MarinTrust Standard V2

By-product Fishery Assessment

South Pacific hake (*Merluccius gayi*) in FAO87 Pacific Southeast

MarinTrust Programme
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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	South Pacific hake (*Merluccius gayi*)
	Geographical area:	FAO 87 Pacific Southeast
	Country of origin of the product:	Ecuador
	Stock:	South Pacific hake in FAO 87 Pacific Southeast
Date	December 2022	
Report Code	ECU08	
Assessor	Léa Lebechnech	
Country of origin of the product - PASS	Ecuador	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Productos Pesqueros S.A Produpes, Tadel S.A, URISA S.A.			
Country: Ecuador			
Email address: marco@urisaecuador.com		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Léa Lebechnech	Matthew Jew	0,5	Re-approval
Assessment Period	To December 2022		

Scope Details	
Main Species	South Pacific hake (*Merluccius gayi*)
Stock	South Pacific hake in FAO 87 Pacific Southeast
Fishery Location	FAO 87 Pacific Southeast
Management Authority (Country/ State)	Peru: IMARPE (*Instituto del Mar del Perú*) and PRODUCE (*Ministerio de la Producción del Perú*) and Ecuador
Gear Type(s)	Purse seine and trawls
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's recommendation
Recommendation	APPROVED

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. South Pacific hake (*Merluccius gayi*) does not appear as Endangered or Critically Endangered on IUCN's Red List, nor does it appear in CITES appendices. Therefore, South Pacific hake is eligible for approval for use as MARINTRUST byproduct raw material. One stock forms part of this assessment: the South Pacific hake (*Merluccius gayi*) latitudinal distribution, which extends from northern Ecuador (010N) to central Peru (140S). Peru's IMARPE (*Instituto del Mar del Perú*) undertake annual stock assessments which include the shared stock with Ecuador. There are specific management measures and reference points are defined for the stock, so it has been assessed under Category C. Fishery removals of the stock is considered in the various stock assessment processes and the most recent estimated spawning stock biomass (SSB) is above B_{lim}, so the stock PASSES Clauses C1.1 and C1.2. Therefore, South Pacific hake (*Merluccius gayi*) in FAO 87 is APPROVED by the assessor for the production of fishmeal and fish oil under the current MARINTRUST v 2.0 by-products standard.
Fishery Assessment Peer Review Comments
The assessor correctly classified south Pacific hake in FAO 87 (Pacific southeast) 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 shows that the stock is biological reference points. Therefore, the stock is considered to have biomass above the limit reference point. Herring in Division 27.3, subdivisions 22-32 passes both clauses (C1.1 and C1.2) and therefore should be approved under the MarinTrust Standard v.2.
Notes for On-site Auditor
Determine which flag state(s) the plant is sourcing its hake from.

Commented [MJ1]: Im not seeing the actual value for PBRs in the stock assessment paper. I just see the projection figure which shows the biomass trends. Does it actually say that the estimated biomass is above the PBRs?

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]
South Pacific Hake	*Merluccius gayi*	South Pacific hake in FAO 87	Peru: IMARPE / PRODUCE and Ecuador	C	DD	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	**South Pacific Hake (*Merluccius gayi*)**		
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 last stock assessment estimated that, at the closing of the 2021-2022 fishing season, 75% of the maximum limit of the allowed total catch (LMTCP or *Límite Máximo de Captura Total Permisible*).

The procedure for the estimation of hake stock status is described in IMARPE (2018) and consists of the use of two methods:

- direct methods (hake and other demersal population assessment cruises, usually 2 annual with at least two complementary surveys, with the help of trawl fleets for verification purposes), using swept area and acoustic methods, and
- indirect methods (XSA - eXtended Survivor Analysis).

The application of direct methods is carried out during the autumn season, a season that corresponds to the maximum projection of the secondary jet of the Cromwell Current, when the hake population extends its distribution area to the south, presenting the necessary conditions for its evaluation off the Peruvian coast. Data on capture by age and number of individuals (by year) was used to generate abundance indices.

During 2022, some problems arose that did not allow the assessment cruise to be carried out on board a research vessel. In view of this situation, IMARPE conducted "Hake Operations" on board commercial fishing vessels, which are carried out under a work plan and guidelines given by IMARPE, with the objective of characterizing the situation of the main population and fishing indicators of the resource.

Considering the limitations and using the best scientific information available, the following activities were carried out to estimate the biomass and population structure of hake that will support the July 2022 - June 2023 fishing regime:

(a) Estimation of hake abundance indices by age group from the data of Hake Operations carried out during the May - June period, in order to have indicators in conditions similar to those obtained during the assessment cruises.
b) Application of eXtended Survivor Analysis (XSA) as the main hake assessment method. This procedure corresponds to the methodology used in 2018, as well as in the international assessment panels of the mentioned resource.

Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process, so it 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.

The hake stock yield projection was made considering the population structure (ages) estimated by eXtended Survivor Analysis (XSA), under the two calibration approaches analyzed. The mean biomass estimated by applying XSA under both calibration approaches were 432 077t and 380 375 t, of which 381 736 t and 333 083 t correspond to exploitable biomass (age group 2+).

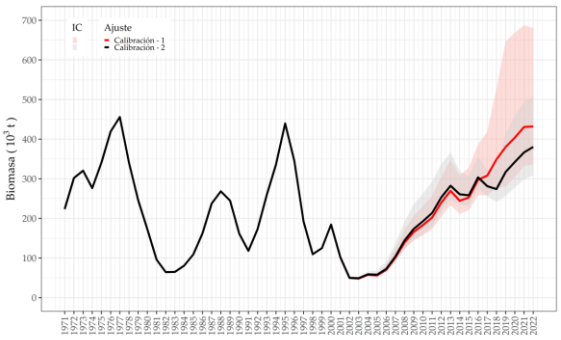

Figure 1. Mean biomass (tons) of hake estimated under the two calibration approaches.
Source: OFICIO N° 547-2021-IMARPE/PCD

Based on the conditions under which this assessment has been developed, and the biological considerations aimed at consolidating the current state of hake, the precautionary approach was applied, which recommends caution in the choice of exploitation level. In this sense, it is considered prudent that the exploitation rate continues to be set between 0.15 and 0.18.

Consequently, any Total Maximum Allowable Catch Limit (TAC) that is determined taking into consideration the range of exploitation rates mentioned above, would not affect the sustainability of the resource.

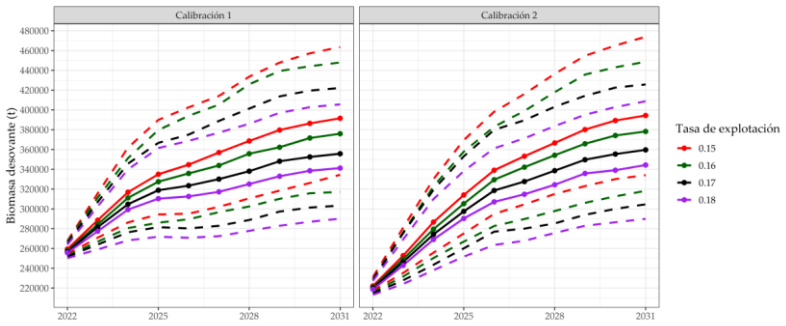

Figure 2. Medium-term stochastic projections of the spawning biomass of hake.
Source: OFICIO N° 547-2021-IMARPE/PCD.

Therefore, the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), so it PASSES Clause C1.2.

References

OFICIO N° 547-2021-IMARPE/PCD : *Informe « Análisis de la Pesquería, Estado Poblacional Y Proyecciones de Pesca de la Merluza Peruana "Merluccius gayi peruanus" JULIO 2022 - JUNIO 2023 :* https://www.gob.pe/institucion/imarpe/informes-publicaciones/3336717-informe-correspondiente-al-oficio-n-607-2022-imarpe-pcd

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

Commented [MJ2]: My Spanish…. Sucks… do it say in the paper what the actual biological reference points (PBRs) are?

Because the values above are just upper and lower limits of the estimated biomass, right?

Commented [LL3R2]: Check together p.26 and 27