

By-Product assessment report

BP091 Marine Protein Marprot S.A



Report code	BP091	Date of issue	October 2025
ricport code	DI 031	Date of 155ac	000001 2023

1. Application details					
Applicant	Marine Protein Marprot S.A				
Applicant country	Ecuador				
2. Certification Body details					
Name of Certification Body (CB)	NSF / Global Trust Certification Ltd				
Contact information for CB	nsf-marintrust@nsf.org				
Assessor name	Ana Elisa Almeida Ayres				
CB internal peer reviewer name	Léa Lebechnech				
Internal peer review evaluation	Agree with evaluation				
Number of Assessment days	0.5				
Comments on the assessment	This assessment covers 3 byproduct species caught by vessels from Ecuador, but with flag and coastal states from USA, Ecuador and Panama in FAO Areas 77 and 87 (Eastern Central Pacific and Southeast Pacific). USA are considered Medium Risk flag state, thus it was Approved, Source with Caution in Step 2. Ecuador and Panama are considered High Risk flag states, and so the species were subjected to Step 3 assessment. All species passed the Step 3 risk assessment via Path 2. They have also passed the Category C assessment, and were scored as Approved, Source with Caution.				
3. Approval validity	Valid from 10/2025 Valid until 10/2026				
4. Assessment cycle	Initial				

5. By-product ass	essment outcomes		
By-product species name	Flag country(ies)	Fishing Areas	MarinTrust approval status
Skipjack tuna (Katsuwonus pelamis)	USA, Ecuador, Panama	FAO 77 and 87	Approved source with caution
Yellowfin tuna (Thunnus albacares)	USA, Ecuador, Panama	FAO 77 and 87	Approved source with caution
Bigeye tuna (Thunnus obesus)	USA, Ecuador, Panama	FAO 77 and 87	Approved source with caution



Guidance for on-site auditor

For the audit, the auditor will check how the facility manages by-products deemed medium risk. Any by-products downrated from high to medium risk will require additional due diligence checks.

It is important that facilities check all raw materials from and verify their suppliers especially if there is a perceived risk of sourcing from known or suspected IUU fishing activity. This requires checking supplier records or procedures in place to understand how the supplier can ensure there is no IUU in the raw material they provide. For raw materials risk rated medium, additional or more frequent checks may be required until the facility is certain that the raw materials are not from IUU fishing activity.

The audit requirements are covered in clause 2.11.3 of the MarinTrust Global Standard for Responsible Supply of Marine Ingredients (the MarinTrust Standard) and associated interpretation guidance.

Approved by-products

• No further checks are required beyond those included in the MarinTrust Standard.

Additional checks of Approved Source with Caution by-products

• Review supplier records or procedures in place.

Additional checks of by-products Approved Source with Caution via Step 3 assessment

• In addition to checks for medium risk Approved Source with Caution by-products, by-products that have had risk downgraded from high to medium at Step 3 (use **Appendix 1** to identify these by-product species), confirm that the relevant traceability information continues to be collected for this by-product. During the audit, a traceability check on any by-products downgraded from high to medium risk shall be included as part of the required traceability checks (Section 4).

Guidance for the applicant/certificate holder

The applicant/certificate holder is responsible for ensuring the relevant actions are taken to comply with the MarinTrust Standard.

The certificate holder is responsible for communicating any changes to the by-products sourced by submitting a scope extension request through the MarinTrust online Application Portal.



Appendix 1 – assessment outcomes

Step 2 Assessment Outcomes

By-product species name	Flag country(ies)	IUCN Red List	CITES Appendices	Step 2 risk status	Step 3 required
Skipjack tuna (<i>Katsuwonus</i> pelamis)	Ecuador, Panama	Least concern	Not listed	High risk	Yes
Skipjack tuna (<i>Katsuwonus</i> pelamis)	USA	Least concern	Not listed	Medium risk	No
Yellowfin tuna (Thunnus albacares)	Ecuador, Panama	Least concern	Not listed	High risk	Yes
Yellowfin tuna (Thunnus albacares	USA	Least concern	Not listed	Medium risk	No
Bigeye tuna (<i>Thunnus obesus</i>)	Ecuador, Panama	Vulnerable	Not listed	High risk	Yes
Bigeye tuna (Thunnus obesus)	USA	Vulnerable	Not listed	Medium risk	No



Step 3 Assessment Outcomes

By-product species name	Flag country(ies)	Fishing Area	Stock name	Category C Assessment Outcome	Traceability information	Step 3 Risk Outcome
Skipjack tuna (Katsuwonus pelamis)	Ecuador, Panama	FAO 77 and 87	Eastern Pacific Ocean (EPO) skipjack tuna	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Yellowfin tuna (Thunnus albacares)	Ecuador, Panama	FAO 77 and 87	Eastern Pacific Ocean (EPO) yellowfin tuna	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Bigeye tuna (Thunnus obesus)	Ecuador, Panama	FAO 77 and 87	Eastern Pacific Ocean (EPO) bigeye tuna	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Comments on Step 3	Assessment: NA					



Appendix 2 – detailed assessment outcomes

(step 2 and step 3 if applicable)

Step 2 outcomes

Flag state (dropdown)	Risk rating	Flag score	Port score	General score	Flag State is contracting party or cooperating non- contracting party to all relevant RFMOs	'Carded' under EU Carding system	Flag state party to PSMA	Flag state mandatory vessel tracking for commercial seagoing fleet	WGI Governance rank
Ecuador	High	2.58	2.11	2.43	1	3	1	1	35.38%
Panama	High	3.75	1.67	1.93	3	3	1	1	55.19%
USA	Medium	2.29	2.06	2.37	1	1	1	1	91.04%



Step 3 outcomes

Category C assessment

Speci	es nam	ie	Katsuwonus pelamis - Skipjack tuna					
Fishing area and FAO 77 and 87 (Eastern Central Pacific and Southerstock				ic)				
Stock								
C1	Categ	ory C Stoc	k Status - Minimum Requirements					
	C1.1	Fishery re	shery removals of the species in the fishery under assessment are included P					
		in the sto	tock assessment process, OR					
		are consi	dered by scientific authorities to be negligible.					
	C1.2	The spec	ies is considered, in its most recent stock assessment, to have a	Pass				
		biomass	above the limit reference point (or proxy), OR					
		removals	by the fishery under assessment are considered by scientific					
		authoriti	uthorities to be negligible.					
	•		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.

One stock of skipjack is defined in the eastern Pacific Ocean (EPO). Catch data is available and it is used by the IATTC to assess the stock status of skipjack tuna in the EPO. In 2024, a benchmark stock assessment was conducted using an integrated statistical age-structured catch-at-length model in Stock Synthesis. Several data sources were used to fit the model, including data from sixteen defined fisheries and five "surveys". The fisheries are classified by gear type (purse-seine, longline) and purse-seine set. The "surveys" data included: a) catch-per-set indices for purse-seine sets, by set type (OBJ, NOA), where the relationship between catch-per-set and abundance remains uncertain; b) an index based on recently developed echosounder buoy data; c) absolute biomass from a spatiotemporal Petersen-type model applied to tag-recapture data; and d) an index of relative biomass from a tagging biomass model that uses a flexible effort assumption. A reference model was developed based on the most plausible assumptions and sensitivity analyses were conducted by changing the assumptions of the reference model (IATCC, 2024b). Annual catches are presented in Table 1 below.



Table 1. Total annual catches (t) of yellowfin, skipjack, and bigeye tunas, by all types of gear combined, in the Pacific Ocean. The EPO totals for 1995-2024 include discards from purse-seine vessels with carrying capacities greater than 363 t (IATCC, 2025).

		YFT		SKJ			BET			Total		
	EPO	WCPO	Total	EPO	WCPO	Total	EPO	WCPO	Total	EPO	WCPO	Total
1995	244,639	442,805	687,444	150,661	977,478	1,128,139	108,210	110,385	218,595	503,510	1,530,668	2,034,178
1996	266,928	425,669	692,597	132,335	999,701	1,132,036	114,706	107,168	221,874	513,969	1,532,538	2,046,507
1997	277,575	481,019	758,594	188,285	939,497	1,127,782	122,274	133,495	255,769	588,134	1,554,011	2,142,145
1998	280,606	536,845	817,451	165,489	1,244,132	1,409,621	93,954	152,415	246,369	540,049	1,933,392	2,473,441
1999	304,638	474,648	779,286	291,249	1,070,280	1,361,529	93,078	162,524	255,602	688,965	1,707,452	2,396,417
2000	286,863	506,028	792,891	230,479	1,194,139	1,424,618	148,557	148,094	296,651	665,899	1,848,261	2,514,160
2001	425,008	504,501	929,509	157,676	1,100,714	1,258,390	130,546	134,459	265,005	713,230	1,739,674	2,452,904
2002	443,458	489,995	933,453	167,048	1,253,634	1,420,682	132,806	157,958	290,764	743,312	1,901,587	2,644,899
2003	415,933	563,926	979,859	300,470	1,245,155	1,545,625	115,175	143,471	258,646	831,578	1,952,552	2,784,130
2004	296,847	595,888	892,735	217,249	1,354,765	1,572,014	110,722	182,599	293,321	624,818	2,133,252	2,758,070
2005	286,492	551,822	838,314	283,453	1,418,105	1,701,558	110,514	154,748	265,262	680,459	2,124,675	2,805,134
2006	180,519	537,076	717,595	309,090	1,479,366	1,788,456	117,328	165,386	282,714	606,937	2,181,828	2,788,765
2007	182,141	565,930	748,071	216,324	1,663,353	1,879,677	94,260	165,365	259,625	492,725	2,394,648	2,887,373
2008	197,328	644,365	841,693	307,699	1,649,067	1,956,766	103,350	171,317	274,667	608,377	2,464,749	3,073,126
2009	250,413	558,914	809,327	239,408	1,761,272	2,000,680	109,255	169,294	278,549	599,076	2,489,480	3,088,556
2010	261,871	564,607	826,478	153,092	1,680,215	1,833,307	95,408	139,796	235,204	510,371	2,384,618	2,894,989
2011	216,720	530,946	747,666	283,509	1,536,806	1,820,315	89,460	168,119	257,579	589,689	2,235,871	2,825,560
2012	213,310	625,697	839,007	273,519	1,731,944	2,005,463	102,687	167,245	269,932	589,516	2,524,886	3,114,402
2013	231,170	578,467	809,637	284,043	1,831,413	2,115,456	86,029	154,783	240,812	601,242	2,564,663	3,165,905
2014	246,784	618,262	865,046	265,490	1,985,110	2,250,600	96,054	169,046	265,100	608,328	2,772,418	3,380,746
2015	260,265	589,128	849,393	334,049	1,788,545	2,122,594	104,820	145,709	250,529	699,134	2,523,382	3,222,516
2016	255,465	660,291	915,756	345,163	1,788,760	2,133,923	92,952	156,656	249,608	693,580	2,605,707	3,299,287
2017	224,800	710,202	935,002	327,629	1,609,970	1,937,599	102,860	130,595	233,455	655,289	2,450,767	3,106,056
2018	253,305	696,706	950,011	291,352	1,843,398	2,134,750	94,479	154,404	248,883	639,136	2,694,508	3,333,644
2019	242,248	682,704	924,952	350,992	2,044,477	2,395,469	97,145	131,808	228,953	690,385	2,858,989	3,549,374
2020	231,603	726,403	958,006	298,583	1,721,476	2,020,059	104,893	146,497	251,390	635,079	2,594,376	3,229,455
2021		747,354				2,012,645			,	, .	2,564,298	
2022	298,897	689,051	987,948	298,136	1,715,934	2,014,070	68,217	140,838	209,055	665,250	2,545,823	3,211,073
2023	,	739,277	, ,		1,631,322						2,511,272	
2024	294,493	*	294,493	645,260	*	645,260	51,936	*	51,936	991,689	*	991,689

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, 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.

According to the reference model, current fishing mortality remains below the threshold associated with the MSY proxy, while the spawning biomass exceeds the dynamic level linked to the same benchmark (Figure 1). Furthermore, there is less than a 10% chance that the spawning biomass surpasses the established limit reference point. This conclusion holds true across all sensitivity models as well.



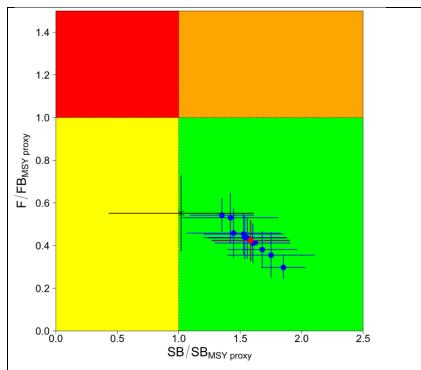


Figure 1. Kobe plot showing the most recent stock status estimates from all the models for skipjack tuna. The x-axis is SBcurrent/0.3*dynamic SB0. Each dot is based on the average F over the most recent three years, 2021-2023, and the error bars represent the 80% confidence intervals of model estimates. The red dot and error bars represent the estimates from the reference model. The black cross and error bars represent the estimates from the model that removed the ECHO index (IATCC, 2024a).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met.

References

IATCC. 2024a. DOCUMENT SAC-15-04 REV STOCK ASSESSMENT OF SKIPJACK TUNA IN THE EASTERN PACIFIC OCEAN: 2024 BENCHMARK ASSESSMENT. https://www.iattc.org/GetAttachment/f57dece1-81ba-4771-8fa8-3362320a368a/SAC-15-04 Skipjack-tuna-benchmark-assessment-2024.pdf

IATCC (2025). The tuna fishery in the Eastern Pacific Ocean in 2024. https://www.iattc.org/GetAttachment/0f3c1e8c-0ae6-41f3-a3a9-5d5891b5cc4e/SAC-16-01 Thetuna-fishery-in-the-Eastern-Pacific-Ocean-in-2024.pdf



Species name			Thunnus albacares - Yellowfin tuna					
Fishir stock	ng area	and	FAO 77 and 87 (Eastern Central Pacific and Southeast Pacifi	ic)				
C1	Categ	ory C Stoo	k Status - Minimum Requirements					
CI	C1.1	-	emovals of the species in the fishery under assessment are included					
			ock assessment process, OR					
		are consi	dered by scientific authorities to be negligible.					
	C1.2	The spec	ies is considered, in its most recent stock assessment, to have a	Pass				
		biomass	above the limit reference point (or proxy), OR					
		removals	by the fishery under assessment are considered by scientific					
		authorities to be negligible.						
	•	•	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 Eastern Pacific Ocean (EPO) yellowfin tuna stock is managed and assessed by the Inter-American Tropical Tunas Commission (IATTC). A new risk-based approach was introduced to the management

of the stock in 2022, with Stock Status Indicators (SSIs) developed using catch and other data collected from the EPO as a whole. This approach continued in 2024 (IATTC 2025). SSIs are considered to be important alternatives to formal stock assessments, particularly where those stock assessments may be too unreliable to form the basis for management advice (IATTC 2022). Fishery removals are a key component of the modelling used to generate SSI's, and their development and use is evidence that managers have sought out alternative mechanisms where stock assessment uncertainty is high. The most recent full stock assessment was conducted in 2020.

Catches are shown in Table 1 above.

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.

In the full stock assessments for this stock, multiple reference models are utilised to create a riskbased understanding of stock status. The most recent results, from 2020, indicated that "the probability of the spawning biomass being below SMSYd [i.e. the target reference point] is low (12%)" (IATTC 2024b), and that the probability of the biomass being below the limit reference point SLIMIT is zero (Figure 2).



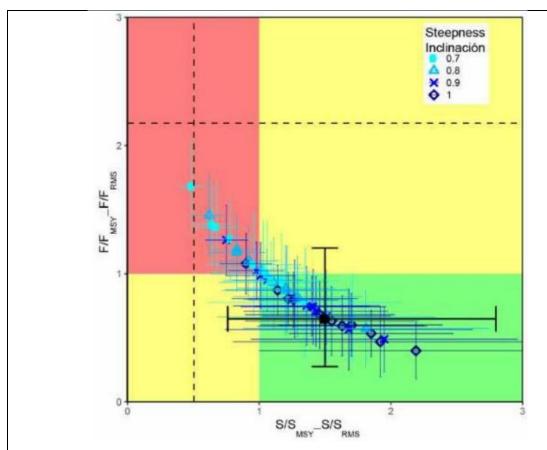


Figure 2. Kobe plot for yellowfin tuna in the EPO of estimates of spawning stock size (S) and fishing mortality (F). Coloured panels are separated by the target reference points SMSY and FMSY. Limit reference points are approximately indicated by the dashed lines, although these vary between models. The solid black circle represents all models combined (IATTC 2024b).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met.

References

IATTC (2022). Stock Status Indicators (SSIs) for tropical tunas in the Eastern Pacific Ocean. 13th Meeting of the IATTC Scientific Advisory Committee, Document SAC-13-06 Corr <a href="https://www.iattc.org/GetAttachment/22511b5b-ba2b-4126-9ba2-0bffee89f4d5/SAC-13-06%20-%20Stock%20Status%20indicators%20(SSIs)%20for%20tropical%20tunas%20in%20the%20EPO

IATTC (2024b). The tuna fishery in the Eastern Pacific Ocean in 2023. https://www.iattc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024 Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

IATCC (2025). The tuna fishery in the Eastern Pacific Ocean in 2024. https://www.iattc.org/GetAttachment/0f3c1e8c-0ae6-41f3-a3a9-5d5891b5cc4e/SAC-16-01 Thetuna-fishery-in-the-Eastern-Pacific-Ocean-in-2024.pdf



Species name			Thunnus obesus – Bigeye tuna						
Fishing area and stock FAO 77 and 87 (Eastern Central Pacific and Southeast Pacific stock)				ic)					
C1	Categ	ory C Stoc	k Status - Minimum Requirements						
CI	C1.1	Fishery r	removals of the species in the fishery under assessment are included F						
		in the sto	ock assessment process, OR						
		are consi	dered by scientific authorities to be negligible.						
	C1.2	The spec	ies is considered, in its most recent stock assessment, to have a	Pass					
		biomass	above the limit reference point (or proxy), OR						
		removals	by the fishery under assessment are considered by scientific						
		authorities to be negligible.							
			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 Eastern Pacific Ocean (EPO) stock of bigeye tuna (Thunnus obesus) is routinely assessed by the Inter-American Tropical Tuna Commission (IATTC). The most recent comprehensive evaluation took place in 2024 and employed a risk-based analytical framework to inform management decisions. This method uses a hierarchical set of three hypothesis levels to explore key uncertainties in the assessment. These include: (1) discrepancies in fitting length composition data for the longline fishery, which assumes asymptotic selectivity; (2) varying levels of effort creep within the longline fleet; and (3) uncertainty regarding the steepness of the stock-recruitment curve. At the first level, four alternative model configurations address different biological and fishery assumptions (e.g., fixed parameters, growth estimation, dome-shaped selectivity, and variable natural mortality). The second level tests three annual increases in longline catchability (0%, 1%, and 2%), while the third level evaluates three steepness values (1.0, 0.9, and 0.8). These combined factors generate 36 potential reference models, of which 33 were successfully used in the final risk analysis due to convergence limitations in three scenarios (IATCC, 2024a).

Catches are presented in Table 1 above.



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.

According to IATCC (2024a), the overall results of the risk analysis performed for the stock indicated:

- a. 46.6% probability that the spawning biomass at the beginning of 2024 is below the target reference point (S_{MSY})
- b. 24.7% probability that the fishing mortality in 2021-2023 is above the target reference point (F_{MSY})
- c. 58.5% probability that the fishing mortality in 2017-2019 (the status quo period) was above the target reference point (F_{MSY})
- d. 0.2% probability that the spawning biomass at the beginning of 2024 is below the limit reference point (S_{Limit})
- e. 0.1% probability that the fishing mortality in 2021-2023 is above the limit reference point (F_{Limit})
- 8. The weighted 10-year projection under the current fishing mortality suggests there is a 50% probability that the spawning biomass ratio at the beginning of 2034 will be above 0.27."

As the probability that the spawning biomass at the beginning of 2024 is below the limit reference point is small (0.2%), the species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met.

References

IATCC (2024a). DOCUMENT SAC-15-02 REVISED STOCK ASSESSMENT OF BIGEYE TUNA IN THE EASTERN PACIFIC OCEAN: 2024 BENCHMARK ASSESSMENT. https://www.iattc.org/GetAttachment/23cfd40e-2865-451a-b63a-b22132a760ab/SAC-15-02 Bigeye-tuna-benchmark-assessment-2024.pdf

IATTC (2025). The tuna fishery in the Eastern Pacific Ocean in 2024. https://www.iattc.org/GetAttachment/0f3c1e8c-0ae6-41f3-a3a9-5d5891b5cc4e/SAC-16-01_The-tuna-fishery-in-the-Eastern-Pacific-Ocean-in-2024.pdf



Traceability information

Information provided for Step 3 Path 1 or Path 2

Species name			Skipjack tuna (Katsuwonus pelamis)			
Path 1		Yes	s □ No ⊠			
Confirm all KDEs are p	provided	Yes	s □ No ⊠			
Path 2	Yes ⊠ No					
Path 2 outcome	Flag countr	У	Coastal score	Port score	Risk outcome	
	Ecuador		2.69	2.11	Downgraded to medium risk	
	Panama		1.69	1.67	Downgraded to medium risk	
Species name		Yell	lowfin tuna (<i>Thuni</i>	nus albacares)		
Path 1		Yes	s □ No ⊠			
Confirm all KDEs are p	rovided	Yes □ No ⊠				
Path 2	Yes ⊠ No					
Path 2 outcome	Flag countr	y	Coastal score	Port score	Risk outcome	
Path 2 outcome	Flag countr Ecuador	_	Coastal score 2.69	Port score 2.11	Downgraded to medium risk	
Path 2 outcome					Downgraded to	
Path 2 outcome	Ecuador		2.69	2.11	Downgraded to medium risk Downgraded to	
Species name	Ecuador		2.69	2.11	Downgraded to medium risk Downgraded to	
	Ecuador Panama	Bigo	2.691.69	2.11	Downgraded to medium risk Downgraded to	
Species name	Ecuador Panama	Big	2.69 1.69 eye tuna (<i>Thunnus</i>	2.11	Downgraded to medium risk Downgraded to	
Species name Path 1	Ecuador Panama	Big Yes	2.69 1.69 eye tuna (<i>Thunnus</i> s □ No ⊠	2.11	Downgraded to medium risk Downgraded to	
Species name Path 1 Confirm all KDEs are p	Panama provided	Big Yes Yes	2.69 1.69 eye tuna (<i>Thunnus</i> s □ No ⊠	2.11	Downgraded to medium risk Downgraded to	
Species name Path 1 Confirm all KDEs are p Path 2	Panama provided Yes No	Big Yes Yes	2.69 1.69 eye tuna (<i>Thunnus</i> s □ No ⊠ s □ No ⊠	2.11 1.67 s obesus)	Downgraded to medium risk Downgraded to medium risk	



Guidance for Applicants/Certificate holders on improved traceability

When by-product origin cannot be made more granular than major FAO Areas, or when the source fishery is taking place in the High Seas (i.e. outside of EEZs of all relevant nations), an assessor must evaluate the Coastal and Port scores for each nation that straddles that FAO Area. This may lead to higher risk outcomes for an applicant. To mitigate that risk, better practice involves securing KDEs from the source fishery of the by-products, thereby meeting Path 1 instead of Path 2.

What does better practices look like?

Comprehensive data collection and sharing: Collect detailed information using Key Data Elements (KDEs) including vessel identification and authorisation, species, catch areas, fishing method and dates. These are defined in the MarinTrust Standard clauses 2.11.2.2 and 3.2.5.

Supply chain transparency: Maintain detailed records at each step of the supply chain, from capture to final sale, to ensure traceability.

Interoperable systems and technologies to support the collection and transfer of this information.