



## MarinTrust Standard V2

### By-product Fishery Assessment

# *USA20 – Bigeye tuna in FAO Areas 41 & 47 (Atlantic bigeye)*

**MarinTrust Programme**

Unit C, Printworks

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

Fishery Under Assessment	Species:	Bigeye tuna ( <i>Thunnus obesus</i> )
	Geographical area:	FAO Areas 41 & 47
	Country of origin of the product:	Seychelles, South Africa
	Stock:	Atlantic bigeye tuna
Date	June 2023	
Report Code	USA20	
Assessor	Sam Peacock	
Country of origin of the product - PASS	Seychelles, South Africa	
Country of origin of the product - FAIL	n/a	

Application details and summary of the assessment outcome			
Company Name(s): The Scoular Company - Indian Ocean Tuna Ltd			
Country: USA			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Kate Morris	0.2	Initial
Assessment Period	June 2023 – June 2024		

Scope Details	
Main Species	Bigeye tuna ( <i>Thunnus obesus</i> )
Stock	Atlantic bigeye tuna
Fishery Location	FAO Areas 41, 47
Management Authority (Country/ State)	International Commission for the Conservation of Atlantic Tunas (ICCAT)
Gear Type(s)	Longline, baitboat, purse seine
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Pass

## Table 2. Assessment Determination

Assessment Determination
<p>Bigeye tuna has been categorised by the IUCN as Vulnerable, and does not appear in the CITES appendices. Bigeye in the Atlantic is managed by the International Commission for the Conservation of Atlantic Tunas (ICCAT) relative to a target reference point (<math>B_{MSY}</math>), and therefore was assessed under Category C.</p> <p>The most recent stock assessment for bigeye in the Atlantic was conducted in 2021, providing an estimate of stock status in 2019. The assessment incorporated all available catch data, and concluded that stock biomass was slightly below <math>B_{MSY}</math>. Although no limit reference point is established for the stock, biomass was estimated to be very likely to be above <math>\frac{1}{2} B_{MSY}</math>, the default limit reference point defined by the MT byproduct assessment guidance. For this reason, the byproduct meets the MT requirements and should be approved for use as a raw material.</p>
Fishery Assessment Peer Review Comments
<p>The by-product fishery under assessment here is the Bigeye tuna (<i>Thunnus obesus</i>) fishery, pursued by vessels in FAO fishing area 41 &amp; 47. Bigeye tuna is managed by international or state regulations. Therefore, for this Marin Trust assessment, the bigeye tuna stock is scored against Category C.</p> <p>The species scoring table has been completed by the auditor with sufficient evidence presented to support their final determination.</p> <p>The peer review supports the auditor's recommendation to pass the FAO 41 &amp; 47, Bigeye tuna stock pursued by the fishery under the Marin Trust IFFO RS v2.0 by-fishery standard for the production of fishmeal and fish oil.</p>
Notes for On-site Auditor
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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 a 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 <sup>1</sup>	CITES Appendix 1 <sup>2</sup>
Bigeye tuna	<i>Thunnus obesus</i>	Atlantic bigeye	Yes	C	Vulnerable <sup>3</sup>	No

<sup>1</sup> <https://www.iucnredlist.org/>

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

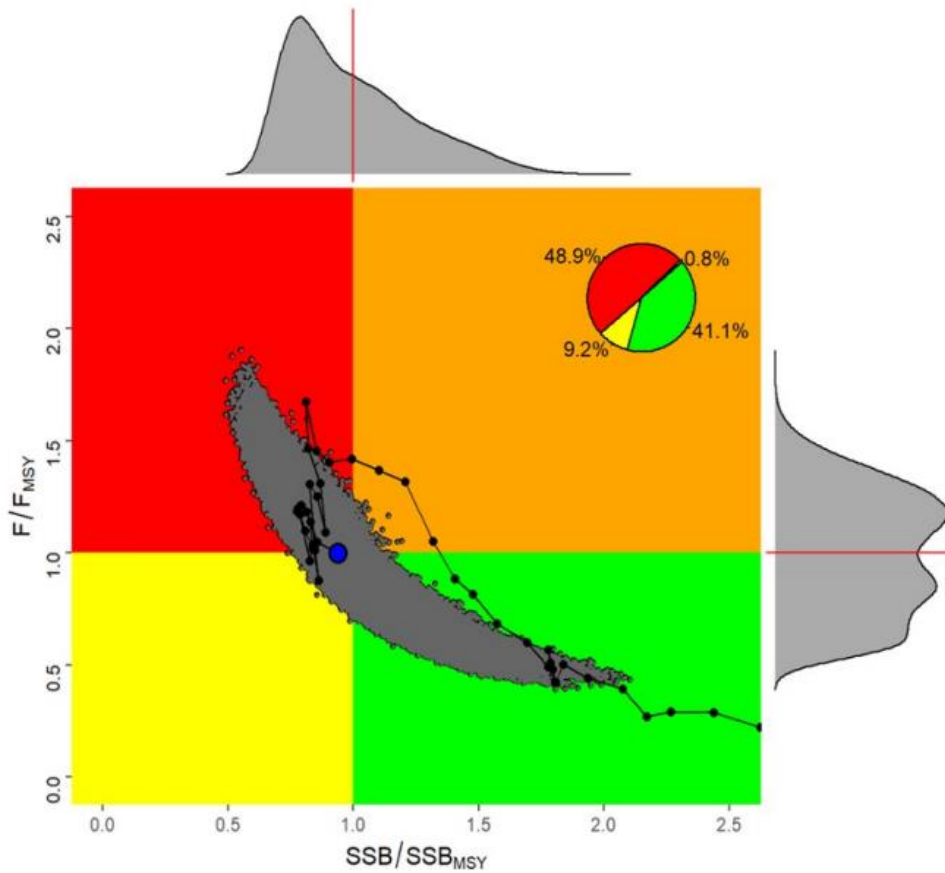
<sup>3</sup> <https://www.iucnredlist.org/species/21859/46912402>

## CATEGORY C SPECIES

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

Species Name	Bigeye tuna		
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	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
	<b>C1.2</b>	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
<b>Clause outcome:</b>			PASS
<p><b>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.</b></p> <p>The most recent stock assessment for Atlantic bigeye was conducted by ICCAT in 2021 using all available catch data and several modelling approaches (ICCAT 2021). Different model formulations were used to test different potential representations of stock dynamics and characteristics to reduce uncertainties in the outcomes. Catch data are available by area, gear, and vessel flag, and were incorporated into the assessment. C1.1 is met.</p> <p><b>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.</b></p> <p>The 2021 stock assessment produced estimates of stock status in 2019. Relative spawning biomass (<math>SSB_{2019}/SSB_{MSY}</math>) was estimated to be 0.94, with a 96% confidence interval of 0.71 – 1.37. This places the stock into the Overfished section of the Kobe chart, and indicates that biomass is likely to be below the target reference point. The stock assessment also concluded that as of 2019 the stock was not subject to overfishing.</p> <p>No limit reference point is defined for the stock. Where this is the case, the MT byproduct assessment guidance directs assessors to assume a limit reference point of <math>\frac{1}{2}B_{MSY}</math>. The 95% confidence interval described above indicates that there is a very high probability the stock biomass is at least 0.71 <math>B_{MSY}</math>, and therefore is very likely to be above the default limit reference point. For this reason, C1.2 is met.</p>			



Kobe plot of SSB/SSB<sub>MSY</sub> and F/F<sub>MSY</sub> for stock status of Atlantic bigeye tuna in 2019. Insert pie chart shows the probability that 2019 status is in the red quadrant (48.9%), green quadrant (41.1%), orange (0.8%) and in yellow (9.2%). Blue circle is the median and marginal histograms represent distribution of either SSB/SSB<sub>MSY</sub> or F/F<sub>MSY</sub> (ICCAT 2021).

**References**

ICCAT (2021). Stock assessment executive summary, bigeye tuna.  
[https://www.iccat.int/Documents/SCRS/ExecSum/BET\\_ENG.pdf](https://www.iccat.int/Documents/SCRS/ExecSum/BET_ENG.pdf)

**Links**

<b>MarinTrust Standard clause</b>	1.3.2.2
<b>FAO CCRF</b>	7.5.3
<b>GSSI</b>	D.3.04, D5.01

## 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.

<b>D1</b>	<b>Species Name</b>	n/a	
	<b>Productivity Attribute</b>	<b>Value</b>	<b>Score</b>
	Average age at maturity (years)		
	Average maximum age (years)		
	Fecundity (eggs/spawning)		
	Average maximum size (cm)		
	Average size at maturity (cm)		
	Reproductive strategy		
	Mean trophic level		
	<b>Average Productivity Score</b>		
	<b>Susceptibility Attribute</b>	<b>Value</b>	<b>Score</b>
	Availability (area overlap)		
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		
	Selectivity of gear type		
	Post-capture mortality		
	<b>Average Susceptibility Score</b>		
	<b>PSA Risk Rating (From Table D3)</b>		
	<b>Compliance rating</b>		
	<b>Further justification for susceptibility scoring (where relevant)</b> <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
	<b>References</b>		
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

D4 Species Name		n/a	
<b>Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements</b>			
D4.1	The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.		
D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.		
			<b>Outcome:</b>
<b>Evidence</b>			
D4.1: The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.			
D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.			
<b>References</b>			
<b>Links</b>			
MarinTrust Standard clause		1.3.2.2, 4.1.4	
FAO CCRF		7.5.1	
GSSI		D.5.01	