



MarinTrust Standard V2

By-product Fishery Assessment *Flathead Sole (Hippoglossoides elassodon) in FAO 61 & 67 (Gulf of Alaska)*

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Flathead sole (<i>Hippoglossoides elassodon</i>)
	Geographical area:	FAO 61 & 67 northeast Pacific
	Country of origin of the product:	Thailand (flag state(s): USA)
	Stock:	Flathead sole in the Gulf of Alaska (GOA)
Date	8 May 2023	
Report Code	THA06	
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	Flathead sole (<i>Hippoglossoides elassodon</i>)
Stock	Flathead sole in the Gulf of Alaska (GOA)
Fishery Location	FAO 61 & 67 northeast Pacific
Management Authority (Country/ State)	North Pacific Fisheries Management Council (NPFMC)
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. Flathead sole (<i>Hippoglossoides elassodon</i>) does not appear as Endangered or Critically Endangered on IUCN’s Red List, and does not appear in CITES appendices; therefore, <i>Hippoglossoides elassodon</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 GOA flathead 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, flathead sole in the Gulf of Alaska (GOA) 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 flathead sole in the Gulf of Alaska (GOA) 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, flathead sole in the Gulf of Alaska (GOA), 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
Flathead sole	<i>Hippoglossoides elassodon</i>	Flathead sole in Gulf of Alaska (GOA)	NPFMC	C	LC	No

¹ <https://www.iucnredlist.org/species/158625653/158637976>

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		Flathead sole (<i>Hippoglossoides elassodon</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 catch (ABC) for GOA Flathead sole 2023 is 40,222 tons.</p> <p>GOA flathead sole is assessed using Model 17.1a which was bridged from Stock Synthesis v3.24u (SS3). This revised model incorporates catch data from 2017-2021 (previous years already included), estimated 2022 catch, survey biomass data from multiple sources and multiple years, length composition data from 2018-2022.</p> <p>Long term catches for GOA flathead sole are given below:</p>			

Year	OFL	ABC	TAC	Total Catch	% Retained
1995	31,557	28,790	9,740	2,180	71
1996	31,557	52,270	9,740	3,074	77
1997	34,010	26,110	9,040	2,441	83
1998	34,010	26,110	9,040	1,731	83
1999	34,010	26,110	9,040	897	62
2000	34,210	26,270	9,060	1,548	84
2001	34,210	26,270	9,060	1,912	87
2002	29,530	22,690	9,280	2,146	87
2003	51,560	41,390	11,150	2,459	87
2004	64,750	51,720	10,880	2,398	80
2005	56,500	45,100	10,390	2,552	86
2006	47,003	37,820	9,077	3,142	89
2007	48,658	39,110	9,148	3,130	91
2008	55,787	44,735	11,054	3,446	89
2009	57,911	46,464	11,181	3,663	97
2010	59,295	47,422	10,441	3,903	95
2011	61,412	49,133	10,587	2,732	97
2012	59,380	47,407	30,319	2,167	94
2013	61,036	48,738	30,496	2,819	88
2014	50,664	41,231	27,746	2,557	94
2015	50,792	41,349	27,756	2,001	93
2016	42,840	35,020	27,832	2,422	96
2017	43,128	35,243	27,856	2,050	93
2018	43,011	35,266	26,388	2,202	98
2019	44,865	36,782	26,489	2,668	95
2020	46,572	38,196	28,262	1,911	98
2021	47,982	39,377	28,392	708	79
2022	48,928	40,175	27,437	535	88

Figure 1. Long-term catches (in tons) for GOA flathead sole from 1993 to 2021.
Source: Kaur and Monnahan, 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.

Annual catches have been well below TAC and ABC in recent years (Figure 1).

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 <i>specified last</i> year for:		As estimated or <i>recommended this</i> year for:	
	2022	2023	2023	2024
<i>M</i> (natural mortality rate)	0.2	0.2	0.2	0.2
Tier	3a	3a	3a	3a
Projected total (3+) biomass (t)	279,975	276,796	294,188	293,277
Projected Female spawning biomass (t)	97,614	97,876	94,059	95,932
<i>B</i> _{100%}	91,551	91,551	92,582	92,582
<i>B</i> _{40%}	36,620	36,620	37,033	37,033
<i>B</i> _{35%}	32,043	32,043	32,404	32,404
<i>F</i> _{OFL}	0.36	0.36	0.36	0.36
<i>maxF</i> _{ABC}	0.28	0.28	0.29	0.29
<i>F</i> _{ABC}	0.28	0.28	0.29	0.29
OFL (t)	48,928	48,757	48,161	49,073
maxABC (t)	40,175	40,046	39,480	40,222
ABC (t)	40,175	40,046	39,480	40,222
Status	As determined <i>last year</i> for:		As determined <i>this year</i> for:	
	2020	2021	2021	2022
Overfishing	no	NA	no	NA
Overfished	NA	no	NA	no
Approaching Overfished	NA	no	NA	no

Figure 2. GOA flathead sole summary of the stock assessment.
Source: Kaur and Monnahan, 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

Kaur, M.S., and Monnahan, C. 2022. Assessment of the Flathead Sole Stock in the Gulf of Alaska. https://apps-afsc.fisheries.noaa.gov/Plan_Team/2022/GOAflathead.pdf

Links

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