By-Product assessment report

BP021

Maz Industrial SA de CV

Report code	BP021	Date of issue	February 2025

1. Application details		
Applicant	Maz Industrial SA de CV	
Applicant country	Mexico	
2. Certification Body details		
Name of Certification Body (CB)	NSF	
Contact information for CB	nsf-marintrust@nsf.org	
Assessor name	Ana Elisa Almeida Ayres	
CB internal peer reviewer name	Matthew Jew	
Internal peer review evaluation	Agree with evaluation	
Comments on the assessment	The two byproduct species (Yellowfin and skipjack tuna) are sourced from a high-risk flag state, Mexico, requiring a Step 3 assessment. Additional information was requested from the applicant. The applicant presented most of the Key Data Elements (KDEs), with exception of the catch date, thus Path 2 was used. The information was forthcoming and sufficient to enable the completion of the Step 3 process. As a result of this, all the byproduct species can be Approved, source with caution.	
3. Approval validity	Valid from 02/2025	Valid until 02/2026

4. By-product assessment outcomes		
By-product species name	**Flag country(ies)**	**MarinTrust approval status**
Yellowfin tuna (*Thunnus albacares*)	Mexico	Approved source with caution
Skipjack tuna (Katsuwonus pelamis)	Mexico	Approved source with caution

Guidance for on-site auditor
For the audit, the auditor will check how the facility manages by-products deemed medium risk. Any by-products downrated from high to medium risk will require additional due diligence checks.

It is important that facilities check all raw materials from and verify their suppliers especially if there is a perceived risk of sourcing from known or suspected IUU fishing activity. This requires checking supplier records or procedures in place to understand how the supplier can ensure there is no IUU in the raw material they provide. For raw materials risk rated medium, additional or more frequent checks may be required until the facility is certain that the raw materials are not from IUU fishing activity.

The audit requirements are covered in clause 2.11.3 of the MarinTrust Global Standard for Responsible Supply of Marine Ingredients (the MarinTrust Standard) and associated interpretation guidance.

Approved by-products

- No further checks are required beyond those included in the MarinTrust Standard.

Additional checks of Approved Source with Caution by-products

- Review supplier records or procedures in place.

Additional checks of by-products Approved Source with Caution via Step 3 assessment

- In addition to checks for medium risk Approved Source with Caution by-products, by-products that have had risk downgraded from high to medium at Step 3 (use **Appendix 1** to identify these by-product species), confirm that the relevant traceability information continues to be collected for this by-product. During the audit, a traceability check on any by-products downgraded from high to medium risk shall be included as part of the required traceability checks (Section 4).

Guidance for the applicant/certificate holder
The applicant/certificate holder is responsible for ensuring the relevant actions are taken to comply with the MarinTrust Standard.
The certificate holder is responsible for communicating any changes to the by-products sourced by submitting a scope extension request through the MarinTrust online Application Portal.

Appendix 1 – assessment outcomes

By-product species name	Flag country(ies)	IUCN Red List	CITES Appendices	Step 2 risk status	Step 3 required	Step 3 risk Outcome
Yellowfin tuna (*Thunnus albacares*)	Mexico	Least concern	Not listed	High risk	Yes	Risk downgraded to Medium risk
Skipjack tuna (*Katsuwonus pelamis*)	Mexico	Least concern	Not listed	High risk	Yes	Risk downgraded to Medium risk

Appendix 2 – detailed assessment outcomes

(step 2 and step 3 if applicable)

Step 2 outcomes

Flag state	Risk rating	Flag score	Port score	General score	Flag State is contracting party or cooperating non-contracting party to all relevant RFMOs	'Carded' under EU Carding system	Flag state party to PSMA	Flag state mandatory vessel tracking for commercial seagoing fleet	WGI Governance rank
Mexico	High	2.25	3.06	2.78	2	1	5	1	46.70%

Step 3 outcomes

Category C assessment

Species name		**Yellowfin tuna (*Thunnus albacares*)**	
Fishing area and stock		**FAO 77 (Eastern Central Pacific)**	
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.

The assessment and management of the Eastern Pacific Ocean (EPO) yellowfin tuna stock fall under the responsibility of the Inter-American Tropical Tuna Commission (IATTC). The majority of yellowfin tuna catches in the EPO originate from purse-seine fisheries targeting dolphins and floating objects.

A key challenge in the assessment process has been the uncertainty regarding stock structure. The 2020 benchmark assessment and external reviews identified the possibility of at least two distinct stocks being exploited, with dynamic boundaries. Despite this uncertainty, the assessment model incorporated catch data from the entire EPO, ensuring that all fishery removals were accounted for in stock evaluations.

In 2024, exploratory stock assessment models were developed using abundance indices and length composition data from dolphin-associated purse-seine fisheries. These models integrated catch data from either the core fishing area or the entire EPO, depending on the scenario, and incorporated updated estimates of natural mortality and growth derived from recent tagging research under the IATTC Regional Tuna Tagging Program (RTTP) [IATCC, 2024].

The IATTC recognizes that unresolved stock and spatial structure continue to pose challenges for yellowfin tuna assessments. In some areas, data limitations prevent a full resolution of these uncertainties, highlighting the need for further research. The application of a spatiotemporal modeling approach, which was successfully used in the skipjack tuna benchmark assessment, presents a promising method for improving future assessments of yellowfin tuna (IATCC, 2024).

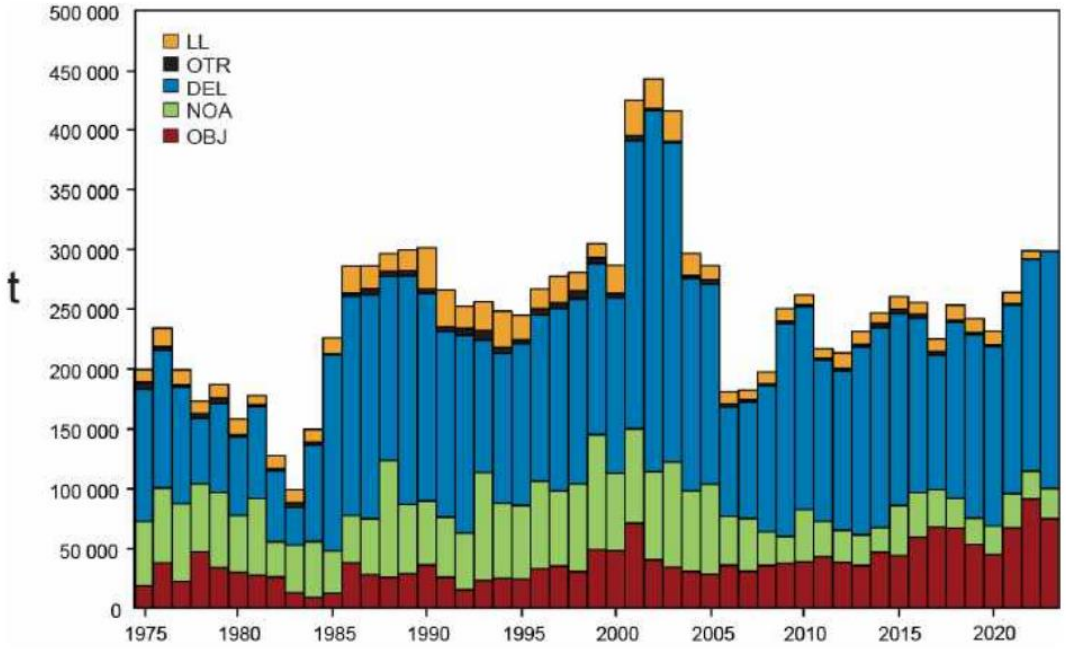

Figure 1. Total catches (retained catches plus discards) for the purse-seine fisheries, by set type (DEL, NOA, OBJ), and retained catches for the longline (LL) and other (OTR) fisheries, of yellowfin tuna in the eastern Pacific Ocean, 1975-2023. The purse-seine catches are adjusted to the species composition estimate obtained from sampling the catches. The 2020 and 2021 data are preliminary (IATCC, 2024).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, 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.

The results of the latest exploratory analysis indicated that the yellowfin stock and the possible sub-stocks were likely to be near or above the level that corresponds to dynamic MSY and not likely to have exceeded the spawning biomass limit reference point. However, these conclusions are uncertain and dependent on the assumed steepness of the Beverton-Holt stock-recruitment relationship. Further research and data collection particularly about stock and spatial structure, are needed to produce reliable assessments and management advice in the future (IATCC, 2024).

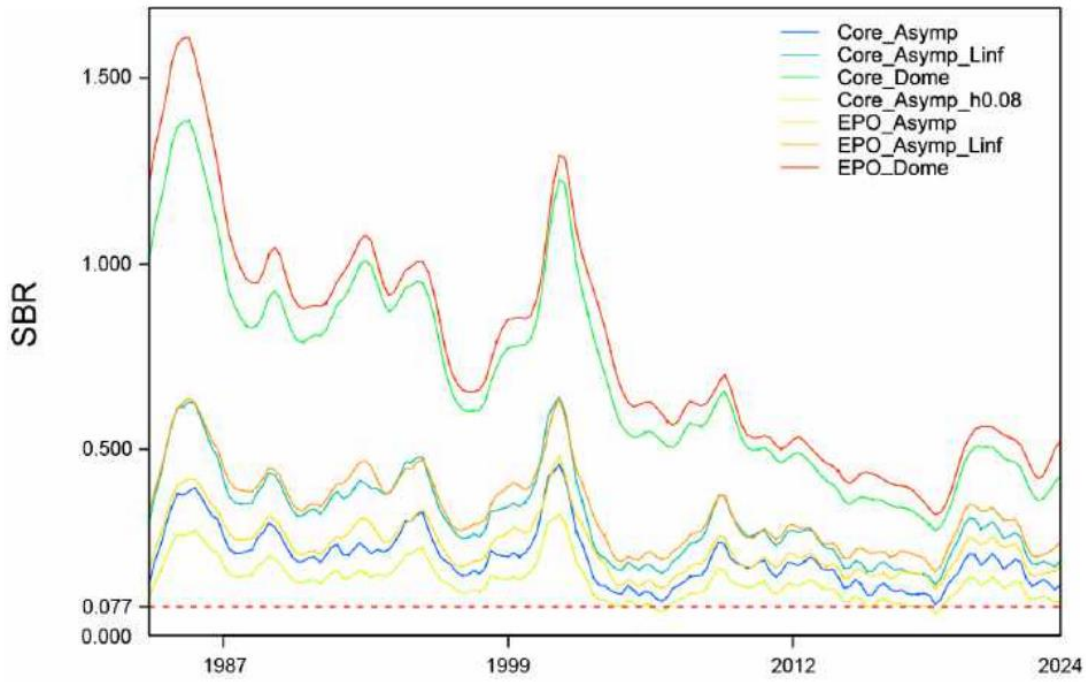

Figure 2. Spawning biomass ratios (SBRs) for yellowfin tuna in the EPO, 1985-2023 for models in the exploratory assessment for yellowfin tuna in the EPO. The red dashed horizontal line (at 0.077) identifies the SBR at SLIMI (IATCC, 2024).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met

References

IATCC. 2024. THE TUNA FISHERY IN THE EASTERN PACIFIC OCEAN IN 2023. https://www.iattc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

Species name		**Skipjack tuna (*Katsuwonus pelamis*)**	
Fishing area and stock		**FAO 77 (Eastern Central Pacific)**	
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.

Skipjack tunas are widely distributed in tropical waters across the Pacific Ocean, with the Eastern Pacific Ocean (EPO) stock primarily harvested by purse-seine fisheries. Since 1990, purse-seine sets associated with floating objects have become the dominant fishing method.

A benchmark stock assessment for EPO skipjack tuna was conducted using an integrated statistical age-structured catch-at-length model in Stock Synthesis. This assessment marks a substantial improvement over the interim 2022 assessment, incorporating advancements in methodology and new data, including tagging information from the Regional Tuna Tagging Program.

The assessment model is informed by multiple data sources, including information from sixteen defined fisheries and five survey-based indices. These fisheries are categorized by gear type (purse-seine, longline) and set type (dolphin-associated, floating-object associated, and unassociated), ensuring that all fishery removals are accounted for in the evaluation. Additional survey data include catch-per-set indices, echosounder buoy data, and biomass estimates derived from spatiotemporal modeling of tag-recapture data. A reference model was established based on the most credible assumptions, with sensitivity analyses conducted to assess the impact of varying model parameters (IATCC, 2024).

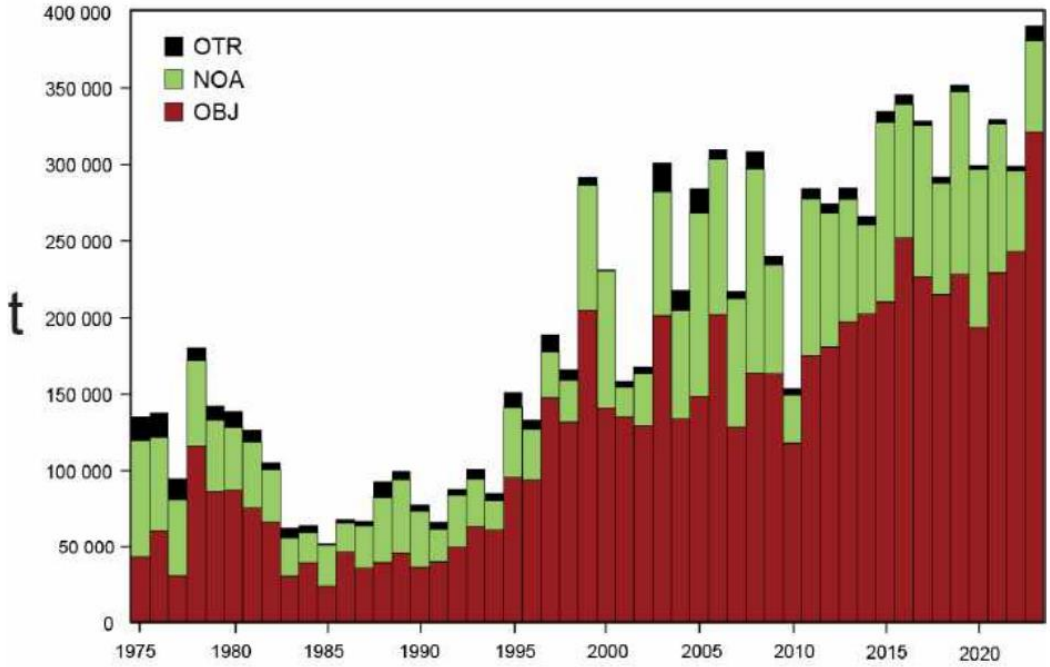

Figure 3. Total catches (retained catches plus discards) for the purse-seine fisheries, by set type (NOA,OBJ) and retained catches for the other (OTR) fisheries, of skipjack tuna in the eastern Pacific Ocean, 1975- 2023. The purse-seine catches are adjusted to the species composition estimate obtained from sampling the catches. The 2020 catch data are preliminary (IATCC, 2024).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, 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.

The reference model, along with most sensitivity analyses, indicated that the current biomass exceeds the target reference point, while fishing mortality remains below the target level. The only exception is a more pessimistic scenario that omits the echosounder buoy index, which suggests the stock falls below the proxy target—but only when using the static definition. Importantly, none of the evaluated scenarios suggest that the stock has dropped below the limit reference point (IATCC, 2024).

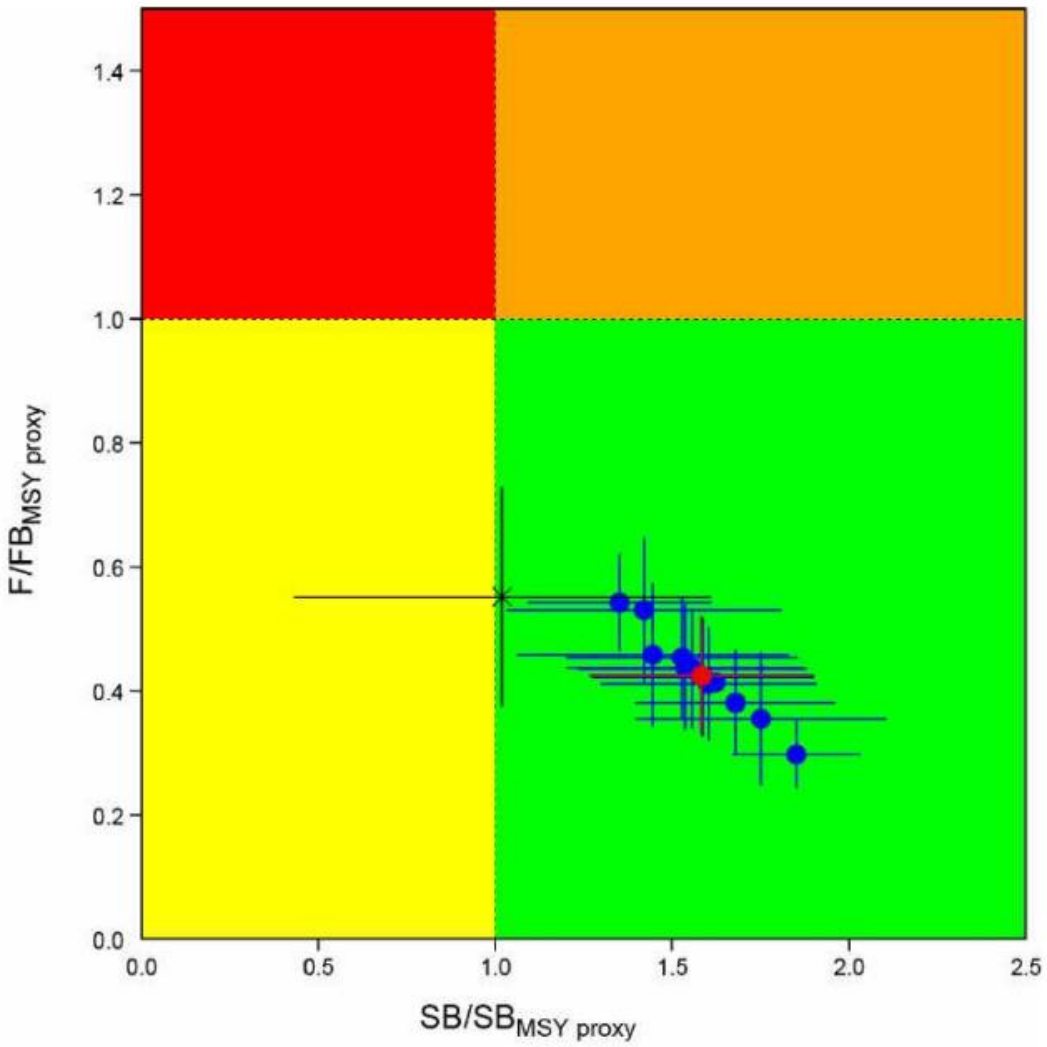

Figure 4. Kobe plot showing the stock status estimates from all the models. The red dot and error bars represent the estimates from the reference model. The black cross and error bars represent the estimates from the model that removed the ECHO index (IATCC, 2024).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met

References

IATCC. 2024. THE TUNA FISHERY IN THE EASTERN PACIFIC OCEAN IN 2023. https://www.iattc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

Traceability information

Information provided for Step 3 Path 1 or Path 2

Species name	Yellowfin tuna (Thunnus albacares)			
Path 1	Yes ☐ No ☒			
Confirm all KDEs are provided	Yes ☐ No ☒			
Path 2	Yes ☒ No ☐			
Path 2 outcome	**Flag country**	**Coastal score**	**Port score**	**Risk outcome**
	Mexico	2.86	3.06	Downgraded to medium risk

Species name	Skipjack tuna (*Katsuwonus pelamis*)			
Path 1	Yes ☐ No ☒			
Confirm all KDEs are provided	Yes ☐ No ☒			
Path 2	Yes ☒ No ☐			
Path 2 outcome	**Flag country**	**Coastal score**	**Port score**	**Risk outcome**
	Mexico	2.86	3.06	Downgraded to medium risk