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# Global Standard for Responsible Supply of Marine Ingredients

## Fishery Assessment Methodology and Template Report V2.0

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|---|---|
| **Fishery Under Assessment** | **Skipjack tuna (*Katsuwonus pelamis*) FAO 77 (Pacific Eastern Central), FAO 87 (Pacific South East)** |
| **Date** | **March 2018** |
| **Assessor** | **Jim Daly** |

| **Application details and summary of the assessment outcome** | | | | |
|---|---|---|---|---|
| **Name: Sarval Bio-Industries Noroeste S.A.U.** | | | | |
| **Address:** | | | | |
| **Country:** | | **Zip:** | | |
| **Tel. No.:** | | **Fax. No.:** | | |
| **Email address:** | | **Applicant Code** | | |
| **Key Contact**: | | **Title:** | | |
| **Certification Body Details** | | | | |
| **Name of Certification Body:** | | **SAI GLOBAL** | | |
| **Assessor Name** | **Peer Reviewer** | **Assessment Days** | **Initial/Surveillance/Re-approval** | **Whole fish/ By-product** |
| Jim Daly | Deirdre Hoare | 3 | Initial | By-product |
| **Assessment Period** | 2017 | | | |

| Scope Details | |
|---|---|
| **Management Authority (Country/State)** | Inter-American Tropical Tuna Commission (IATTC) |
| **Main Species** | Skipjack tuna (*Katsuwonus pelamis*) |
| **Fishery Location** | FAO 77 (Pacific Eastern Central), FAO 87 (Pacific South East) |
| **Gear Type(s)** | Purse seine, longline, pole & line, artisanal |
| **Outcome of Assessment** | |
| **Overall Outcome** | PASS |
| **Clauses Failed** | None |
| **Peer Review Evaluation** | Pass |
| **Recommendation** | Approve byproduct |

**Assessment Determination**

The Regional Fishery Management Organisation (RFMO) managing the fishery in the assessment area is the Inter-American Tropical Tuna Commission (IATTC). The objective of this RFMO is to ensure the long-term conservation and sustainable use of tuna, tuna-like and other fish species taken by vessels fishing in the Eastern Pacific Ocean (EPO) in accordance with the relevant rules of international law. Recent Resolutions adopted by IATTC include a 2016 Resolution on Harvest Control Rules for Tropical Tuna (Yellowfin, Bigeye and Skipjack):


**Skipjack tuna:**

Skipjack tuna reach sexual maturity in around one year and spawn opportunistically in warm waters above 25°C throughout the year, in large areas of the world's oceans. Skipjack generally form large schools, often in association with other tunas of similar size such as juveniles of yellowfin and bigeye tuna. Skipjack tuna is the predominant species associated with Fish Aggregation Devices (FAD's) where it is caught in association with other species of epipelagic fauna. Most of the skipjack catch in the Pacific Ocean is taken in the West Central Pacific Ocean (WCPO).

Traditional stock assessment models are difficult to apply to skipjack tuna because of their characteristics (continuous spawning, spatial variation in growth, discrimination of effort for fishing on free schools and on Fish Aggregating Devices (FADs)). Data and model-based indicators are used (Maunder 2018).

Although biomass, recruitment, and fishing mortality indices are estimated to be highly variable over time, data and model-based indicators have yet to detect any adverse impacts of removals on the fishery. The species is considered, when applying the most recent stock indicators, to have a biomass above the limit reference point (or proxy).

IUCN has categorised skipjack tuna as a species of least concern. The species does not appear in the current CITES appendices (both sites accessed 04.04.18).

The assessment team recommends the approval of skipjack tuna (Eastern Pacific Ocean fishery) as a by-product species under the current IIFO RS Standard (v2.0).

**Peer Review Comments**

**Notes for On-site Auditor**

## Species-Specific Results

| Category | Species | % landings | Outcome (Pass/Fail) | |
|---|---|---|---|---|
| Category A | | | A1 | |
| | | | A2 | |
| | | | A3 | |
| | | | A4 | |
| Category B | | | | |
| Category C | Skipjack tuna (*Katsuwonus pelamis*) | 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]

## 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 |
|---|---|---|---|---|---|
| Skipjack tuna | *Katsuwonus pelamis* | | N/A | IOTC | 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** | | **Skipjack tuna** *Katsuwonus pelamis* | |
|---|---|---|---|
| **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 |

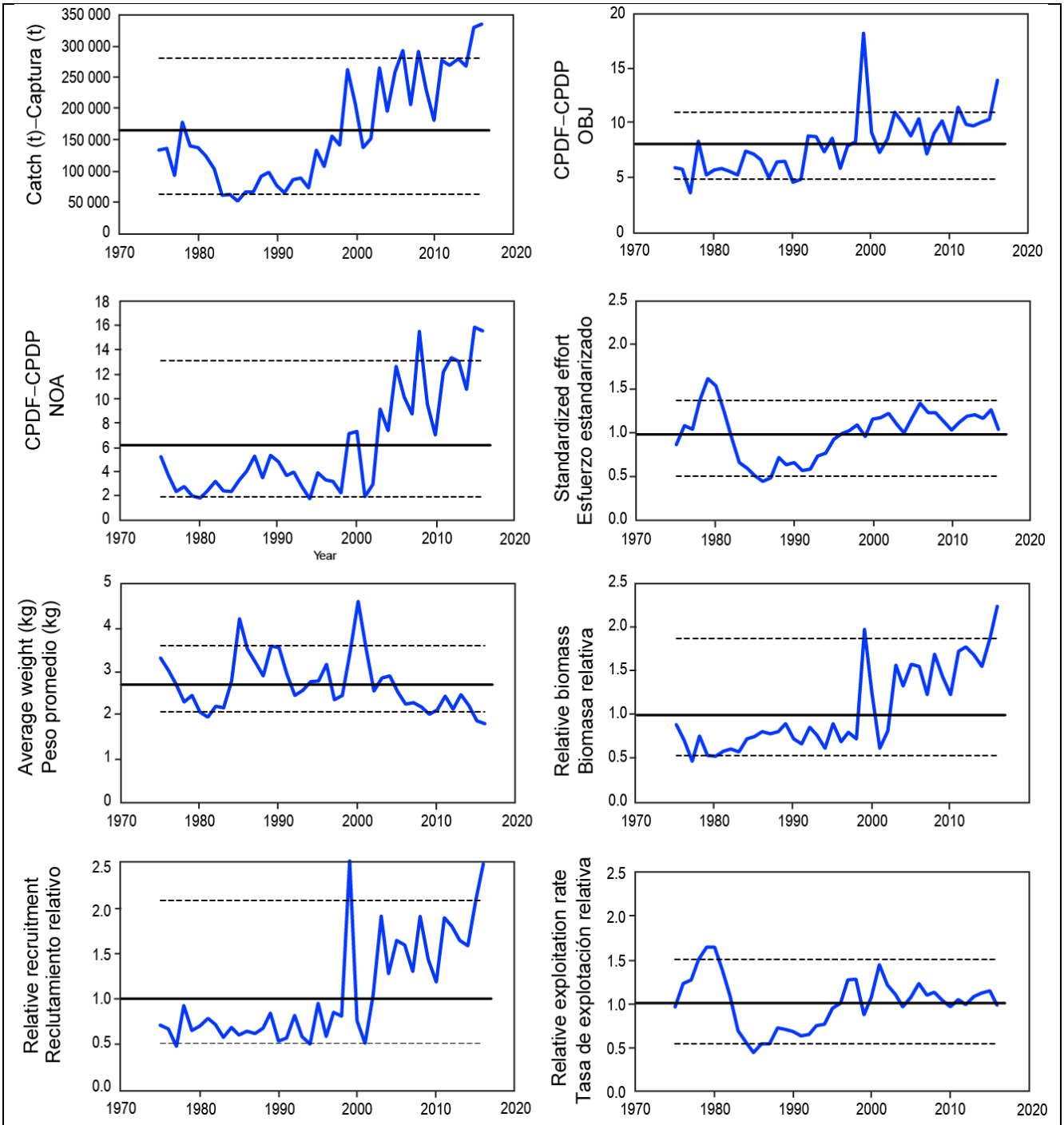
**Eastern Pacific Ocean (EPO) Fishery:**

EPO Skipjack are caught by purse seine, longline, pole & line and artisanal vessels. It is likely that there is a continuous stock throughout the Pacific Ocean with some exchange of individuals occurring at local level. Large-scale movements (from Eastern to Western Pacific Ocean) are thought to be rare. In their latest report (IATTC Fisheries Status Report No 15) catch data for 2015 and 2016 (all gear types) is presented. For stock assessments of skipjack seven purse-seine fisheries and one pole-and-line fishery are defined. Fishery removals are included in the stock assessment process. During 2001-2015 the annual retained catch in the EPO (purse-seine, pole and line fisheries) averaged 242,000t. The preliminary estimate of retained catch in 2016 was 337,000t. Small amounts of EPO skipjack are caught with longlines and other gears.

**Skipjack stock status:**

Biomass, recruitment, and fishing mortality are estimated to be highly variable over time. Estimates differ among alternative assessment methods and are uncertain because: 1) it is unknown if catch-per-day-fished for purse-seine fisheries is proportional to abundance; 2) it is possible that there is a population of large skipjack that is invulnerable to the fisheries; and 3) the structure of the EPO stock in relation to the Western and Central Pacific stocks is still uncertain. There are also uncertainties in the estimates of natural mortality and growth. No traditional reference points are available for skipjack tuna in the EPO. However data and model-based indicators have yet to detect any adverse impacts of the fishery.

The average weight of EPO skipjack has declined to levels seen in the early 1980s and was below its lower reference level in 2015 and 2016 which can be a consequence of overexploitation, but it can also be caused by recent recruitments being greater than past recruitments or expansion of the fishery into areas occupied by smaller skipjack. The low levels are likely due to large recruitments in 2015 and 2016:




***Indicators of stock status for skipjack tuna in the eastern Pacific Ocean. OBJ: floating-object fishery; NOA: unassociated fishery; CPDF: catch per day fished. All indicators are scaled so that their average equals one.***

Susceptibility and productivity analysis show that skipjack tuna has substantially higher productivity than bigeye tuna. Biomass and the fishing mortality that produces MSY ($F_{MSY}$) are, respectively, negatively and positively correlated with productivity. Therefore, since skipjack and bigeye have about the same susceptibility, which is related to fishing mortality, the status of skipjack can be inferred from the status of bigeye. The current assessment of bigeye tuna estimates that the fishing mortality is less than $F_{MSY}$; therefore, the fishing mortality for skipjack should also be less than $F_{MSY}$. Since effort has been relatively constant over the past 15 years and biomass at historical highs, this also implies that skipjack biomass is above $B_{MSY}$ (Maunder 2018). Using the

most recent indicators the species is therefore considered to have a biomass above the limit reference point, (or proxy).

**References**

Mark N. Maunder (2018) IATTC Stock Assessment Report No 18: Updated indicators of stock status for skipjack tuna in the Eastern Pacific Ocean pp 35-41
http://www.iattc.org/PDFFiles/StockAssessmentReports/_English/SAR-18-3-SKJ-assessment-2016.pdf

(Anon) (2017) IATTC Fisheries Status Report No 15: Tunas, Billfishes and other pelagic species in the Eastern Pacific Ocean pp 1-191
http://www.iattc.org/PDFFiles/FisheryStatusReports/_English/FisheryStatusReport15.pdf

FAO Species Fact Sheets (Skipjack tuna)
http://www.fao.org/fishery/species/2494/en

CITES Species Endangered list: http://checklist.cites.org/#/en (accessed 04.04.18)

IUCN Red list: http://www.iucnredlist.org/search (accessed 04.04.18)

MSC Track a Fishery:
https://fisheries.msc.org/en/fisheries/search?q=certified+skipjack+tuna&start (accessed 03.04.18)

*Standard clauses 1.3.2.2*

## SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.