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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 31 (Atlantic Western Central)** |
| **Date** | **December 2018** |
| **Assessor** | **Jim Daly** |

| **Application details and summary of the assessment outcome** | | | | |
|---|---|---|---|---|
| **Name: South East Asian Packing & Canning & others** | | | | |
| **Address:** | | | | |
| **Country: Thailand** | | **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 | Virginia Polonio | 0.5 | Initial | By-product |
| **Assessment Period** | 2018 | | | |

| Scope Details | |
|---|---|
| **Management Authority (Country/State)** | ICCAT |
| **Main Species** | Skipjack tuna (*Katsuwonus pelamis*) |
| **Fishery Location** | FAO 31 (Atlantic Western Central) |
| **Gear Type(s)** | Bait boat, Purse seine, pole & line, longlines |
| **Outcome of Assessment** | |
| **Overall Outcome** | **PASS** |
| **Clauses Failed** | None |
| **Peer Review Evaluation** | Pass |
| **Recommendation** | Approve by-product |

| Assessment Determination |
|---|
| The Regional Fishery Management Organisation (RFMO) managing the fishery in the assessment area is the International Commission for the Conservation of Atlantic Tuna (ICCAT). For the Western Atlantic stock the latest assessment was undertaken in 2014. The next assessment will be undertaken in 2019. The major fishery for the Western stock is the Brazilian bait boat fishery, followed by the Venezuelan purse seine fleet.<br><br>Fishery removals of the species in the fishery under assessment are included. Biomass and fishing mortality reference points are provided and are within limit reference points. However these data are based on the 2013 fishery. Future assessments should take into account the possibility of under-reporting of catches in this fishery.<br><br>There are currently no MSC Certified fisheries in the assessment area. IUCN has categorised skipjack tuna as a species of least concern; the species does not appear in the current CITES appendices (both sites accessed 10.12.18).<br><br>The assessment team recommends the approval of skipjack tuna as a by-product species under the current IIFO RS Standard (v2.0) for the production of fishmeal and fish oil. |
| **Peer Review Comments** |
| |
| **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 | 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* | Western Atlantic | N/A | ICCAT | 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** |

**Evidence**

The International Commission for the Conservation of Atlantic Tunas (ICCAT) is an intergovernmental organization responsible for the management and conservation of tuna and tuna-like species in the Atlantic Ocean and adjacent seas. The organization was established in 1969. Scientists participating in ICCAT carry out studies on biometry, fisheries ecology, and oceanography, focusing on the effects of fishing on tuna stock abundance. They also collect and analyse fisheries statistics which are relative to conditions the management of resources.

**Skipjack tuna:**

Skipjack tuna is the predominant species aggregated to Fish Aggregation Devices (FAD's) where it is caught in association with juvenile yellowfin tuna, bigeye tuna and with other species of epipelagic fauna. Skipjack reach sexual maturity in around one year and spawn opportunistically in warm waters above 25°C throughout the year, in large areas of the ocean. Growth differences depending on latitude must be taken into account if assessments are carried out on separate stocks between sub-tropical and tropical areas. In the Western Atlantic, the major fishery is the Brazilian bait boat fishery, followed by the Venezuelan purse seine fleet.

**Stock Assessments:**

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)).

Surplus production models deal with the entire stock, the entire fishing effort and total yield obtained from the stock, without entering into any details such as the growth and mortality parameters or the effect of mesh size

on the age of fish capture. This model was used in conjunction with a stock assessment based on catches for the Western Atlantic skipjack tuna stock. For the Brazilian fishery a method based on the development of average size of individuals captured over time was used to determine fishing mortality. Several biomass indicators were also analysed in order to track the development of the state of the stock over time.

**Species –Specific Stock Assessment:**

Fishery removals of Skipjack tuna in the fishery under assessment are included in the stock assessment process, such as catches and effort (Catch Per Unit Effort (CPUE)). Stock assessments (Eastern and Western Atlantic skipjack tuna) were conducted by ICCAT in 2014 using 2013 data. The next assessment is due in 2019.

Preliminary estimates of catches (Western Atlantic stock) in 2014 amounted to 26,317t (against the historic record of 40,200 t in 1985). This sharp decrease in 2014 (following large catches reported by Brazilian bait boats in 2012) is due to incomplete reporting by Brazil in 2013. As the fishing effort of this fleet has not increased, these variations could be the result of changes in catchability at local level of this fishery. No marked trend regarding the structure of catches by size has been observed (ref ICCAT Report 2014-2015 pp 50-67).

The CPUEs in the Western Atlantic stock were those of a) the Brazilian bait boat fleet b) the Venezuelan purse seiner c) the US pelagic longline and d) a larval index.

Models based on catch and non-equilibrium surplus biomass production estimated respectively MSY at 30,000 t - 32,000t (which remains close to previous estimates of 34,000 t). Catches in 2014 (provisional data) amounted to 26,317t. The fishing mortality vector estimated by a method based on the development of average size of individuals captured over time (mainly from Brazilian catches) shows a profile which is very close to that estimated by the non-equilibrium surplus biomass model. All analyses rest on the assumption of a single western stock from the US coast to Brazil and correspond to the current geographic coverage of this fishery.

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), for the western Atlantic stock, in light of the information provided by the trajectory of B/BMSY and F/FMSY ratios (1.3 and 0.7 respectively (2013 catch data) it is unlikely that the current catch is larger than the replacement yield (Fig 1):

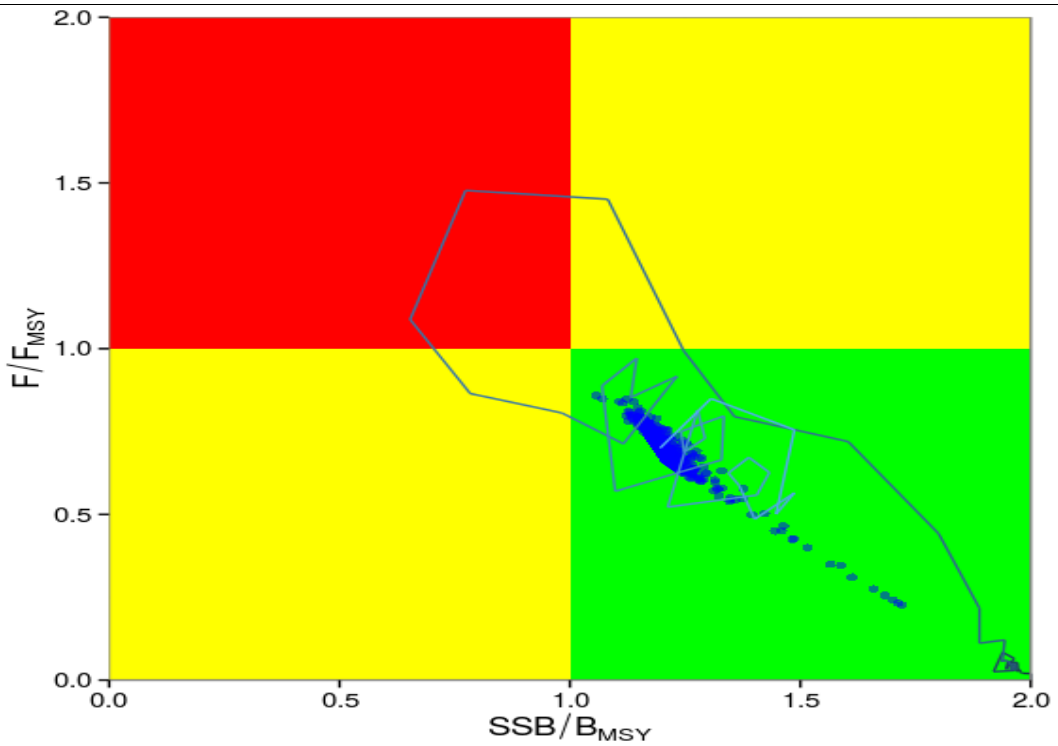


**Figure 1**: Western skipjack stock status: trajectories of B/BMSY and F/FMSY from the ASPIC surplus production model (Schaefer type). **R2**

Stock status (based on 2014 catch data) was concluded by ICCAT to be probably not overfished and probably not subjected to overfishing.

**Management Recommendations:**

For the West Atlantic stock ICCAT have not formulated any management recommendations, and has only indicated that the catches should not be allowed to exceed the MSY. Despite recent progress, the Committee has expressed its concern regarding uncertainties which the underreporting of skipjack catches may have on the perception of the state of the stocks.

Fishery removals of Skipjack tuna in the fishery under assessment are included in the stock assessment process and the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy) **R2**

**References**

R1: FAO Species Fact Sheets (Skipjack tuna) http://www.fao.org/fishery/species/2494/en
R2: Anon: Stock Assessment Skipjack tuna (East and West Stock Assessment): ICCAT Report Dakar Senegal 2014-2015 https://www.iccat.int/Documents/Meetings/Docs/2014_SKJ_ASSESS_ENG.pdf 98 pp
R3: CITES Species Endangered list: http://checklist.cites.org/#/en (accessed 23.03.18)
R4: IUCN Red list: http://www.iucnredlist.org/search (accessed 23.03.18)
R5: MSC Track a Fishery: https://fisheries.msc.org/en/fisheries/search?q=certified+skipjack+tuna&start (accessed 23.03.18)
R6: Fishsource: Skipjack Tuna Western Atlantic Ocean: https://www.fishsource.org/stock_page/1042

*Standard clauses 1.3.2.2*