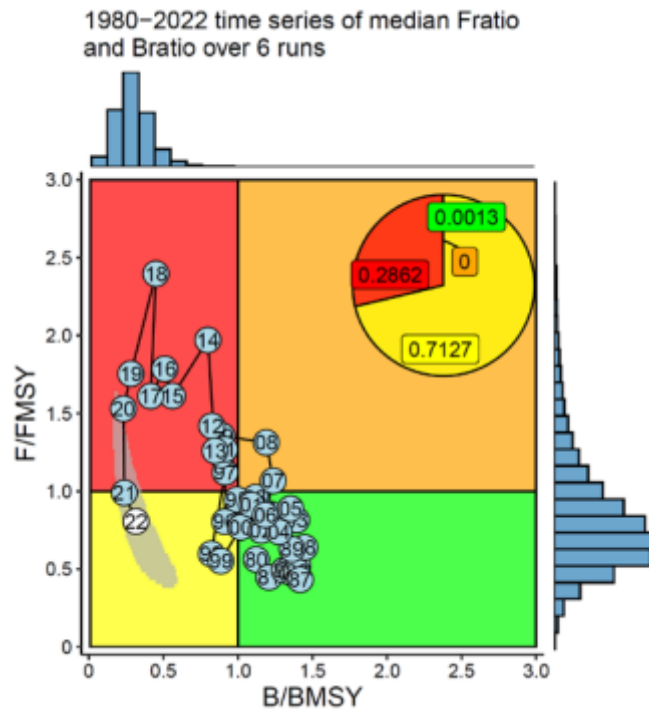


Figure 2. Pacific saury, Kobe plot with time trajectory. Data are aggregated across 6 model results (NPFC 2024).

Therefore, the species is considered, in its most recent stock assessment, to have a biomass below the limit reference point (or proxy) and it FAILS clause C1.2. As per MT guidance, the stock will be assessed under Category D hereinafter.

References

NPFC (2024). 12th Meeting of the Small Scientific Committee on Pacific Saury, Nanaimo, Canada, 11-14 December 2023. REPORT. February 2024. <https://www.npfc.int/sites/default/files/2024-02/SSC%20PS12%20report.pdf>

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 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.

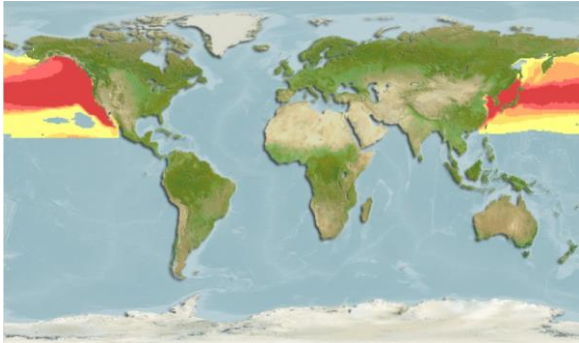
D1	Species Name	Pacific saury (<i>Cololabis saira</i>)	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	1.2 years	1
	Average maximum age (years)	4.8 years	1
	Fecundity (eggs/spawning)	47,000-180,000	1
	Average maximum size (cm)	40cm	1
	Average size at maturity (cm)	17.9cm	1
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	3.7	3
	Average Productivity Score		1.29
	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	Targeted	3
	Post-capture mortality	Retained	3
	Average Susceptibility Score		3
	PSA Risk Rating (From Table D3)		PASS
	Compliance rating		PASS
	Further justification for susceptibility scoring (where relevant)		
	<i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
			
<p>Pacific saury computer-generated distribution map, from FishBase https://www.fishbase.se/summary/Cololabis-saira.html</p>			
References			
Fecundity from Fuji et al., 2019. NPFC. A review of the biology for Pacific Saury, <i>Cololabis saira</i> in the North Pacific Ocean: https://www.npfc.int/system/files/2019-11/NPFC-2019-SSC%20PS05-WP13%28Rev%201%29%20Review%20of%20Pacific%20saury%20biology_Japan.pdf			
All other information from FishBase, Pacific saury: https://www.fishbase.se/summary/Cololabis-saira.html			
<i>Standard clauses 1.3.2.2</i>			

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

D4 Species Name			
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.		
D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.		
Outcome:			
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.			
D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.			
References			
Links			
MarinTrust Standard clause		1.3.2.2, 4.1.4	
FAO CCRF		7.5.1	
GSSI		D.5.01	