MarinTrust Standard V2

By-product Fishery Assessment

Report Template (Gulf of Alaska Northern Rock Sole in FAO Areas 61 and 67)

Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Northern Rock Sole, *Lepidopsetta polyxystra*
	Geographical area:	Northeast Pacific, FAO 61 and FAO 67
	Country of origin of the product:	USA (Flag Country)
	Stock:	Gulf of Alaska (GOA)
Date	May 2022	
Report Code	THA08	
Assessor	Ivan Mateo	
Country of origin of the product - PASS	USA (Flag Country)	
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			
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Ivan Mateo	Geraldine Criquet	0.5	Initial
Assessment Period	To May 2022		

Scope Details	
Main Species	Northern Rock Sole, *Lepidopsetta polyxystra*
Stock	Gulf of Alaska (GOA)
Fishery Location	Northeast Pacific, FAO 61 and FAO 67
Management Authority (Country/ State)	North Pacific Management Council (NPFMC)
Gear Type(s)	Bottom Trawl
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's determination of approval
Recommendation	APPROVE

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 MARINTRUST raw material. GOA Northern Rock Sole is not listed as Endangered or Critically Endangered on IUCN's Red List, nor it is listed in CITES appendices; therefore, GOA Northern Rock Sole is eligible for approval for use as MARIN TRUST by-product raw material. This stock is managed in by North Pacific Management Council (NPFMC). NMFS conducts stock assessments; reference points are defined for the GOA Northern Rock Sole stock The stock is classified as Category C. Fishery removals of the stock are considered in the various stock assessment processes so the stock PASSES Clause C1.1. In the most recent stock assessment, the stock is considered to have a biomass above the limit reference point, the stocks PASSES Clause C1.2. In order to be approved, the stock under assessment must pass both Clauses C1.1 and C1.2. GOA Northern Rock Sole passes both Clauses C1.1 and C1.2, and therefore is APPROVED by the assessor for the production of fishmeal and fish oil under the current Marin Trust v.2.20 by-product Standard.
Fishery Assessment Peer Review Comments
The assessor correctly classified Gulf of Alaska Northern rock sole stock as Category C, the stock is subject to a specific management regime and reference points are defined. Fishery removals are considered in the stock assessment process. The most recent stock assessment determined that the stock is not overfished. Therefore, the stock is considered to have a biomass above the limit reference point. Gulf of Alaska Northern rock sole passes both Clauses C1.1 and C1.2 and therefore should be approved under the Marin Trust Standard v.2.
Notes for On-site Auditor
None.

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]
Northern Rock Sole	*Lepidopsetta polyxystra*	Gulf of Alaska	NPFMC	C	LC	No

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[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		Northern Rock Sole, *Lepidopsetta polyxystra*	
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.			
Data to support the stock assessment is derived from commercial catches: relative catches in weight, relative catch per set and relative average length of catch. Total catches (retained plus discards) are shown in **Error! Reference source not found.** . T herefore, the stock PASSES Clause C1.1.			

TABLE **3**. TOTAL ROCK SOLE CATCH FROM ALASKA FISHERIES INFORMATION NETWORK (AKFIN) AS OF 2021-10

Year	Catch (t)
1993	8112.12
1994	3008.11
1995	3923.91
1996	6595.32
1997	5466.78
1998	2532.34
1999	1765.35
2000	5386.69
2001	4771.73
2002	5564.29
2003	3554.64
2004	2216.74
2005	4130.50
2006	5763.28
2007	6727.40
2008	7269.09
2009	6538.69
2010	3570.64
2011	3237.93
2012	2923.49
2013	4199.96
2014	3645.50
2015	2863.09
2016	3166.62
2017	2116.89
2018	2106.35
2019	2171.89
2020	3175.48
2021	1367.46*

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.

A statistical age-structured model is used as the primary assessment tool for the Gulf of Alaska northern rock sole assessment. This assessment consists of a population model, which uses survey and fishery data to generate a historical time series of population estimates, and a projection model, which uses results from the population model to predict future population estimates and recommended harvest levels. The data sets used in this assessment include total catch biomass, fishery age compositions, trawl survey abundance estimates and trawl survey age compositions.

The northern rock sole models estimate an increasing trend in total and spawning biomass and relatively low fishing mortality rates in recent years. The 2021 northern rock sole SSB estimates were above B35% and the 2021 fishing mortality estimates were below F35%.

The status of the stock is not overfished(Table 4). Therefore, the assessor determines that, the stock is considered to have a biomass above the limit reference point, it PASSES
Clause C1.2.

TABLE 4. STOCK STATUS OF GOA NORTHERN ROCK SOLE

Northern Rock Sole

Quantity	As estimated or *specified last* year for:		As estimated or *recommended this* year for:	
	2021	2022	2022+	2023+
M (natural mortality rate; female, male)	0.2, 0.253*	0.2, 0.253*	See area specific estimates	
Tier	3a	3a	3a	3a
Projected total (age 0+) biomass (t)	94,612	94,614	98,387	100,919
Projected Female spawning biomass (t)	47,694	46,330	35,474	39,682
$B_{100\%}$	51,387	51,387		
$B_{40\%}$	20,555	20,555		
$B_{35\%}$	17,985	17,985	See area specific estimates	
F_{OFL}	0.462	0.462		
$maxF_{ABC}$	0.382	0.382		
F_{ABC}	0.382	0.382		
OFL (t)	21,080	21,191	14,027	14,810
maxABC (t)	17,756	17,851	11,882	12,551
ABC (t)	17,756	17,851	11,882	12,551
	As determined *last* year for:		As determined *this* year for:	
Status	2019	2020	2020	2021
Overfishing	No	n/a	No	n/a
Overfished	n/a	No	n/a	No
Approaching overfished	n/a	No	n/a	No

*Male natural mortality was estimated. +Estimates represent the combined results from the area-specific model 21.2.

References

https://apps-afsc.fisheries.noaa.gov/refm/docs/2021/GOArocksole.pdf

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

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		
Productivity Attribute		**Value**	**Score**
Average age at maturity (years)			
Average maximum age (years)			
Fecundity (eggs/spawning)			
Average maximum size (cm)			
Average size at maturity (cm)			
Reproductive strategy			
Mean trophic level			
	Average Productivity Score		
Susceptibility Attribute		**Value**	**Score**
Availability (area overlap)			
Encounterability (the position of the stock/species within the water column relative to the fishing gear)			
Selectivity of gear type			
Post-capture mortality			
	Average Susceptibility Score		
	PSA Risk Rating (From Table D3)		
	Compliance rating		
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*			
References			
Standard clauses 1.3.2.2			

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk — Score 3	Medium productivity/ Medium risk — Score 2	High productivity/ Low risk — Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk — Score 3	Medium susceptibility/ Medium risk — Score 2	Low susceptibility/ Low risk — Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

Note: Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

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