



MarinTrust Standard V2

By-product Fishery Assessment Report Template

MarinTrust Programme

Unit C, Printworks

22 Amelia Street

London

SE17 3BZ

E: standards@marin-trust.com

T: +44 2039 780 819

Table 1 Application details and summary of the assessment outcome

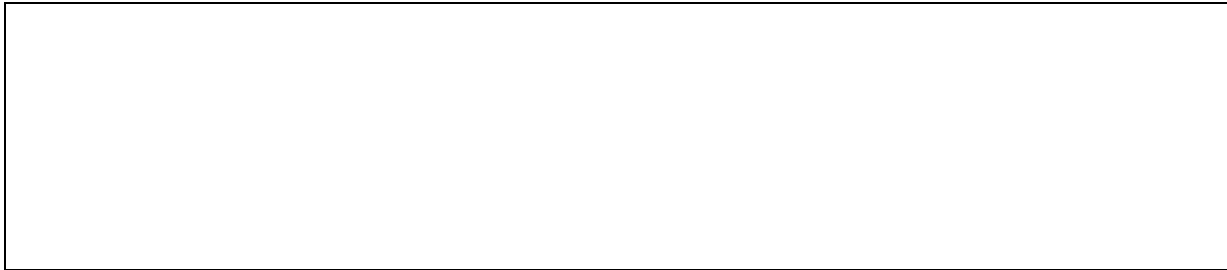
Fishery Under Assessment	Species:	Bigeye tuna, <i>Thunnus obesus</i>
	Geographical area:	FAO Areas 77 & 71 Pacific Eastern Central & Western Central
	Country of origin of the product:	Thailand
	Stock:	Western & Central Pacific Ocean (WCPO) bigeye tuna Eastern Pacific Ocean (EPO) bigeye tuna
Date	18/10/2021	
Report Code	BP206	
Assessor	Virginia Polonio	
Country of origin of the product - PASS	Thailand	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Name:			
Address:			
Country: Thailand		Zip:	
Tel. No.:		Fax. No.:	
Email address:		Applicant Code:	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Virginia Polonio	Geraldine Criquet	0.5	Surveillance 2
Assessment Period	To October 2021		

Scope Details	
Main Species	Bigeye tuna, <i>Thunnus obesus</i>
Stock	Western & Central Pacific Ocean (WCPO) bigeye tuna Eastern Pacific Ocean (EPO) bigeye tuna
Fishery Location	FAO Areas 77 & 71 Pacific Eastern Central & Western Central
Management Authority (Country/ State)	Western and Central Pacific Fisheries Commission (WCPFC) Inter-American Tropical Tuna Commission (IATTC) Department of Fisheries of Thailand
Gear Type(s)	Longline, pole and line and purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's recommendation of approval
Recommendation	APPROVED

Table 2. Assessment Determination

Assessment Determination
<p>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 MarinTrust raw material. Bigeye tuna, <i>Thunnus obesus</i> does not appear as Endangered or Critically Endangered on IUCN's Red List, nor does it appear in CITES appendices, therefore Bigeye tuna, (<i>Thunnus obesus</i>) is eligible for approval for use as MarinTrust by-product raw material.</p> <p>Bigeye tuna in the western and central Pacific Ocean are managed at the international level by the Western and Central Pacific Fisheries Commission (WCPFC). The WCPFC has an agreement with the Secretariat of the Pacific to undertake regular assessments of target tuna and tuna-like species. Therefore, the status of the stocks is known and regularly monitored. Catch limits have recently been put into place (2013) for six countries (United States, China, Indonesia, Japan, Korea, Taiwan) longline fisheries operating on the high seas.</p> <p>Further as the FAO areas included in this report are FAO 77 and 71, the eastern Pacific Ocean (EPO) bigeye tuna stock, which is managed by Inter-American Tropical Tuna Commission (IATTC) is also included. Different models were used to produce management advice for EPO stock by combining them using relative weights determined based on several criteria, including performance on model diagnostics. The species is subject to a species-specific management regime in both areas and therefore it has been assessed under Category C.</p> <p>For both bigeye tuna stocks, removals are considered in the stock assessment and the last stock assessment showed that the SSB is above reference points. Therefore, both stocks PASS clauses C1.1 and C1.2</p> <p>Western & Central Pacific Ocean and Eastern Pacific Ocean bigeye tuna, <i>Thunnus obesus</i> are APPROVED for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified WCPO and EPO bigeye tuna stocks as category C, reference points are defined to assess status of both stock relative to.</p> <p>Fishery removals are included in the stock assessment process so both stocks PASS Clause C1.1. The WCPO and EPO bigeye tuna stocks are considered, in their most recent stock assessment, to have a biomass above the limit reference point, both stocks PASS Clause C1.2.</p> <p>Therefore, WCPO and EPO bigeye tuna stocks should be approved.</p>
Notes for On-site Auditor



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
Bigeye tuna	<i>Thunnus obesus</i>	Western & Central Pacific Ocean (WCPO) bigeye tuna & Eastern Pacific Ocean (EPO) bigeye tuna	Western and Central Pacific Fisheries Commission (WCPFC) & Inter-American Tropical Tuna Commission (IATTC)	C	Globally VU	No

¹ <https://www.iucnredlist.org/>

² <https://cites.org/eng/app/appendices.php>

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.

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. Where a species fails this Clause, it should be assessed as a Category D species instead.

Species Name		Bigeye tuna, (<i>Thunnus obesus</i>) 1. Western & Central Pacific Ocean (WCPO) 2. Eastern Pacific Ocean (EPO)	
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.	Yes
	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.	Yes
			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.			
<u>WCPO stock</u>			
Stock assessments of bigeye tuna in the WCPO have been conducted regularly since 1999. The most recent assessment was conducted in 2019 and included catch, effort, length-frequency and weight-frequency data from 1952-2015.			
The SC16 noted that the preliminary estimate of total catch of WCPO bigeye tuna for 2019 was 135,680 mt, a 9% decrease from 2018 and an 8% decrease from the average 2014-2018. Longline catch in 2019 (68,371 mt) was a 0% decrease from 2018 and a 2% increase from the 2014-2018 average. Purse seine catch in 2019 (50,819 mt) was a 22% decrease from 2018 and a 17% decrease from the 2014-2018 average. Pole and line catch (1,400 mt) was a 66% decrease from 2018 and a 66% decrease from the average 2014-2018 catch. Catch by other gear totalled 15,090 mt and was a 33% increase from 2018 and 1% increase from the average catch in 2014-2018).			
<u>EPO stock</u>			
<p>Figure 1. Total catches (retained catches plus discards) by the purse-seine (PS) fisheries, and retained catches by the longline (LL) fisheries, of bigeye tuna in the eastern Pacific Ocean, 1975-2019. The purse-seine catches are adjusted to the species composition estimate obtained from sampling the catches. 2019 data are preliminary. Source: IATTC</p>			
Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and the fishery PASSES clause C1.1			

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.

Based on the uncertainty grid adopted by SC16, the WCPO bigeye tuna spawning biomass is above the biomass LRP and recent F is very likely below FMSY. The stock is not overfished (100% probability $SB/SBF=0 > LRP$) and likely not experiencing overfishing (87.5% probability $F < FMSY$).

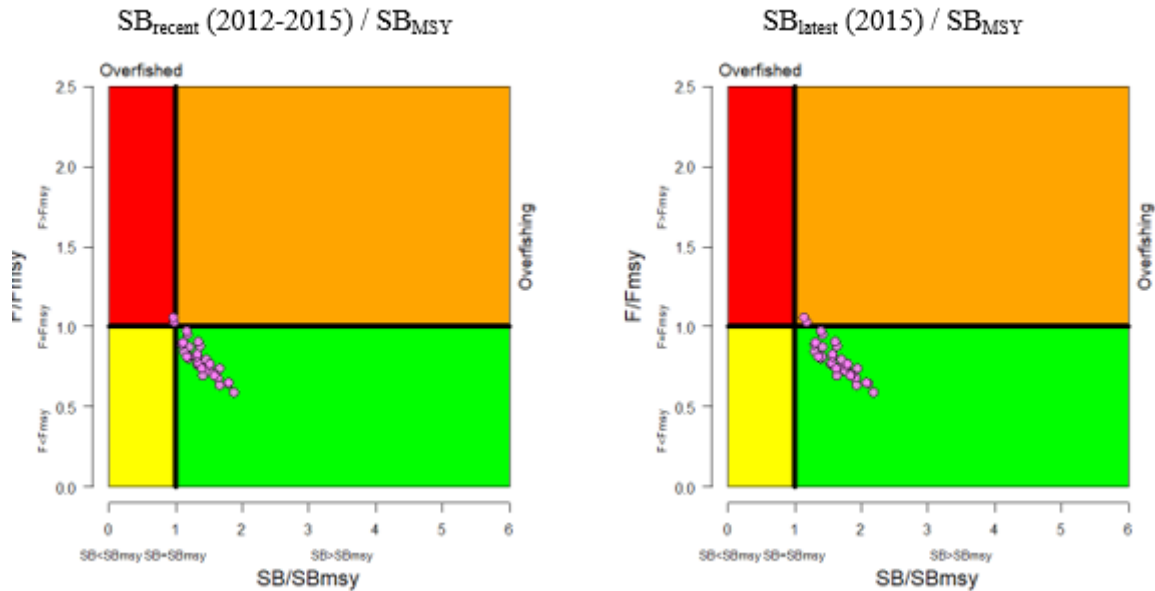


Figure 2. Kobe plot summarising the results for each of the models in the structural uncertainty grid. In the upper panel, the points represent SB_{recent}/SB_{MSY} , where SB_{recent} is the mean SB over 2012-2015. In the lower panel, the points represent SB_{latest}/SB_{MSY} , where SB_{latest} is from 2015. Source: WCPO, 2021.

Therefore, the species is considered, in its most recent stock assessment, to have a biomass above reference points (or proxy) and it **PASSES** clause C1.2.

EPO stock

The last stock assessment has shown that Regarding management quantities (Figure 3), the 44 reference models estimate that (1) at the beginning of 2020, the spawning biomass of bigeye ranged from 14% to 212% of the level at dynamic MSY; 26 models suggest that it was below that level; (2) at the beginning of 2020, the spawning biomass of bigeye ranged from 51% to 532% of the limit reference level; five models suggest that it was below that limit; (3) during 2017-2019, the fishing mortality of bigeye ranged from 51% to 223% of the level at MSY; 26 runs suggest that it was above that level; (4) during 2017-2019, the fishing mortality of bigeye ranged from 32% to 114% of the limit reference level; three models suggest that it was above that limit.

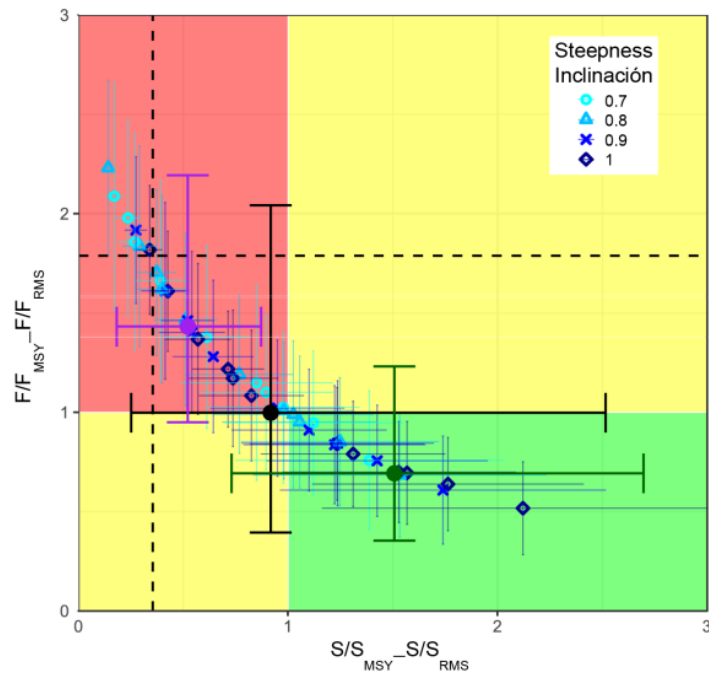


Figure 3. Kobe plot of the most recent estimates of spawning biomass (S) and fishing mortality (F) relative to their MSY reference points (SMSY_d and FMSY) estimated by the 44 converged reference model runs (see Table 4). Each dot is based on the average F over the most recent three years. The dashed lines represent the limit reference points averaged for the 44 converged reference model runs. The error bars represent the 95% confidence interval of the estimates. The black, purple, and green dots are the combined estimates across all models, all pessimistic models, and all optimistic models, respectively. Source: IATTC 2020.

Therefore, for EPO stock the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy) and it **PASSES** clause C1.2.

References

Vincent, M. T., G. Pilling, and J. Hampton. 2018. Incorporation of updated growth information within the 2017 WCPO bigeye stock assessment grid, and examination of the sensitivity of estimates to alternative model spatial structures. WCPFC-SC14-2018/SA-WP-03.

WCPFC. 2018c. Bigeye Tuna (*Thunnus obesus*) Stock Status & Trends plus Management Advice and Implications. <https://www.wcpfc.int/doc/01/bigeye-tuna>

WCPFC. 2018d. Bigeye Tuna | WCPFC. <https://www.wcpfc.int/doc/01/bigeye-tuna>

WCPO, 2019. Bigeye Tuna (*Thunnus obesus*). Stock Status and Management Advice. <https://www.wcpfc.int/doc/01/bigeye-tuna>. The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean.

WCPO, 2021. Bigeye Tuna (*Thunnus obesus*). Stock Status and Management Advice.

Links

MARINTRUST Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01