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Global Standard for Responsible Supply of Marine Ingredients

Fishery Assessment Methodology and Template Report V2.0

Fishery Under Assessment	**Pacific Ocean Perch (Rockfish) (*Sebastes alutus*) Central Gulf of Alaska**
Date	**February 2019**
Assessor	**Virginia Polonio**

Application details and summary of the assessment outcome				
Name: Kodiak Fishmeal Company				
Address:				
Country: USA		**Zip:**		
Tel. No.:		**Fax. No.:**		
Email address:		**Applicant Code**		
Key Contact:		**Title:**		
Certification Body Details				
Name of Certification Body:		**SAI Global Ltd**		
Assessor Name	**Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/Re-approval**	**Whole fish/ By-product**
V. Polonio	J. Daly	1	Surveillance 1	By-product
Assessment Period	2018			

Scope Details	
Management Authority (Country/State)	USA
Main Species	Pacific Ocean Perch (*Sebastes alutus*)
Fishery Location	Central Gulf of Alaska
Gear Type(s)	Demersal trawls, seines, beam and otter trawls, longlines, hook and lines.
Outcome of Assessment	
Overall Outcome	Pass
Clauses Failed	None
Peer Review Evaluation	Approve by-product
Recommendation	Approve

Assessment Determination
Pacific ocean perch (POP/Rockfish) off the U.S. West Coast from Northern California to the Canadian Border is assessed and managed as a separate stock. Catches in commercial hook and line and trawl fisheries are well monitored. Fisheries management in Alaskan waters is supported by the Alaska Fisheries Science Centre (AFSC), a research branch of the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS). AFSC plan, develop and manage research programs, and conduct stock assessments in support of fishery management throughout the state and federal waters off Alaska. Pacific Ocean perch (POP/Rockfish) is managed as a component of two groundfish complexes according to Fishery Management Plans (FMP). POP/Rockfish is managed at the species level, with an annual quota applied, further subdivided between subareas and districts. POP/Rockfish are assessed on a biennial stock assessment schedule to coincide with the availability of new survey data. For Gulf of Alaska Rockfish in alternate (even) years an executive summary is presented that recommends harvest levels for the following two years. There were no changes in assessment methodology as 2018 was an off-cycle year. The most recent stock assessment conducted for Pacific Ocean Perch in Washington, Oregon and California waters shows that the stock is not overfished and overfishing is not occurring. IUCN has not categorised *Sebastes alutus* as it has not yet been assessed and is not listed in the current CITES appendices. Therefore, the assessment team recommends the approval of this by-product against IFFO –RS v 2.0 standard (by-products).
Peer Review Comments
Agree
Notes for On-site Auditor

Note: This table should be completed for whole fish assessments only.

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A			A1	
			A2	
			A3	
			A4	
Category B				
Category C	Pacific Ocean Perch *(Sebastes alutus)*	N/A	Pass	
Category D				

[List all Category A and B species. List approximate total %age of landings which are Category C and D species; these do not need to be individually named here]

HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** of the minimum requirements.

By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the 'target' or 'main' species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the 'bycatch' or 'minor' species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The 'stock' column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The 'management' column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it **cannot** be approved for use as an IFFO RS raw material. This applied to whole fish as well as by-products.

TYPE 1 SPECIES (Representing 95% of the catch or more)
Category A: Species-specific management regime in place.
Category B: No species-specific management regime in place.

TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)
Category C: Species-specific management regime in place.
Category D: No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Pacific Ocean Perch	*Sebastes alutus*	Central Gulf of Alaska	N/A	USA/Alaska Fisheries Science Centre	C

CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment. 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. A Category C species does not meet the minimum requirements of clause C1 should be re-assessed as a Category D species.

Species Name		**Pacific Ocean Perch** ***Sebastes alutus***	
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**

Evidence

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.

Regular stock assessments have been conducted for this stock using different stock assessment methods. Earlier assessments used stand-alone forward projection statistical catch-at-age model; more recent assessments since 2003 have used the Stock Synthesis model. Rockfish are assessed on a biennial stock assessment schedule to coincide with the availability of new survey data.

NOAA Fisheries (through data reported by the Gulf of Alaska) currently use a statistical age-structured model as the primary assessment tool for Gulf of Alaska Rockfish. For off-cycle years NOAA do not re-run the assessment model, but update the projection model with new catch information incorporating the most current catch information without re-estimating model parameters and biological reference points. In the most recent assessment (2018 data) updated catch data (t) for Rockfish (Gulf of Alaska) was used.

Therefore the assessment team have concluded that the removals of the species are included in the stock assessment **and clause 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.

For the 2019 fishery, NOAA recommend the maximum allowable catch (ABC) of 28,555 t from the updated projection model. This ABC is 2% less than 2018 and 0.2% less than the projected 2019 ABC from the 2017 assessment. The corresponding reference values for POP/Rockfish are summarized in **Table 1** with recommended ABC values in bold.

Table 1.Projected ABCs for 2019 and 2020 derived using estimated catch for 2018, and projected catches for 2019 and 2020 based on realized catches from 2015-2017. Source. NOAA Fisheries **R1**

Quantity	As estimated or specified *last* year for: 2018	2019	As estimated or recommended *this* year for: 2019	2020[1]
M (natural mortality)	0.066	0.066	0.066	0.066
Tier	3a	3a	3a	3a
Projected total (age 2+) biomass (t)	511,934	497,600	496,922	481,608
Projected Female spawning biomass	180,150	177,539	176,934	172,345
$B_{100\%}$	293,621	293,621	293,621	293,621
$B_{40\%}$	117,448	117,448	117,448	117,448
$B_{35\%}$	102,767	102,767	102,767	102,767
F_{OFL}	0.113	0.113	0.113	0.113
$maxF_{ABC}$	0.094	0.094	0.094	0.094
F_{ABC}	0.094	0.094	0.094	0.094
OFL (t)	34,762	34,010	**33,951**	32,876
maxABC (t)	29,236	28,605	**28,555**	27,652
ABC (t)	29,236	28,605	**28,555**	27,652
Status	As determined *last* year for: 2016	2017	As determined *this* year for: 2017	2018
Overfishing	No	n/a	No	n/a
Overfished	n/a	No	n/a	No
Approaching overfished	n/a	No	n/a	No

NOAA conclude overfishing is not occurring, the stock is not overfished, and not approaching an overfished condition. POP/Rockfish catch/biomass ratio has ranged from < 0.01 to 0.05 between 1991-2018 **(Figure 1**).

Figures

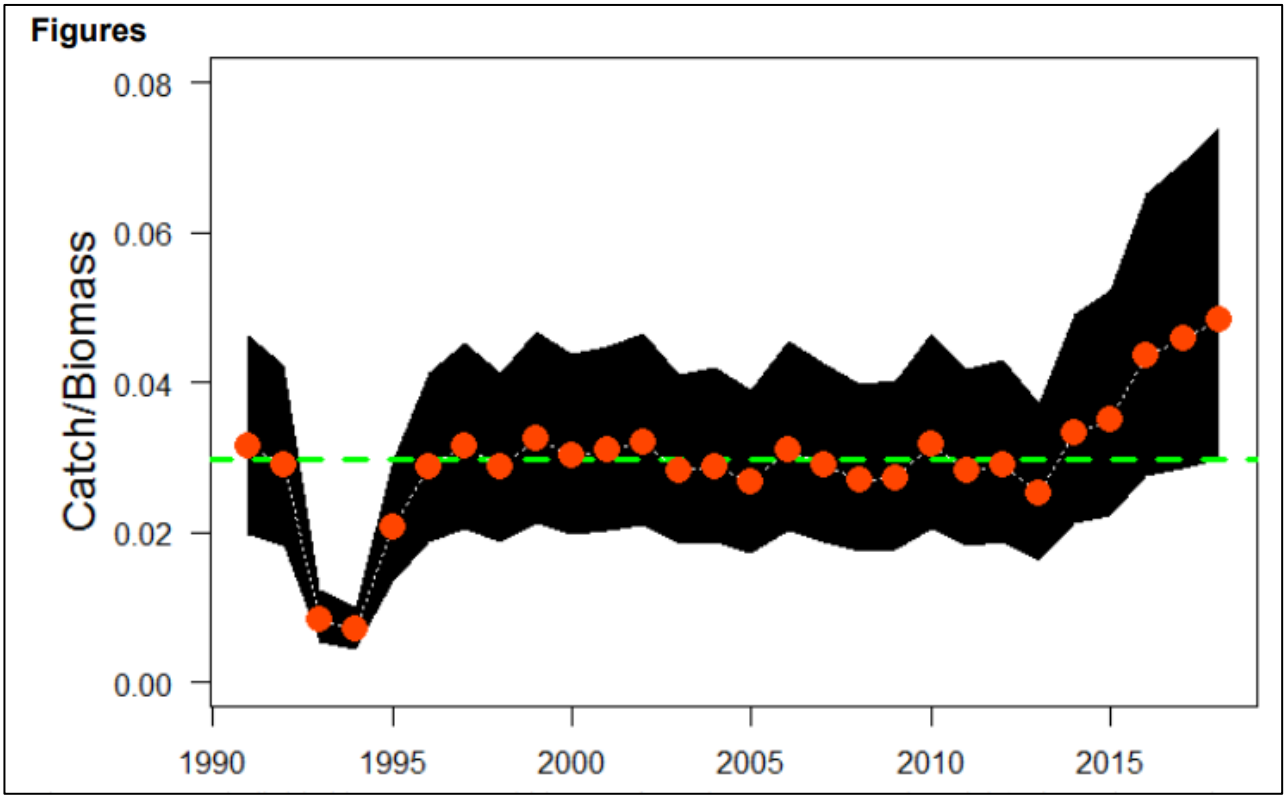

Figure 1. Catch divided by age 2+ total biomass from the age-structured model (point estimates shown by orange circles) with 95% sampling error confidence intervals (black shaded area) for Gulf of Alaska Pacific ocean perch from 1991-2018. Green dashed line is the average of time-series. Source. NOAA Fisheries **R1**

Since 2013, the catch/biomass ratio has been increasing as a result of the fishery fully taking ABC in all the areas where trawling is allowed.

Therefore, the assessment team can conclude that the species is above reference points and **clause C1.2 is met.**

References

R1 NOAA Fisheries. 2018 Assessment of the Pacific Ocean Perch Stock in the Gulf of Alaska. https://www.fisheries.noaa.gov/resource/data/2018-assessment-pacific-ocean-perch-stock-gulf-alaska
R2 NMFS Alaska Regional Office Catch Accounting System via the Alaska Fisheries Information Network (AKFIN) database. http://www.akfin.org
R3 Fishsource Pacific Ocean Perch https://www.fishsource.org/stock_page/1948
R4 IUCN Red List: www.iucn.org

Standard clauses 1.3.2.2