MarinTrust Standard V2

By-product Fishery Assessment
THA59
Pink salmon (*Oncorhynchus gorbusha*) in FAO 67 (Pacific Northeast)

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Pink salmon (*Oncorhynchus gorbusha*)
	Geographical area:	FAO 67
	Country of origin of the product:	Thailand
	Stock:	Northeast Pacific pink salmon
Date	August 2024	
Report Code	THA59	
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	Pink salmon (*Oncorhynchus gorbusha*)
Stock	Northeast Pacific pink 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 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. Pink salmon (*Oncorhynchus gorbusha*) does not appear as Endangered or Critically Endangered on IUCN's Red List, and does not appear in CITES appendices; therefore, *Oncorhynchus gorbusha* is eligible for approval for use as Marin trust by-product raw material. The large majority of pink salmon caught in the Northeast Atlantic originates from Alaskan waters. US fisheries are managed by NOAA Fisheries. Rather than biomass reference points, pink salmon is managed using escapement goals[1]; there are roughly 300 salmon escapement goals in place in Alaska alone. Although this means that, strictly speaking, the large majority of pink 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. Pink salmon was awarded an average Productivity score of 1.71 and an average Susceptibility score of 3, leading to a Pass rating against Table D3. Therefore, pink salmon (*Oncorhynchus gorbusha*) 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 pink salmon (*Oncorhynchus gorbusha*) 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 longtail tuna was awarded an average Productivity score of 1.71 and an average Susceptibility rating of 3, which lead to a PASS rating on Table D3. Therefore, pink 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/pink-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]
Pink salmon	*Oncorhynchus gorbusha*	Northeast Pacific pink salmon	See Assessment Determination	D	Not assessed	No

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

CATEGORY D SPECIES

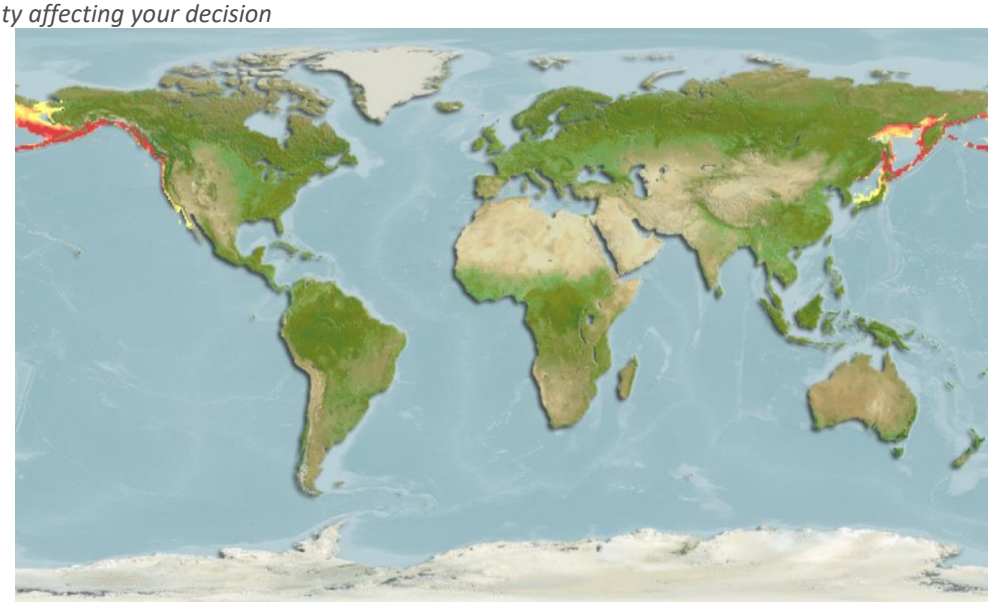
Category D species are those which are not subject to a species-specific management regime. In the case of mixed trawl fisheries, Category D species may make up the majority of landings. The comparative lack of scientific information on the status of the population of the species means that a risk-assessment style approach must be taken.

D1 Species Name — **Pink salmon (*Oncorhynchus gorbusha*)**

Productivity Attribute	Value	Score
Average age at maturity (years)	2 years	1
Average maximum age (years)	8.8 years	1
Fecundity (eggs/spawning)	1060[1]	2
Average maximum size (cm)	76cm	1
Average size at maturity (cm)	42cm	2
Reproductive strategy	Demersal egg layer	2
Mean trophic level	4.5	3
	Average Productivity Score	**1.71**
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)	**PASS**
	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



Pink salmon, computer generated map of global distribution. From fishbase: https://www.fishbase.us/summary/SpeciesSummary.php?ID=240

References

(1): Kwain, Wen-hwa (1982). Spawning Behavior and Early Life History of Pink Salmon (*Oncorhynchus gorbuscha*) in the Great Lakes. https://cdnsciencepub.com/doi/abs/10.1139/f82-182

All other data from Fishbase, pink salmon: https://www.fishbase.us/summary/SpeciesSummary.php?ID=240
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		
	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