MarinTrust Standard V2

By-product Fishery Assessment
THA60
Chum salmon (*Oncorhynchus keta*)
in FAO 67 (Pacific Northeast)

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Chum salmon (*Oncorhynchus keta*)
	Geographical area:	FAO 67
	Country of origin of the product:	Thailand
	Stock:	Northeast Pacific chum salmon
Date	August 2024	
Report Code	THA60	
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 Agrotech Co. Ltd			
Country: Thailand			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		NSF / Global Trust Certification Ltd.	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval
Sam Peacock	Léa Lebechnech	0.2	Surveillance 1
Assessment Period	August 2024 – August 2025		

Scope Details	
Main Species	Chum salmon (*Oncorhynchus keta*)
Stock	Northeast Pacific chum salmon
Fishery Location	FAO 67
Management Authority (Country/ State)	NOAA
Gear Type(s)	Purse seine, drift gillnet, troll, set gillnet, beach seine, fish wheel, dip net
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's determination
Recommendation	**APPROVED**

Table 2. Assessment Determination

Assessment Determination
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. Chum salmon (*Oncorhynchus keta*) does not appear as Endangered or Critically Endangered on IUCN's Red List, and does not appear in CITES appendices; therefore, *Oncorhynchus keta* is eligible for approval for use as Marin trust by-product raw material. The large majority of chum salmon caught in the Northeast Atlantic originates from Alaskan waters. US fisheries are managed by NOAA Fisheries. Rather than biomass reference points, chum salmon is managed using escapement goals[1]; there are roughly 300 escapement goals in place in Alaska alone. Although this means that, strictly speaking, the large majority of chum salmon catch originates in fisheries which do have species-specific management measures in place, it is beyond the scope of this report to consider each of the many hundreds of "stocks". As a pragmatic alternative, the byproduct was assessed using Category D. Chum salmon was awarded an average Productivity score of 2 and an average Susceptibility score of 3, leading to the use of Table D4. There are management plans in place covering chum salmon fisheries in Alaska, Canada, and the rest of the US Pacific coast. These plans aim to manage the impacts of fisheries on chum salmon populations, and therefore D4.1 is met. There is no significant evidence that chum salmon is currently over-exploited, and there are several fisheries with MSC certifications in the region relevant to this assessment, meaning D4.2 is also met. Therefore, chum salmon (*Oncorhynchus keta*) in FAO 67 is **APPROVED** for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products.
Fishery Assessment Peer Review Comments
The assessor correctly assessed chum salmon (*Oncorhynchus keta*) in FAO 67 under category D, as it appears to be the most pragmatic alternative regarding the fact there are many hundreds of "stocks" and species-specific management measures in place. The peer reviewer agree with the fact that chum salmon was awarded an average Productivity score of 2 and an average Susceptibility rating of 3, which lead to a further assessment under Table D4, following MT guidance. As there are implemented management plans managing the impacts of fisheries on chum salmon populations in Alaska and neighbour countries, clause D4.1 is met. Also, as there is no significant evidence that chum salmon is currently over-exploited, and there are several fisheries with MSC certifications in the region relevant to this assessment, the peer reviewer agrees with the assessor conclusion of clause D4.2 being met. Therefore, chum salmon in FAO 67 is **APPROVED** for the production of fishmeal and fish oil under the current MarinTrust V2.3 by-products standards.
Notes for On-site Auditor

[1] https://www.fisheries.noaa.gov/species/chum-salmon/science

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]
Chum salmon	*Oncorhynchus keta*	Northeast Pacific chum salmon	See Assessment Determination	D	Not assessed	No

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

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.

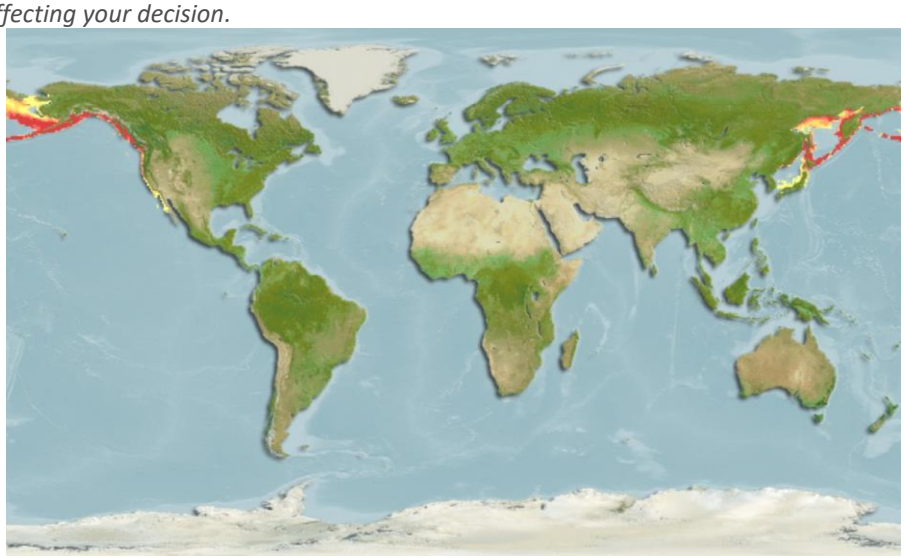
D1 Species Name — **Chum salmon (*Oncorhynchus keta*)**

Productivity Attribute	Value	Score
Average age at maturity (years)	2.2 years	1
Average maximum age (years)	10.7 years	2
Fecundity (eggs/spawning)	2,728	2
Average maximum size (cm)	100cm	2
Average size at maturity (cm)	61.5cm	2
Reproductive strategy	Demersal spawner	2
Mean trophic level	3.7	3
	Average Productivity Score	**2**

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	Retained	3
Post-capture mortality	Retained	3
	Average Susceptibility Score	**3**
	PSA Risk Rating (From Table D3)	**TABLE D4**
	Compliance rating	**PASS**

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.



Chum salmon, computer generated map of global distribution. From fishbase: https://fishbase.se/summary/241

References

Fishbase, chum salmon: https://fishbase.se/summary/241

Standard clauses 1.3.2.2

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	Chum salmon (*Oncorhynchus keta*)	
	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.	PASS
	D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.	PASS
		Outcome:	**PASS**

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.

Salmon fisheries in the US are managed by the National Oceanic and Atmospheric Administration (NOAA). There are separate management plans in place for Alaskan salmon (NPFMC 2024) and the rest of the US West Coast. Both FMPs cover chum salmon and have preventing over-exploitation as an objective.

In Canada, fisheries are managed by the Department of Fisheries and Oceans. There are four FMPs in place for Pacific coast salmon fisheries: South Coast British Columbia; North Coast British Columbia; Transboundary Rivers; and Yukon River chinook, fall chum and coho salmon (DFO 2024). These are similarly aimed at managing the potential impacts of fisheries on salmon stocks.

The potential impacts of fisheries on this species are considered, and management plans are in place to mitigate these impacts. D4.1 is met.

D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.

Chum salmon migrate back to the freshwater area where they were born to spawn, and as such there are hundreds of stocks in the area relevant to this assessment. Stock status varies considerably, but wild-caught Pacific coast salmon is generally considered to be sustainably managed (SFW 2024), and several areas hold MSC certifications (MSC 2024). No evidence was encountered to suggest that fisheries have a significant negative impact on chum salmon stocks in this region.

There is no substantial evidence that fisheries have a significant negative impact on the species, and D4.2 is met.

References

DFO (2024). Department of Fisheries and Oceans, Integrated Fisheries Management Plans. https://www.pac.dfo-mpo.gc.ca/fm-gp/ifmp-eng.html

MSC (2024). Certified fisheries involving chum salmon. https://fisheries.msc.org/en/fisheries/@@search?q=chum

NOAA (2024). Chum salmon overview. https://www.fisheries.noaa.gov/species/chum-salmon

NPFMC (2024). Fishery management plan for the salmon fisheries in the EEZ off Alaska. https://www.npfmc.org/wp-content/PDFdocuments/fmp/Salmon/SalmonFMP.pdf

PFMC (2024). Pacific coast salmon fishery management plan. https://www.pcouncil.org/documents/2022/12/pacific-coast-salmon-fmp.pdf/

SFW (2024). Monterey Bay Aquarium Seafood Watch: Chum Salmon. https://www.seafoodwatch.org/recommendations/search?query=%3Afree%3Bchum%20salmon%7Call	
Links	
MarinTrust Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01