MarinTrust Standard V2

By-product Fishery Assessment

Report Template

Yellowfin sole *(Limanda aspera)*
FAO 61 Pacific, Northwest, 67 Pacific Northeast, Bering Sea and Aleutian Islands

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Table 1. Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Yellowfin sole (Limanda aspera)
	Geographical area:	FAO 61 Pacific, Northwest, 67 Pacific Northeast, Bering Sea and Aleutian Islands
	Country of origin of the product:	Thailand
	Stock:	Yellowfin sole in the Bering Sea and Aleutian Islands
Date	December 2024	
Report Code	THA35	
Assessor	Sam Dignan	
Country of origin of the product - PASS	Thailand	
Country of origin of the product - FAIL	Not applicable	

Application details and summary of the assessment outcome			
Company Name(s): Piyo Bhokabhan Co. Ltd, TC Union Agrotech Co. Ltd			
Country:			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Dignan	Phoebe Schouten	0.2	Re-approval
Assessment Period	To December 2024		

Scope Details	
Main Species	Yellowfin sole (Limanda aspera)
Stock	Yellowfin sole in the Bering Sea and Aleutian Islands
Fishery Location	FAO 61 Pacific, Northwest, 67 Pacific Northeast, Bering Sea and Aleutian Islands
Management Authority (Country/ State)	North Pacific Fishery Management Council (NPFMC), USA
Gear Type(s)	Otter trawl
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Pass

Table 2. Assessment Determination

Assessment Determination
Yellowfin sole (*Limanda aspera*) has been categorised by the IUCN as a species of Least Concern and does not appear in the CITES appendices. A single stock is recognised in the Eastern Bering Sea. Overall, fishery removals are non-negligible but are included in the stock assessment process and the stock is considered, in its most recent stock assessment, to have a biomass' above MSY level and thus above limits; therefore, the stock continues to meet relevant MT requirements and should be approved for continuing use as an approved raw material.
Fishery Assessment Peer Review Comments
The peer reviewer agrees that the stock has been categorised as least concern by the IUCN, and does not appear on CITES Appendix 1. There is a management strategy in place, so the peer reviewer agrees that the stock should be assessed as a category C species. The assessor has shown sufficient evidence and references to justify the Pass scores under C1.1 and C1.2, so the peer reviewer agrees that this stock should continue to be approved as a raw materiel source for Marin Trust product.
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[1]	CITES Appendix 1[2]
Yellowfin sole	Limanda aspera	Yellowfin sole in the Bering Sea and Aleutian Islands	North Pacific Fishery Management Council (NPFMC)	C	LC	No

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[1] https://www.iucnredlist.org/
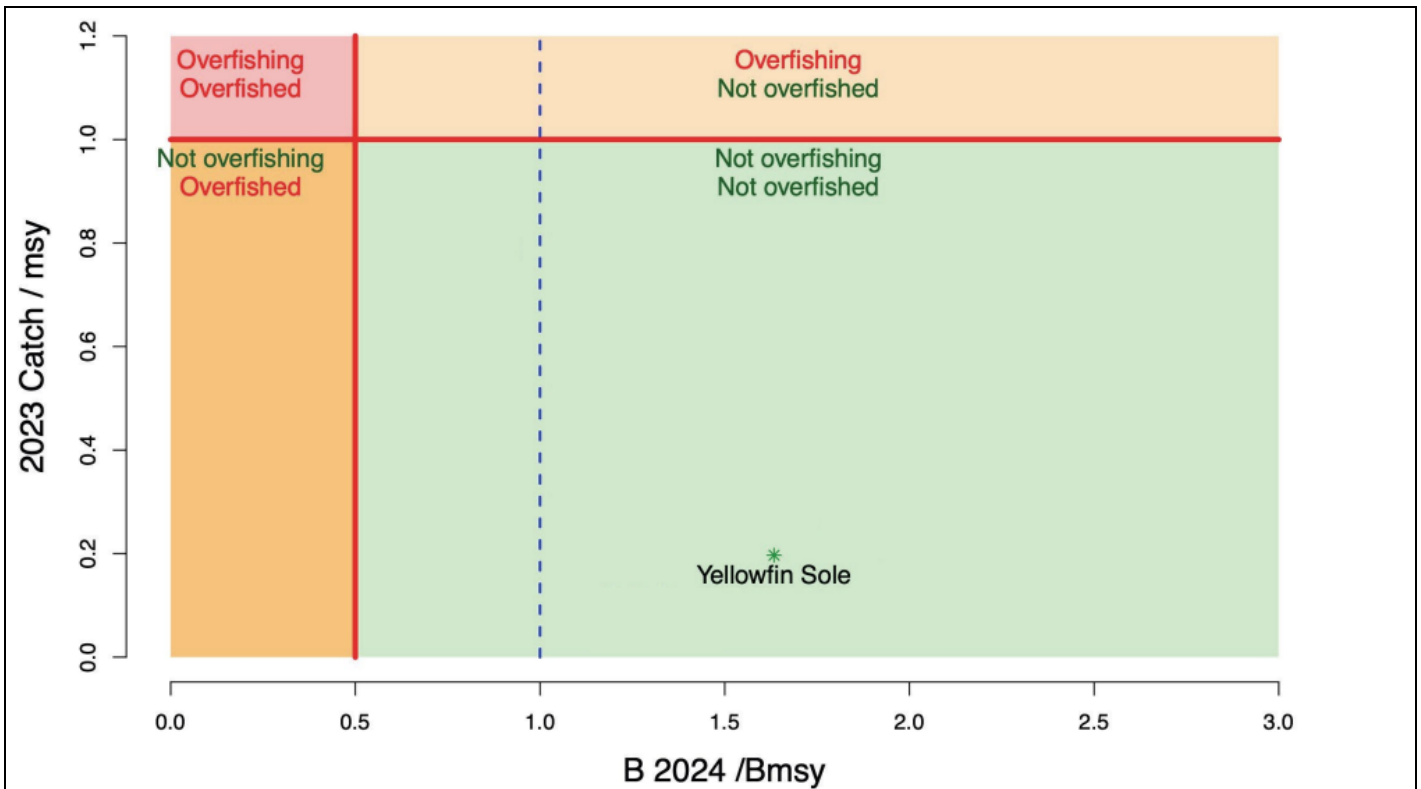[2] https://cites.org/eng/app/appendices.php

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	Yellowfin sole (*Limanda aspera*) in the Bering Sea and Aleutian Islands	
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.	PASS
	Clause outcome:	PASS

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.

Fishery removals in the fishery under assessment are non-negligible with 2023 catches estimated to be 79,688 mt (Spies et al., 2023). These removals (estimates of total catch 1954 – 2023) form part of the data used in the stock assessment process alongside fishery age composition (1964 – 2022), fishery weight-at-age, survey biomass and standard error (1982 - 2023 (not 2020)), bottom temperature (1982 – 2023), survey age composition (1979 - 2022 (not 2020)), annual length-at-age and weight-at-age from surveys (1979 - 2022 (not 2020)) and age at maturity (combined 1992 and 2012 samples) (see Spies et al., 2023 §Data).

Overall, while non-negligible, fishery removals are appropriately included in the stock assessment process such that **C1.1 is met.**

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 latest available stock assessment of BSAI yellowfin sole is Spies et al., 2023 which determined that yellowfin sole female spawning biomass continues to be above B_{MSY} and the annual harvest remains below the Acceptable Biological Catch (ABC) level with simulation results indicating that yellowfin sole is not currently overfished and not approaching an overfished condition.

Figure 1. Summary of BSAI yellowfin sole stock status. Source: Modified from Aydin et al., 2023.

Overall, the stock is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy) such that **C1.2 is met**.

References

Aydin, K., G. Adams, C.A. Akselrud, S.J. Barbeaux, L. Britt, M. Bryan, J. Conner, M.E. Conners, C. Conrath, M. Dalton, A. De Robertis, K. Echave, K.H. Fenske, B. Fissel, M. Furuness, D. Goethel, P. Joy, R. Haehn, D. Hanselman, A. Haynie, A. Hicks, L. Hillier, J. Hoff, K. Holsman, T. Honkalehto, T. Hurst, J.N. Ianelli, K. Kearney, A. Kingham, S. Kotwicki, B. Laurel, S. Lowe, C.R. Lunsford, I. Ortiz, P. Malecha, B. Matta, M.E. Matta, C.R. McGilliard, D. McKelvey, C. Monnahan, D.G. Nichol, O.A. Ormseth, W.A. Palsson, A. Punt, C.J. Rodgveller, L. Rogers, C.N. Rooper, A. Seitz, C. Siddon, E. Siddon, K. Siwicke, K. Shotwell, M. Smith, P.D. Spencer, I.B. Spies, D. Stram, J. Sullivan, T.T. TenBrink, G.G. Thompson, J. Thorson, C.A. Tribuzio, S. Whitney, T.K. Wilderbuer, and S. Zador (2023). STOCK ASSESSMENT AND FISHERY EVALUATION REPORT FOR THE GROUNDFISH RESOURCES OF THE BERING SEA/ALEUTIAN ISLANDS REGIONS. The Plan Team for the Groundfish Fisheries of the Bering Sea and Aleutian Islands. November 2023. North Pacific Fishery Management Council 1007 West Third, Suite 400. Anchorage, AK 99501. (https://www.fisheries.noaa.gov/s3/2024-02/BSAIintro.pdf)

Spies, I., Meaghan Bryan, Lewis Barnett, Emily Markowitz, Zack Oyafuso, Elizabeth Siddon (2023). Assessment of the Yellowfin Sole Stock in the Bering Sea and Aleutian Islands. Alaska Fisheries Science Center, National Marine Fisheries Service National Oceanic and Atmospheric Administration. 7600 Sand Point Way NE., Seattle, WA 98115-6349. 16 November, 2023. https://apps-afsc.fisheries.noaa.gov/Plan_Team/2023/BSAIyfin.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		
Productivity Attribute		**Value**	**Score**
Average age at maturity (years)			
Average maximum age (years)			
Fecundity (eggs/spawning)			
Average maximum size (cm)			
Average size at maturity (cm)			
Reproductive strategy			
Mean trophic level			
		Average Productivity Score	
Susceptibility Attribute		**Value**	**Score**
Availability (area overlap)			
Encounterability (the position of the stock/species within the water column relative to the fishing gear)			
Selectivity of gear type			
Post-capture mortality			
		Average Susceptibility Score	
		PSA Risk Rating (From Table D3)	
		Compliance rating	
Further justification for susceptibility scoring (where relevant) *For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision*			
References			
Standard clauses 1.3.2.2			

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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