# MarinTrust Standard V2

# By-product Fishery Assessment
# Bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific)

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## Table 1 Application details and summary of the assessment outcome

| | | |
|---|---|---|
| Fishery Under Assessment | Species: | Bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) |
| | Geographical area: | Bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) |
| | Country of origin of the product: | Ecuador |
| | Stock: | Bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) |
| Date | 17 October 2023 | |
| Report Code | ECU05 | |
| Assessor | Ana Elisa Almeida Ayres | |
| 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): URISA S.A.; TADEL S.A.; PRODUCTOS PESQUEROS S.A.; PESQUERA EXU S.A. | | | |
| Country: Ecuador | | | |
| Email address: | | Applicant Code: | |
| Certification Body Details | | | |
| Name of Certification Body: | | Global Trust Certification/ NSF | |
| Assessor | Peer Reviewer | Assessment Days | Initial/Surveillance/ Re-approval |
| Ana Elisa Almeida Ayres | Matthew Jew | 0.5 | Re-approval |
| Assessment Period | October 2023 – October 2024 | | |

| Scope Details | |
|---|---|
| Main Species | Bullet tuna (*Auxis rochei*) |
| Stock | Bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) |
| Fishery Location | FAO 87 (southeast Pacific) |
| Management Authority (Country/ State) | Inter-American Tropical Tuna Commission (IATTC), Vice-ministry of Aquaculture and Fisheries of Ecuador |
| Gear Type(s) | Purse seine and longline |
| 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 Union for Conservation of Nature's Red List of Threatened Species - IUCN's Red List, or if it appears in the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES appendices, it cannot be approved for use as Marin Trust raw material. Bullet tuna (*Auxis rochei*) is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, bullet tuna (*Auxis rochei*) is eligible for approval for use as Marin Trust by-product raw material.<br><br>Inter-American Tropical Tuna Commission (IATTC) and Vice-ministry of Aquaculture and Fisheries of Ecuador provide data of catches if bullet tuna, but there is nor stock assessment neither reference points defined for this stock, thus it was assessed under Category D, with the use of the Productivity-Susceptibility Analysis – PSA. The stock was awarded a Productivity score of 1.29 and a Susceptibility score of 2.5, leading to a "Pass" rating against Table D3.<br><br>Therefore, bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard. |
| **Fishery Assessment Peer Review Comments** |
| The assessor correctly classified bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) as Category D, the stock is subject to a species-specific management regime and reference points are not defined.<br><br>The assessor correctly identified the productivity and susceptibility attributes in the PSA and correctly assigned scores for each attribute. The assessor also correctly calculated the productivity score of 1.29 and the susceptibility score of 2.5.<br><br>Bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) passes the PSA in accordance with Table D3 and therefore should be approved under the MarinTrust Standard v.2.3. |
| **Notes for On-site Auditor** |
| N/A |

Marine Ingredients Certifications Ltd (09357209) | Doc FISH1- Issued October 2022 – Version 2.3 | Approved by Libby Woodhatch

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# 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] |
|---|---|---|---|---|---|---|
| Bullet tuna | *Auxis rochei* | Bullet tuna (*Auxis rochei*) in FAO 87 (southeast Pacific) | Inter-American Tropical Tuna Commission (IATTC), Vice-ministry of Aquaculture and Fisheries of Ecuador | D | LC | No |

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[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php

# 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.
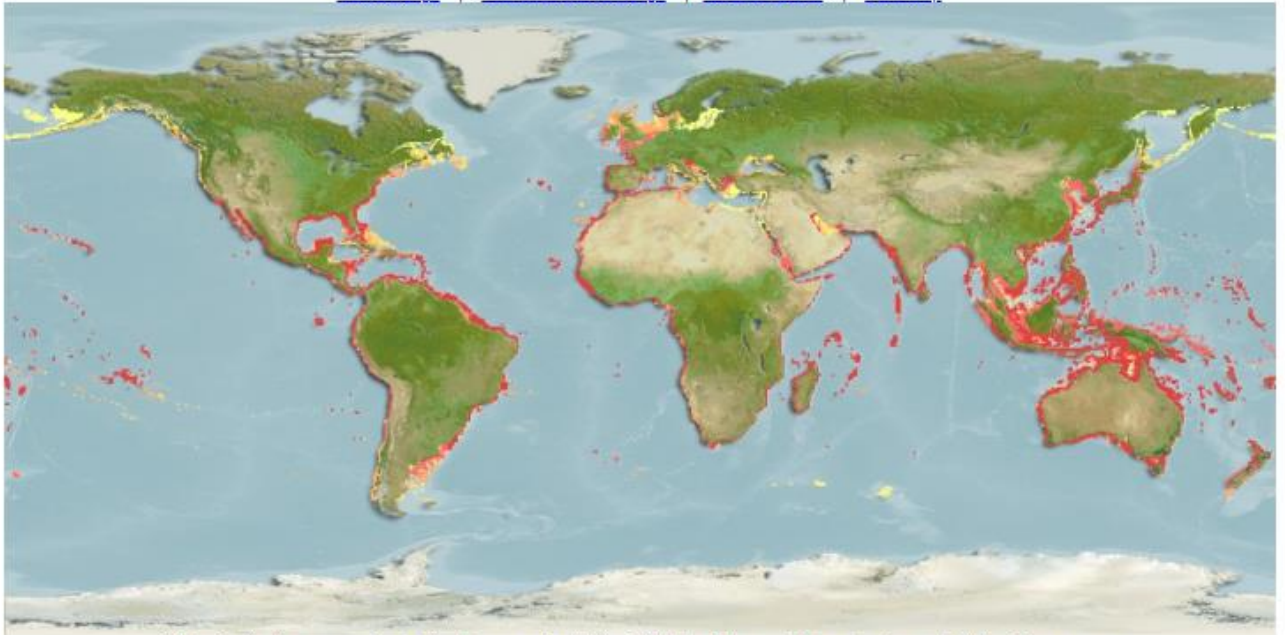
| D1 | **Species Name** | **Bullet tuna (*Auxis rochei*)** | |
|---|---|---|---|
| | **Productivity Attribute** | **Value** | **Score** |
| | Average age at maturity (years) | 1.7 | 1 |
| | Average maximum age (years) | 7.1 | 1 |
| | Fecundity (eggs/spawning) | 31,000 -103,000 | 1 |
| | Average maximum size (cm) | 47.2 | 1 |
| | Average size at maturity (cm) | 26.6 | 1 |
| | Reproductive strategy | Broadcast spawner | 1 |
| | Mean trophic level | 4.4 | 3 |
| | | **Average Productivity Score** | **1.29** |
| | **Susceptibility Attribute** | **Value** | **Score** |
| | Availability (area overlap) | <10% overlap | 1 |
| | Encounterability (the position of the stock/species within the water column relative to the fishing gear) | High | 3 |
| | Selectivity of gear type | High | 3 |
| | Post-capture mortality | Retained | 3 |
| | | **Average Susceptibility Score** | **2.5** |
| | | **PSA Risk Rating (From Table D3)** | **Pass** |
| | | **Compliance rating** | **Pass** |
| | **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* <br><br> According to Froese and Pauly (2023), the species is found in Atlantic, Indian and Pacific (Western), including the Mediterranean Sea (Figure 1). | | |

Figure 1. Distribution of the bullet tuna (*Auxis rochei*). Source: AquaMaps (2019).

The client did not provide details of the gear used to harvest bullet tuna, and the selectivity of the gear cannot be determined. Thus, it was awarded a score of 3 out of precaution.

**References**

AquaMaps. 2019. Computer generated distribution maps for *Auxis rochei* (Bullet tuna), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario. https://www.aquamaps.org/receive.php?type_of_map=regular&map=cached

Froese, R. and D. Pauly. Editors. 2023.FishBase. World Wide Web electronic publication. https://www.fishbase.se/summary/Auxis-rochei

*Standard clauses 1.3.2.2*

# Table D2 - Productivity / Susceptibility attributes and scores.

| Productivity attributes | High productivity (Low risk, score = 1) | Medium productivity (medium risk, score = 2) | Low productivity (high risk, score = 3) |
|---|---|---|---|
| Average age at maturity | <5 years | 5-15 years | >15 years |
| Average maximum age | <10 years | 10-25 years | >25 years |
| Fecundity | >20,000 eggs per year | 100-20,000 eggs per year | <100 eggs per year |
| Average maximum size | <100 cm | 100-300 cm | >300 cm |
| Average size at maturity | <40 cm | 40-200 cm | >200 cm |
| Reproductive strategy | Broadcast spawner | Demersal egg layer | Live bearer |
| Mean Trophic Level | <2.75 | 2.75-3.25 | >3.25 |

| Susceptibility attributes | | Low susceptibility (Low risk, score = 1) | | Medium susceptibility (medium risk, score = 2) | | High susceptibility (high risk, score = 3) |
|---|---|---|---|---|---|---|
| Areal overlap (availability) Overlap of the fishing effort with the species range | | <10% overlap | | 10-30% overlap | | >30% overlap |
| Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear | | Low overlap with fishing gear (low encounterability). | | Medium overlap with fishing gear. | | High overlap with fishing gear (high encounterability). Default score for target species |
| Selectivity of gear type Potential of the gear to retain species | a | Individuals < size at maturity are rarely caught | a | Individuals < size at maturity are regularly caught. | a | Individuals < size at maturity are frequently caught |
| | b | Individuals < size at maturity can escape or avoid gear. | b | Individuals < half the size at maturity can escape or avoid gear. | b | Individuals < half the size at maturity are retained by gear. |
| Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival | | Evidence of majority released post-capture and survival. | | Evidence of some released post-capture and survival. | | Retained species or majority dead when released. |

| 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 |