



MarinTrust Standard V2

By-product Fishery Assessment

VNM10

Pacific cod (*Gadus macrocephalus*) in FAO Area 67, Eastern Bering Sea

MarinTrust Programme

Unit C, Printworks

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Pacific cod (<i>Gadus macrocephalus</i>)
	Geographical area:	FAO Subarea 67 - Aleutian Islands
	Country of origin of the product:	Vietnam Flag country: USA
	Stock:	Pacific cod (<i>Gadus macrocephalus</i>) FAO Subarea 67 - Aleutian Islands
Date	November 2024	
Report Code	VNM10	
Assessor	Ana Elisa Almeida Ayres	
Country of origin of the product - PASS	Vietnam	
Country of origin of the product - FAIL	N/A	

Application details and summary of the assessment outcome			
Company Name(s): Thien Quynh Co. Ltd			
Country: Vietnam			
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
Ana Elisa Almeida Ayres	Matthew Jew	0.5	Re-approval
Assessment Period		November 2024 – November 2025	

Scope Details	
Main Species	Pacific cod (<i>Gadus macrocephalus</i>)
Stock	Pacific cod (<i>Gadus macrocephalus</i>) FAO Subarea 67 - Aleutian Islands
Fishery Location	FAO Subarea 67 - Aleutian Islands
Management Authority (Country/ State)	Alaska Department of Fish and Game (ADF&G), North Pacific Fishery Management Council (NPFMC)
Gear Type(s)	Demersal trawls, longlines, pots
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's recommendation
Recommendation	APPROVED

Table 2. Assessment Determination

Assessment Determination
<p>If any species is categorised as Endangered or Critically Endangered on Union for Conservation of Nature's Red List of Threatened Species - IUCN's Red List, or if it appears in the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES appendices, it cannot be approved for use as MarinTrust raw material. Pacific cod (<i>Gadus macrocephalus</i>) is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, Pacific cod (<i>Gadus macrocephalus</i>) is eligible for approval for use as Marin Trust by-product raw material.</p> <p>It is managed in the Eastern Bering Sea by the Alaska and US Federal Governments, with stock assessments conducted by NOAA Fisheries. Reference points and annual quotas are established, therefore the stock was assessed under Category C.</p> <p>Fishery removals are included in the stock assessment and it PASSES Clause C1.1. The stock is considered, in its most recent stock assessment from February 2023, to have biomass above the limit reference point, it PASSES Clause C1.2.</p> <p>Therefore, Pacific cod (<i>Gadus macrocephalus</i>) in FAO Subarea 67 - Eastern Bering Sea is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified <i>Gadus macrocephalus</i> in FAO Area 67 as Category C, the stock is subject to a specific management regime and reference points are defined by NOAA Fisheries.</p> <p>Fishery removals are considered in the stock assessment process. The most recent stock assessment shows that the stock is above limit reference point.</p> <p><i>Gadus macrocephalus</i> in FAO area 67 passes both clauses (C1.1 and C1.2) and therefore should be approved under the MarinTrust Standard v.2.3</p>
Notes for On-site Auditor
<p>N/A</p>

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
Pacific cod	<i>Gadus macrocephalus</i>	Pacific cod FAO Subarea 67 - Aleutian Islands	Yes	C	Not Evaluated	No

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		Pacific cod (<i>Gadus macrocephalus</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.	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.

In the most recent stock assessment conducted by Alaska Fisheries Science Center, catches of Bering Sea Pacific cod for 1991 - 2022 were used, as well as a preliminary catch estimate for 2023. Input data also included catch biomass, size composition and CPUE, plus survey abundance, size composition and age composition data (Barbeaux *et al.*, 2023).

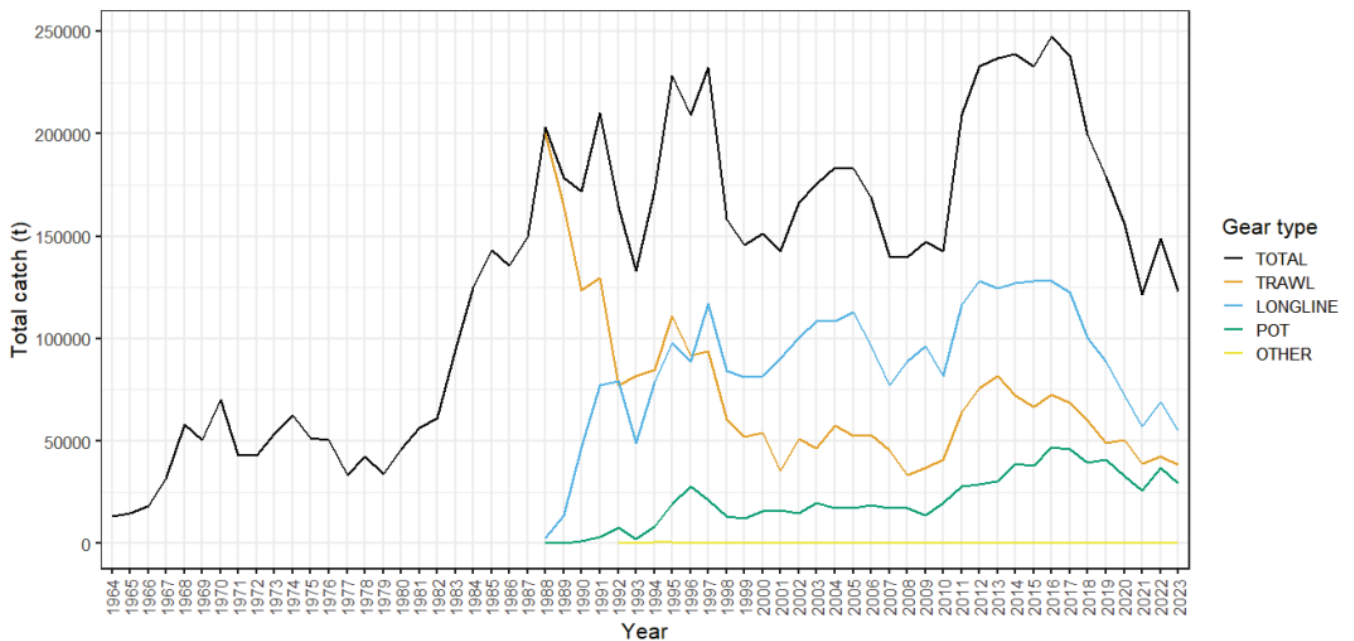


Figure 1. Total catch and catch by gear type. Catch for 2023 is through October 3 (Barbeaux *et al.*, 2023).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, 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 2023 stock assessment concluded that the stock is not subject to overfishing and is not overfished nor approaching overfished (where “overfished” is defined as below the target reference point). As stock biomass is estimated to be above the

target reference point, and therefore above any potential limit reference point.

According to MFRAG (2024) “Stock status is determined relative to B40% and B35%, which are regarded as reference points that trigger the harvest control rule. B40% can be considered a proxy for BMSY proxy reference point though it is really treated as a limit within management such that if female spawning biomass is assessed as below B40%, maximum allowable fishing mortality rate is reduced. 20% of virgin biomass can be considered a proxy of PRI.”

Table 3. Principal results of the 2023 assessment (based on Model 23.1.0.d, biomass and catch figures are in units of t) and compared with the corresponding quantities as specified last year (Barbeaux *et al.*, 2023).

Quantity	As estimated or specified last year for:		As estimated or recommended this year for:	
	2023	2024	2024*	2025*
<i>M</i> (natural mortality rate)	0.34	0.34	0.386	0.386
Tier	3b	3b	3b	3b
Projected total (age 0+) biomass (t)	844,578	831,566	808,203	787,837
Projected female spawning biomass (t)	245,594	242,911	223,107	211,131
<i>B</i> _{100%}	668,477		567,465	
<i>B</i> _{40%}	267,391		226,986	
<i>B</i> _{35%}	233,467		198,612	
<i>F</i> _{OFL}	0.36	0.35	0.46	0.43
<i>maxF</i> _{ABC}	0.29	0.29	0.37	0.35
<i>F</i> _{ABC}	0.29	0.29	0.37	0.35
OFL (t)	172,495	166,814	200,995	180,798
maxABC (t)	144,834	140,159	167,952	150,876
ABC (t)	144,834	140,159	167,952	150,876
Status	As determined <i>this year</i> for:			
	2021	2022	2022	2023
Overfishing	No	n/a	No	n/a
Overfished	n/a	No	n/a	No
Approaching overfished	n/a	No	n/a	No

*Projections are based on assumed catches of 142,945 t, and 167,952 t in 2023 and 2024, respectively.

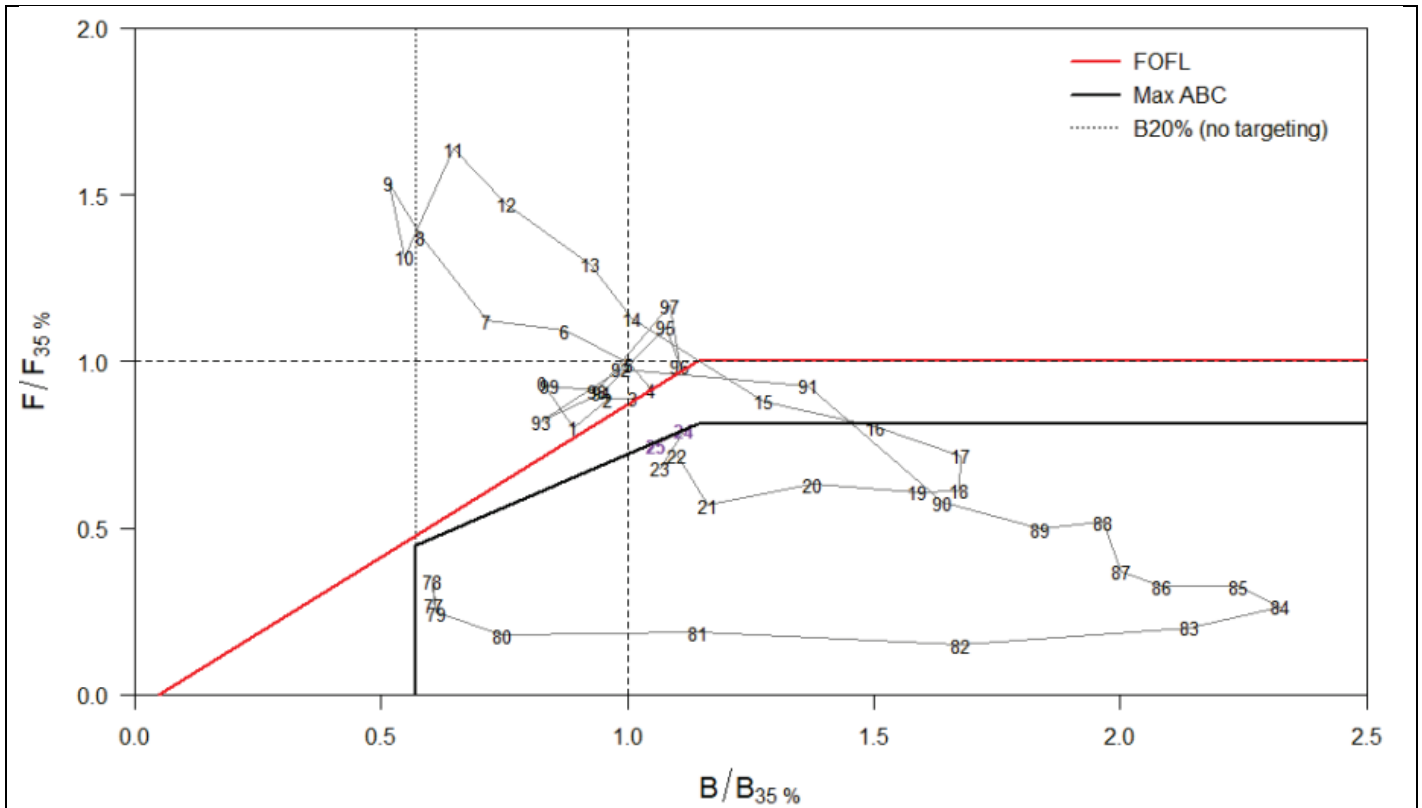


Figure 2. Trajectory of EBS Pacific cod fishing mortality and female spawning biomass as estimated by ensemble model (Barbeaux *et al.*, 2023).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), thus C1.2 is met.

References

MFRAG. 2024. Bering Sea and Aleutian Islands and Gulf of Alaska Cod No: MSC-F-31493. 3rd Surveillance Report May 24th, 2024. MRAG Americas, Inc. <https://fisheries.msc.org/en/fisheries/bsai-and-go-a-pacific-cod/@assessments>

Barbeaux, S.J., L. Barnett, M. Hall, P. Hulson, J. Nielsen, S.K. Shotwell, E. Siddon, I. Spies, and J. Thorson. 2023. Assessment of the Pacific Cod Stock in the Eastern Bering Sea. <https://www.npfmc.org/wpcontent/PDFdocuments/SAFE/2023/EBSpcod.pdf>.

Links

MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01