



MarinTrust Standard V2

By-product Fishery Assessment *Northern Rock Sole (*Lepidopsetta polyxystra*) in FAO 61 & 67 (Bering Sea and Aleutian Islands)*

MarinTrust Programme

Unit C, Printworks

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Northern rock sole (<i>Lepidopsetta polyxystra</i>)
	Geographical area:	FAO 61 & 67 northeast Pacific
	Country of origin of the product:	Thailand (flag state(s): USA)
	Stock:	Northern rock sole in Bering Sea and Aleutian Islands (BSAI)
Date	5 May 2023	
Report Code	THA07	
Assessor	Matthew Jew	
Country of origin of the product - PASS	Thailand (flag state(s): USA)	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Piyo Bhokabhan Co. Ltd			
Country: Thailand			
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 1
Assessment Period	Up to May 2023		

Scope Details	
Main Species	Northern rock sole (<i>Lepidopsetta polyxystra</i>)
Stock	Northern rock sole in Bering Sea and Aleutian Islands (BSAI)
Fishery Location	FAO 61 & 67 northeast Pacific
Management Authority (Country/ State)	North Pacific Management Council
Gear Type(s)	Bottom Trawl
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's determination
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. Northern rock sole (<i>Lepidopsetta polyxystra</i>) does not appear as Endangered or Critically Endangered on IUCN’s Red List, and does not appear in CITES appendices; therefore, <i>Lepidopsetta polyxystra</i> is eligible for approval for use as Marin trust by-product raw material.</p> <p>This stock is managed by the North Pacific Fisheries Management Council (NPFMC) with stock assessment carried out by National Marine Fisheries Service (NMFS) with reference points defined for BSAI northern rock sole. As there is a management regime in place and reference points are defined, this stock 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, northern rock sole in Bering Sea and Aleutian Islands (BSAI) 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 internal peer reviewer agrees with the assessor’s determination, who correctly classified and approved the stock of northern rock sole in Bering Sea and Aleutian Islands (BSAI) under Category C. Fishery removals are included in the stock assessment and the stock is considered, in its most recent stock assessment, to have biomass above the limit reference point, so it PASSES Clauses C1.1 and C1.2.</p> <p>Therefore, northern rock sole in Bering Sea and Aleutian Islands (BSAI) is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v 2.0 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
Northern rock sole	<i>Lepidopsetta polyxystra</i>	Northern rock sole in Bering Sea and Aleutian Islands (BSAI)	NPFMC	C	LC	No

¹ <https://www.iucnredlist.org/species/158631806/158638021>

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		Northern rock sole (<i>Lepidopsetta polyxystra</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
<p>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.</p> <p>The max allowable biological take (ABC) for 2023 is 158,935 tons.</p> <p>BSAI northern rock sole is assessed using a statistical catch-at-age model AD Model builder. Commercial catches are used in the model as well as data sampled from catch including relative catch weight, relative catch per set and relative average length of catch.</p> <p>Long term catches for BSAI northern rock sole are given below:</p>			

Year	Foreign	Joint-Venture	Domestic	Total
1977	5,319			5,319
1978	7,038			7,038
1979	5,874			5,874
1980	6,329	2,469		8,798
1981	3,480	5,541		9,021
1982	3,169	8,674		11,843
1983	4,479	9,140		13,619
1984	10,156	27,523		37,679
1985	6,671	12,079		18,750
1986	3,394	16,217		19,611
1987	776	11,136	28,910	40,822
1988		40,844	45,522	86,366
1989		21,010	47,902	68,912
1990		10,492	24,761	35,253
1991			56,058	56,058
1992			52,723	52,723
1993			64,261	64,261
1994			59,607	59,607
1995			55,029	55,029
1996			46,929	46,929
1997			67,815	67,815
1998			33,644	33,644
1999			41,090	41,090
2000			49,668	49,668
2001			29,477	29,477
2002			41,867	41,867
2003			36,086	36,086
2004			48,681	48,681
2005			37,362	37,362
2006			36,456	36,456
2007			37,126	37,126
2008			51,276	51,276
2009			48,716	48,716
2010			53,200	53,200
2011			60,534	60,534
2012			75,945	75,945
2013			59,751	59,751
2014			51,690	51,690
2015			45,468	45,468
2016			45,084	45,084
2017			35,222	35,222
2018			28,269	28,269
2019			25,800	25,800
2020			25,938	25,938
2021			14,393	14,393
2022			16,014	16,014

Figure 1. Long-term catches (in tons) for BSAI northern rock sole from 1977 to 2022.

Source: McGilliard et al., 2022.

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.

This stock is considered a Tier 1a stock. The assessment model is a population model that uses fishery data and survey trends to estimate population levels. The Tier 1 projection operates within the full assessment model by projecting estimates of the

female spawning biomass, age 6+ total biomass, ABC and OFL ahead two years. Since the full assessment model is not rerun in this assessment, the projected values from the 2020 assessment are used to provide ABC and OFL.

The stock did not experience overfishing in 2020 nor 2021 and it was not considered overfished (or approaching overfishing) in 2021 or 2022.

Quantity	As estimated or specified last year for:		As estimated or recommended this year for:	
	2022	2023	2023	2024
<i>M</i> (natural mortality rate)	0.15 (f),0.17 (m)	0.15 (f),0.17 (m)	0.15 (f),0.19 (m)	0.15 (f),0.19 (m)
Tier	1a	1a	1a	1a
Projected age 6+ geometric mean biomass (t)	1,363,592	1,787,395	941,359	1,111,320
Projected Female spawning biomass (t)	287,600	320,399	260,887	291,774
B_0	476,820	476,820	447,795	447,795
B_{MSY}	158,972	158,972	155,293	155,293
F_{OFL}	0.157	0.157	0.176	0.176
$maxF_{ABC}$	0.152	0.152	0.169	0.169
F_{ABC}	0.152	0.152	0.129	0.108
OFL (t)	214,084	280,621	166,034	196,011
maxABC (t)	206,896	271,199	158,935	187,631
ABC (t)	206,896	271,199	121,719	119,969
Status	As determined last year for:		As determined this year for:	
	2020	2021	2021	2022
Overfishing	no	n/a	no	n/a
Overfished	n/a	no	n/a	no
Approaching overfished	n/a	no	n/a	no

Figure 2. BSAI northern rock sole summary of the stock assessment.
Source: McGilliard et al., 2022.

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

McGilliard, C.R., Ianelli, J., Bryan, M., Spies, I., Haehn, R., Punt, A.E., and Lowe, S. 2022. Assessment of the Northern Rock Sole stock in the Bering Sea and Aleutian Islands. *Stock Assessment and Fishery Evaluation Report for the Groundfish Resources of the Bering Sea/Aleutian Islands Regions*. North Pacific Fishery Management Council, Anchorage, AK. https://apps-afsc.fisheries.noaa.gov/Plan_Team/2022/BSAIrocksole.pdf

Links

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