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Global Standard for Responsible Supply of Marine Ingredients

Fishery Assessment Methodology and Template Report V2.0

Fishery Under Assessment	Yellowfin tuna (*Thunnus albacares*), FAO fishing area 77 (Pacific, Eastern Central)
Date	15 June 2020
Report Code	2020-97
Assessor	Sam Dignan
Stock Pass	Yes
Stock Fail	

Application details and summary of the assessment outcome				
Name:				
Address:				
Country:		**Zip:**		
Tel. No.:		**Fax. No.:**		
Email address:		**Applicant Code:**		
Key Contact:		**Title:**		
Certification Body Details				
Name of Certification Body:		**SAI Global**		
Assessor	**Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/ Re-approval**	**Whole fish/ By-product**
Sam Dignan	Virginia Polonio	0.5	Initial	By-product
Assessment Period	To June 2020			

Scope Details	
Management Authority (Country/State)	Western and Central Pacific Fisheries Commission (WCPFC), Inter-American Tropical Tuna Commission (IATTC) and relevant National authorities of Vietnam.
Main Species	Yellowfin tuna (*Thunnus albacares*)
Stock:	1. Yellowfin tuna in the western and central Pacific Ocean (west of 150°W). 2. Yellowfin tuna in the eastern Pacific Ocean (east of 150°W).
Fishery Location	FAO fishing area 77 (Pacific, Eastern Central).
Gear Type(s)	All gears
Outcome of Assessment	
Peer Review Evaluation	**APPROVE**
Recommendation	**APPROVE**

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 IFFO RS raw material. Pacific yellowfin tuna does not appear as Endangered or Critically Endangered on IUCN's Red List, nor does it appear in CITES appendices; therefore, product originating from this fishery is eligible for approval for use as IFFO RS by-product raw material.

For assessment and management purposes, two discrete stocks of yellowfin are recognised in the Pacific Ocean delimited based on their being east and west of 150°W longitude:

1. Western Central Pacific Ocean (WCPO) yellowfin (west of 150°W), managed via the Western and Central Pacific Fisheries Commission (WCPFC).
2. Eastern Pacific Ocean (EPO) yellowfin (east of 150°W), managed by the Inter-American Tropical Tuna Commission (IATTC).

Various data suggest some mixing between the western and eastern Pacific. In addition, FAO area 77 has its western boundary at 175°W so it encompasses the stock areas of both EPO yellowfin and WCPO yellowfin between 150°W and 175°W. As yellowfin tuna catches in FAO area 77 could come from either of these stocks, both stocks are considered in this assessment.

Based on the above, this assessment covers two stocks; 1) yellowfin tuna in the western Pacific Ocean (west of 150°W), and; 2) yellowfin tuna in the eastern Pacific Ocean (east of 150°W) when fished within FAO fishing areas 77 and 87 by Vietnamese vessels.

Fishery removals from both stocks are considered in the WCPFC and IATTC stock assessment processes such that both stocks **achieve a PASS against Clause C1.1.**

In addition, the most recent stock assessment for both stocks show them to be above relevant limit reference points defined by management such that both stocks **achieve a PASS against C1.2**.

In order to be approved, the stocks assessed must pass both Clause C1.1 and C1.2; therefore, as this is the case here, by-product covered by this report is **APPROVED** for the production of fishmeal and fish oil under the current IFFO RS v 2.0 by-product standard.

Peer Review Comments

Both stocks have the biomass below target reference points, however the requirements are set up at limits, therefore both stocks are below limits reference points, therefore the fishery achieves a pass for both clauses and it is approved for the production of fishmeal and fish oil under the current IFFO RS v 2.0 by-product standard.

Notes for On-site Auditor

HOW TO COMPLETE THIS ASSESSMENT REPORT

By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

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
Yellowfin tuna	*Thunnus albacares*	Yellowfin tuna in the western and central Pacific Ocean (west of 150°W).	Unk.	WCPFC	C
		Yellowfin tuna in the eastern Pacific Ocean (east of 150°W).	Unk.	IATTC	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		**Yellowfin tuna in the western central Pacific Ocean (west of 150°W).**	
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:			**See above**

C1.1 Evidence

Fishery removals of the species in the fishery under assessment are included in the stock assessment process via Western and Central Pacific Fisheries Commission (WCPFC) processes. Yellowfin catch in 2017 was a record 670,890 mt, a 4% increase from 2016 and a 12% increase from the average over the period 2012 – 2016. In the last stock assessment from 2017 catches were reported as follows:

- Purse seine catch in 2017 (472,279 mt) was a 22% increase from 2016 and a 33% increase from the 2012-2016 average.
- Longline catch in 2017 (83,399 mt) was a 6% decrease from 2016 and a 9% decrease from the 2012-2016 average.
- Pole and line catch (12,219 mt) was a 48% decrease from 2016 and a 56% decrease from the average 2012-2016 catch.
- Catch by other gear (102,993 mt) was a 28% decrease from 2016 and 17% decrease from the average catch in 2012-2016.

Therefore, fishery removals from different gear types are included in the stock assessment process such that **the fishery achieves a PASS against C1.1**.

C1.2 Evidence

The most recent stock assessment for WCPO yellowfin was carried out in 2017 (Tremblay-Boyer et al. 2017a). The WCPFC has adopted 20% of the unfished spawning potential (20%$SB_{F=0}$) as a LRP for this stock; therefore, despite it being quite high at ~77% of the median estimate of B_{MSY}, this is the considered here. Stock status is evaluated by estimating $SB_{recent}/SB_{F=0}$ and $SB_{latest}/SB_{F=0}$, where SB_{latest} and SB_{recent} are the estimated spawning potential in 2015 and the mean over 2011-2014, respectively.

Species Name	Yellowfin tuna in the western central Pacific Ocean (west of 150°W).
Majuro plots presented in Tremblay-Boyer et al. (2017a), show that there are only two scenarios for 'latest' and three for 'recent' which fall below the defined LRP; therefore, the stock is considered, in its most recent stock assessment, to be above the limit reference point defined by management such that **the fishery achieves a PASS against C1.2**.	
References Tremblay-Boyer, S., McKechnie, S., Pilling, G., Hampton, J., 2017a. Stock assessment of yellowfin tuna in the Western and Central Pacific Ocean. WCPFC-SC13-2017/SA-WP-06.	
Standard clauses 1.3.2.2	

Species Name		Yellowfin tuna in the eastern Pacific Ocean (east of 150°W).	
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:			**See above**

C1.1 Evidence

Catches of tunas within the IATTC area of competence are reported to the IATTC (e.g. IATTC, 2020) and these catches are subsequently included in the IATTC stock assessment process; therefore, fishery removals in the fishery under assessment are included in the stock assessment process such that **the fishery achieves a PASS against C1.1**.

C1.2 Evidence

The most recent stock assessment for EPO yellowfin was carried out in 2019 (Minte-Vera, Xu and Maunder, 2019) with a terminal year of 2018. S_{MSY} and F_{MSY} are used as target reference points in the management of this stock and interim limit reference points of $0.28*S_{MSY}$ and $2.42*F_{MSY}$ are defined; these correspond to a 50% reduction in recruitment from its average unexploited level based on a conservative steepness value (h = 0.75) for the Beverton-Holt stock recruitment relationship.

According to the 2018 stock assessment conducted by the IATTC scientific staff (Minte-Vera, Xu and Maunder, 2019) , the EPO yellowfin tuna stock is not overfished but is subject to overfishing; therefore, the stock is considered, in its most recent stock assessment, to be above the limit reference point defined by management such that **the fishery achieves a PASS against C1.2**.

References

- IATTC (2020). Estimated Catch (in mt) by Purse Seine and Pole-and-Line vessels in the Eastern Pacific Ocean (east of 150°W 01 Jan - 03 May 2020: http://www.iattc.org/MonthlyReports/2020/_English/Apr-2020_Current%20monthly%20report.pdf
- Minte-Vera, Xu and Maunder (2019) Inter-American Tropical Tuna Commission Stock Assessment Report 20 Status of the Tuna and Billfish Stocks in 2018:
- http://www.iattc.org/PDFFiles/StockAssessmentReports/_English/No-20-2019_Status%20of%20the%20tuna%20and%20billfish%20stocks%20in%202018.pdf

Standard clauses 1.3.2.2