MarinTrust Standard V2

By-product Fishery Assessment

SLV09 Skipjack Tuna in FAO Areas 41 (Atlantic, Southwest) and 47 (Atlantic, Southeast)

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Skipjack tuna (*Katsuwonus pelamis*)
	Geographical area:	FAO Major Fishing Areas: 41 Atlantic, Southwest 47 Atlantic, Southeast
	Country of origin of the product:	El Salvador
	Stock:	Eastern and Western Atlantic Skipjack
Date	March 2023	
Report Code	SLV09	
Assessor	Sam Dignan	
Country of origin of the product - PASS	El Salvador	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Calvo Conservas El Salvador SA de CV			
Country: El Salvador			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Dignan	Sam Peacock	0.2	Surveillance 1
Assessment Period	To April 2023		

Scope Details	
Main Species	Skipjack tuna (*Katsuwonus pelamis*)
Stock	East and West Atlantic Skipjack
Fishery Location	FAO Areas: 41 Atlantic, Southwest 47 Atlantic, Southeast
Management Authority (Country/ State)	International Commission for the Conservation of Atlantic Tunas (ICCAT)
Gear Type(s)	Longline, pole and line, purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with recommendation
Recommendation	PASS

Table 2. Assessment Determination

Assessment Determination
Skipjack tuna has been categorised by the IUCN as a species of Least Concern and does not appear in the CITES appendices. The areas covered by this assessment (FAO Areas 41 Atlantic, Southwest and 47 Atlantic, Southeast) encompass 2 x skipjack tuna stocks (Eastern Atlantic skipjack and Western Atlantic skipjack). Both stocks are managed by the International Commission for the Conservation of Atlantic Tunas (ICCAT) relative to a target reference points (B_{MSY}) and are therefore assessed under Category C. Eastern Atlantic skipjack The most recent stock assessment for Eastern Atlantic skipjack was conducted in 2022 using catch data up to and including 2020. Although the results produced a large potential range of biomass estimates, the stock is considered not to be overfished and not subject to overfishing with a high probability (78%). As biomass is likely to be above the target reference point, it is very likely to be above any potential limit reference point. Western Atlantic skipjack The most recent stock assessment for Western Atlantic skipjack was conducted in 2022 using all available catch data. The assessment concluded that the stock is not overfished and not subject to overfishing, with a high probability (91%). As biomass is very likely to be above the target reference point, it is also very likely to be above any potential limit reference point. Overall, the by-product meets relevant MarinTrust requirements and should be approved for use as a raw material.
Fishery Assessment Peer Review Comments
The peer reviewer agrees that skipjack is eligible for assessment and has been correctly considered under Category C. The most recent stock assessments for both stocks concluded that there is a high probability that biomass is above the target reference point, and the peer reviewer agrees that this means they are almost certainly above any possible limit reference point. This byproduct material should be approved.
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]
Skipjack tuna	*Katsuwonus pelamis*	Eastern Atlantic	Yes	C	Least Concern[3]	No
		Western Atlantic	Yes	C	Least Concern[4]	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
[3] https://www.iucnredlist.org/species/170310/46644566
[4] https://www.iucnredlist.org/species/170310/46644566

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	**Skipjack tuna (Eastern Atlantic stock)**	
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

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.

The most recent stock assessment conducted for Eastern Atlantic skipjack tuna was carried out in 2022, applying non-equilibrium and Bayesian state-space production models to integrated statistical assessment models using the available catch data up to and including 2020 (ICCAT 2022). Multiple models were used to represent potential population dynamic scenarios, and to account for uncertainty in outputs. The ICCAT stock assessment group decided to combine the results of several models to capture all major uncertainties. Despite this, there was a high degree of uncertainty in the resultant estimates of stock biomass; however, the group were able to produce management advice and have made several recommendations for the improvement of future stock assessments. Overall, the assessor considers C1.1 to be met.

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.

The 2022 stock assessment of Eastern Atlantic skipjack tuna concluded that there was a 78% probability that the stock is neither overfished nor subject to overfishing (ICCAT 2022). Relative biomass (B_{2020}/B_{MSY}) was estimated to be 1.60, although the assessment produced a wide 95% confidence interval (0.50 – 5.79). However, as the biomass is likely to be above the target reference point, it is highly likely to be above any potential limit reference point, and C1.2 is met.

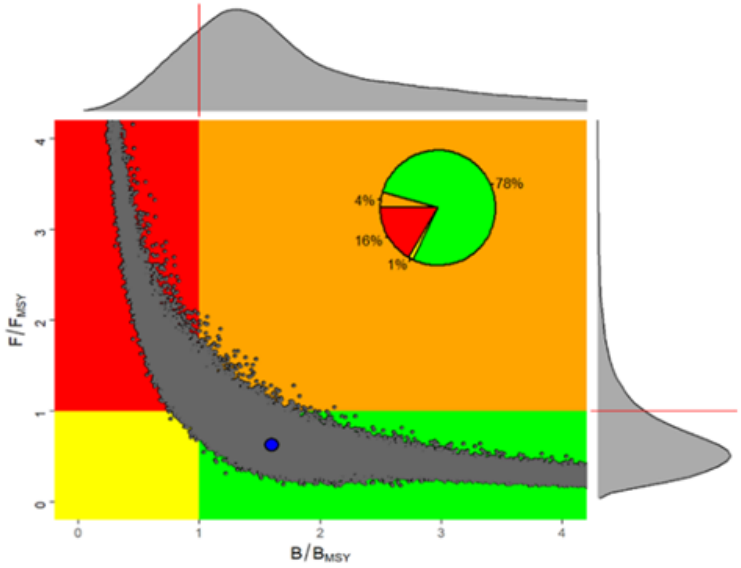

Figure 1. Combined Kobe phase plot for the various models performed for Eastern Atlantic skipjack tuna in 2022. The blue point shows the median of 180,000 iterations for SSB_{2020}/SSB_{MSY} or B_{2020}/B_{MSY} and F_{2020}/F_{MSY} for the entire set of runs in the grid. Grey points represent the 2020 estimates of relative fishing mortality and relative spawning stock biomass for 2020 for each of the 180,000 iterations. The upper graph represents the smoothed frequency distribution of SSB_{2020}/SSB_{MSY} or B_{2020}/B_{MSY} estimates for 2020. The right graph represents the smoothed frequency distribution of F_{2020}/F_{MSY} estimates for 2020. The inserted pie graph represents the percentage of each 2020 estimate that fall in each quadrant of the Kobe plot (ICCAT 2022).

References

ICCAT (2022). Species executive summary, skipjack tuna. https://www.iccat.int/Documents/SCRS/ExecSum/SKJ_ENG.pdf

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

Species Name	Skipjack tuna (Western Atlantic stock)	
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

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.

The most recent stock assessment for Western Atlantic skipjack tuna was conducted in 2022 using a Bayesian state-space production model and an integrated statistical assessment model (ICCAT 2022). The stock status estimates from the two approaches agreed with each other. Available catch data was incorporated into the assessment, alongside a range of other fishery data. C1.1 is met.

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.

The results of the 2022 stock assessment indicated that there is a high probability (91%) that the Western Atlantic skipjack stock is not overfished and not currently subject to overfishing. The relative biomass (B_{2020}/B_{MSY}) was estimated to be 1.60, with a 95% confidence interval of 0.90 – 2.87 (ICCAT 2022). There was an estimated 9.1% probability that the stock is overfished (i.e. that biomass is below the target reference point). As it is highly likely that biomass is currently above the target reference point, it is also highly likely to be above any potential limit reference point, and C1.2 is met.

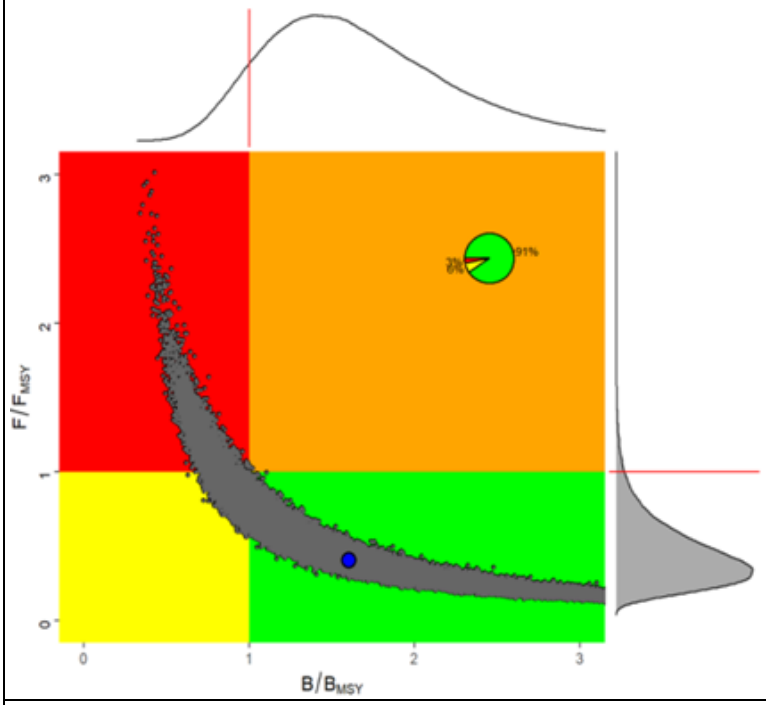

Figure 2. Combined Kobe phase plot for the various models performed for Western Atlantic skipjack tuna in 2022. The blue point shows the median of 200,000 iterations for SSB_{2020}/SSB_{MSY} and F_{2020}/F_{MSY} for the entire set of runs in the grid. Grey points represent the 2020 estimates of relative fishing mortality and relative spawning stock biomass for 2020 for each of the 200,000 iterations. The upper graph represents the smoothed frequency distribution of SSB/SSB_{MSY} estimates for 2020. The right graph represents the smoothed frequency distribution of F/F_{MSY} estimates for 2020. The inserted pie graph represents the percentage of each 2020 estimate that fall in each quadrant of the Kobe plot (ICCAT 2022).

References

ICCAT (2022). Species executive summary, skipjack tuna. https://www.iccat.int/Documents/SCRS/ExecSum/SKJ_ENG.pdf

Links	
MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	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.

D1	**Species Name**		
	Productivity Attribute	**Value**	**Score**
	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		
		Average Productivity Score	
	Susceptibility Attribute	**Value**	**Score**
	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		
		Average Susceptibility Score	
		PSA Risk Rating (From Table D3)	
		Compliance rating	
	Further justification for susceptibility scoring (where relevant) *For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision*		
References			
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		
	Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements		
	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.	
		Outcome:	

Evidence

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.

References

Links	
MarinTrust Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01