



MarinTrust Standard V2

By-product Fishery Assessment *Pacific cod (*Gadus macrocephalus*) in FAO 61, western 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 61, northeast Pacific Ocean
	Country of origin of the product:	Vietnam (flag state(s): Russia)
	Stock:	Pacific cod in the western Bering Sea
Date	12 June 2023	
Report Code	VNM09	
Assessor	Matthew Jew	
Country of origin of the product - PASS	Vietnam (flag state(s): Russia)	
Country of origin of the product - FAIL	NA	

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:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Matthew Jew	Léa Lebechnech	0.5	Surveillance 2
Assessment Period	Up to June 2023		

Scope Details	
Main Species	Pacific Cod (<i>Gadus macrocephalus</i>)
Stock	Pacific cod in the western Bering Sea
Fishery Location	FAO 61, northeast Pacific Ocean
Management Authority (Country/ State)	Federal Fisheries Agency (FFA) of the Russian Federation
Gear Type(s)	Demersal longline
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's recommendation
Recommendation	APPROVED

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 cod (<i>Gadus macrocephalus</i>) does not appear as Endangered or Critically Endangered on IUCN’s Red List, and does not appear in CITES appendices; therefore, <i>Gadus macrocephalus</i> is eligible for approval for use as Marin trust by-product raw material.</p> <p>The stock is managed by Federal Fisheries Agency (FFA) of the Russian Federation with regular stock assessment carried out by KamchatNIRO. The stock is managed by a TAC spread over the western region of FAO 61 (within the Russian EEZ). There are fishing and biomass reference points defined for this stock and, as such, it is 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, to have biomass above the limit reference point, it PASSES Clause C1.2.</p> <p>Therefore, Pacific cod in the western Bering Sea is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.0 by-products.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified the Pacific cod in the western Bering Sea under category C, as the stock is managed and reference points are defined to assess the stock status against.</p> <p>Fishery removals from the stock are considered in the stock assessment process, and the most recent stock assessment shows that the stock is considered to have a biomass well above the limit reference point: the fishery passes both clauses C1.1 and C1.2.</p> <p>Therefore the Pacific cod in the western Bering Sea is APPROVED for the production of fishmeal and fish oil under the current MarinTrust V2.0 by-products standards.</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 a 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 in the western Bering Sea	Federal Fisheries Agency (FFA) of the Russian Federation	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.	Yes
	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.	Yes

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.

The stock is assessed annually according to the standard assessment methods (Aravind and Samy-Kamal, 2022). The stock assessment process is conducted using the 'SYNTHESIS' method which algorithm is realized in a computer program 'Methods' version 3.06 (Aravind and Samy-Kamal, 2022). The model uses a variety of fishery-dependent and -independent sources including CPUE.

As this stock is managed by TAC, total catch efforts are recorded each year and used in the stock assessment process. Figure 1 shows the long-term trends in catch data. More recent catch data could not be located by the assessor.

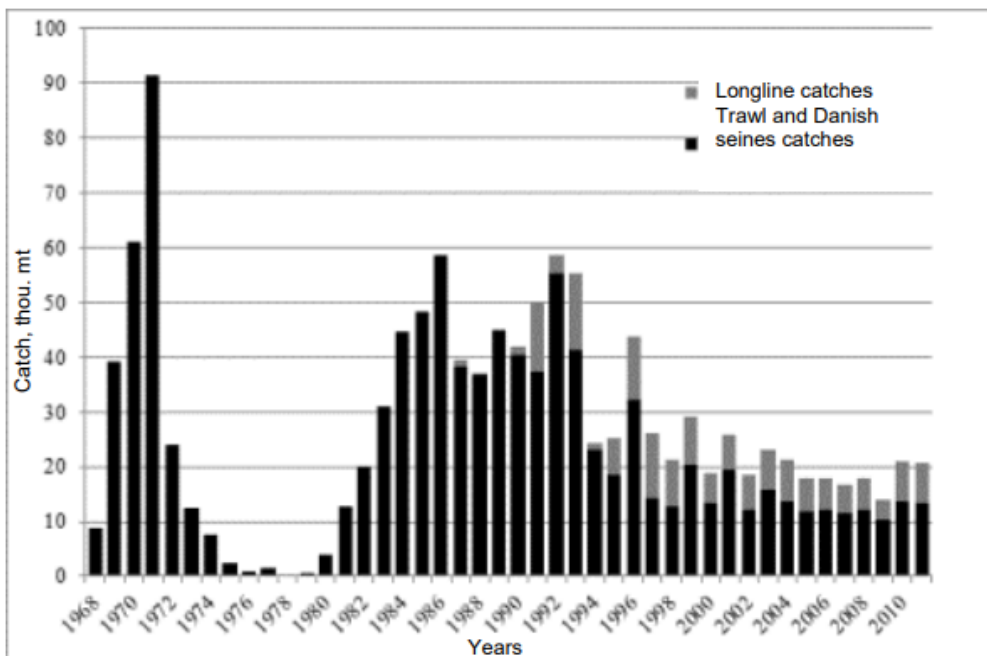


Figure 1. Long-term catches for Pacific cod in the west Bering Sea from 1968 to 2011. Source: Lajus et al., 2019

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.

Biomass for this stock was last assessed in 2022 with data up to the 2021 fishing season (Vasilets and Sendek, 2023). The reference points for this stock are as follows (taken from Lajus et al., 2019):

- target reference point for biomass $B_{tr} = B_{MSY} = 1,123,210$ mt;
- limit reference point for spawning stock biomass $B_{lim} = B_{loss} = 291,080$ mt;
- precautionary estimate of the limit reference point for spawning stock biomass $B_{pa} = B_{lim} \times e^{-1,645s} = 375,620$ mt;
- limit reference point on fishing mortality $F_{lim} = F_{Loss} = 0.588 \text{ year}^{-1}$;
- precautionary estimate of the limit reference point for fishing mortality $F_{pa} = F_{lim} \times e^{-1,645s} = 0.540 \text{ year}^{-1}$;
- target reference point for fishing mortality $F_{tr} = F_{MSY} = 0.105 \text{ year}^{-1}$;
- the value of F_0 was assumed to be zero.

Figure 2 (below) is taken from the 2023 TAC forecast for Pacific cod in the West Bering Sea zone. Current biomass is fluctuating around B_{MSY} (1,123,210 mt) and well above B_{lim} (291,080 mt). Furthermore, as displayed in Figure 3, 2021 biomass is to the right of B_{tr} (target reference point) indicating that the stock is above the target reference point and well above the limit reference point (B_{lim}).



Figure 2. Long term trends in spawning stock biomass (SSB) for Pacific cod in the West Bering Sea zone. SSB is noted by the data displayed with triangles and the left vertical axis is in megagrams (or thousands of metric tonnes). Bar graph data are CPUE (t per day) from fishery independent trawl surveys. CPUE data are displayed as the circular dots.

Source: Vasilets and Sendek, 2023.

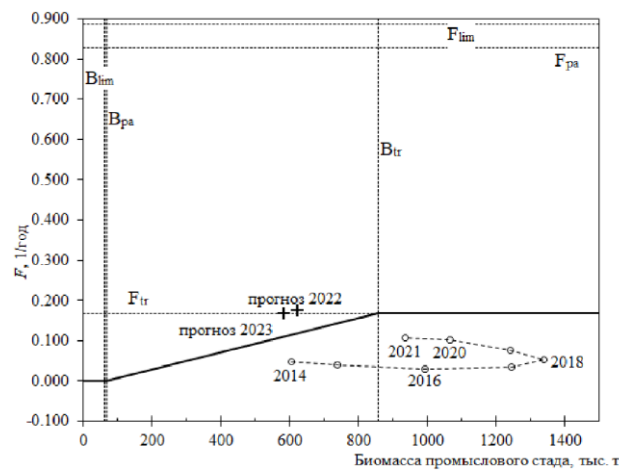


Figure 3. Harvest Control Rule of Pacific cod fishery in the western Bering Sea (West Bering Sea and Chukotskaya zones) and evaluation of its implementation from 2014 to 2021 with forecasts for 2022 and 2023. Biomass parameters are on the horizontal axis and fishing mortality on the vertical axis.

Source: Vasilets and Sendek, 2023

Therefore, the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point and it PASSES clause C1.2.

References

Lajus, D., Safronova, D., Orlov, A., and Blyth-Skyrme, R. 2019. Western Bering Sea Pacific cod and Pacific halibut longline Public Certification Report. MSC fisheries assessment. Marine Certification. https://fisheries.msc.org/en/fisheries/western-bering-sea-pacific-cod-and-pacific-halibut-longline/@@assessment-documentsets?assessment_step=Initial+assessment&documentset_name=Public+certification+report&assessment_id=FA-01881&phase_name=Public+certification+report+and+certificate+issue&start_date=2018-04-18

Aravind, V., and Samy-Kamal, M. 2022. Western Bering Sea Pacific cod and Pacific halibut longline 1st Surveillance Report. MSC fisheries assessment. UCSL – United Certification Systems Limited. https://fisheries.msc.org/en/fisheries/western-bering-sea-pacific-cod-and-pacific-halibut-longline/@@assessment-documentsets?assessment_step=Surveillance+Audit&documentset_name=Surveillance+report&assessment_id=FA-02765&phase_name=Ongoing+surveillance&start_date=2021-09-03

Vasilets, P., and Sendek, D. 2023. Western Bering Sea Pacific cod and Pacific halibut longline 2nd Surveillance Report. MSC fisheries assessment. UCSL – United Certification Systems Limited. https://fisheries.msc.org/en/fisheries/western-bering-sea-pacific-cod-and-pacific-halibut-longline/@@assessment-documentsets?assessment_step=Surveillance+Audit&documentset_name=Surveillance+report&assessment_id=FA-03105&phase_name=Ongoing+surveillance&start_date=2022-10-25

Links

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