



MarinTrust Standard V2

By-product Fishery Assessment Report Template

MarinTrust Programme

Unit C, Printworks

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Japanese Pilchard, <i>Sardinops melanostictus</i> ~ <i>Sardinopsis sagax</i>
	Geographical area:	FAO Area 77 Pacific, Eastern Central
	Country of origin of the product:	Thailand
	Stock:	Pacific Ocean and Tsushima Warm Current Japanese pilchard stocks
Date	24/09/2021	
Report Code	BP188	
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 September 2021		

Scope Details	
Main Species	Japanese Pilchard <i>Sardinops melanostictus</i> ~ <i>Sardinopsis sagax</i>
Stock	Pacific Ocean and Tsushima Warm Current Japanese pilchard stocks
Fishery Location	FAO Area 77 Pacific, Eastern Central
Management Authority (Country/ State)	Management Entities: Japan Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries (MAFF)
Gear Type(s)	Purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with the 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 the IUCN Red List, or if it appears in the CITES appendices, it cannot be approved for use as MarinTrust raw material. Japanese Pilchard does not appear as Endangered or Critically Endangered on the IUCN Red List, nor does it appear in CITES appendices, therefore Japanese Pilchard is eligible for approval for use as MarinTrust raw material.</p> <p>There are two stocks Pacific Ocean stock and the Tsushima Warm Current Stock. Both stocks are assessed separately but managed together under a single TAC for combined stocks. Annual stock assessment is undertaken by the Central Fisheries Research Institute of Japan’s Fisheries Research Agency (FRA). Stocks are subject to a specific research and management regime, therefore are classified as Category C. There has not been a new stock assessment since 2018. In 2021 a forecast with the main results of several surveys is presented but there is no new information available to assess the stock related to reference points. Both stocks have passed the category C clauses.</p> <p>Pacific Ocean and the Tsushima Warm Current Japanese pilchard stocks are approved for the production of fishmeal and fish oil under the MarinTrust v 2.0 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified the Pacific Ocean and the Tsushima Warm Current Japanese pilchard stocks as category C, reference points are defined to assess status of the stocks relative to.</p> <p>Fishery removals are included in the stock assessment process so both stocks PASS Clause C1.1. The Pacific Ocean and the Tsushima Warm Current Japanese pilchard stocks are considered, in their most recent stock assessment, to have a biomass above the limit reference point, it PASS Clause C1.2. Therefore, the Pacific Ocean and the Tsushima Warm Current Japanese pilchard stocks should be approved.</p>
Notes for On-site Auditor
Empty space for notes

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
Japanese pilchard	<i>Sardinops sagax</i> (synonym <i>S. melanostictus</i>)	Pacific Ocean stock and Tsushima warm current stock	Central Fisheries Research Institute of Japan's Fisheries Research Agency (FRA).	C	LC	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		Japanese pilchard, <i>Sardinops Sagax</i> (synonym <i>S. melanostictus</i>)	
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
<p>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.</p> <p>For both stocks, key sources of input data include total landings, numbers of fish caught by age and year (based on body length composition in survey catches and market landings), egg production (based on research surveys), a recruitment index (based on surveys of juveniles), and fish distributions (based on pelagic fish surveys).</p> <p>Purse seine vessel CPUE is used as an abundance indicator (Furuichi et al. 2018). The pelagic fish surveys appear to be fishery-independent and may include adults, but survey data are used to determine fish distributions rather than to generate a fishery-independent abundance index.</p> <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</p>			
<p>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.</p> <p>The last report available in FRA shows that the biomass in 2019 was set at 4,061,000 tons assuming a recruitment in 2017 set at 2,150,000 tons hence, recruitment has been considered relatively high in recent years.</p> <p>The biomass displays an increasing trend. The limit reference point B_{limit} is still defined at 221,000 tons and in the last stock assessment this limit is kept until 2024. Fishing mortality has been defined at 0.24, 20% less than previous years (Figure 1). The biomass is well above the limit reference point since 2013.</p> <p>Therefore, 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</p>			

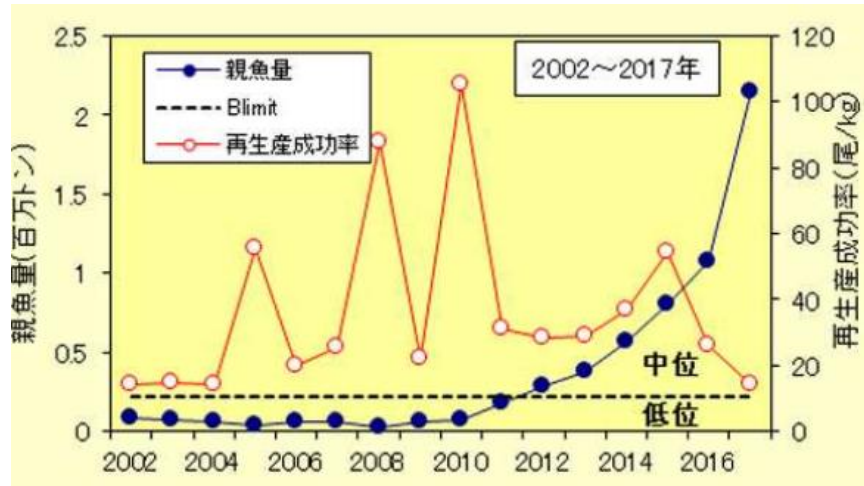


Figure 1. Stock assessment of Japanese sardine *S. melanostictus* over the period 1976 – 2017. Blue line shows biomass, red line shows catch ratio. Left scale shows stock volume (million tonnes, t) and right scale shows catch ratio (%). Catch ratio is the ratio of catch volume to resource volume. Source: FRA- Fy2018 National Resource Assessment Report Meeting Material 1-1.

Tsushima warm current stock

The last report available in FRA shows that the biomass in 2019 was set at 711,000 tons assuming a recruitment in 2017 set at 197,000 tons, hence, recruitment has been considered relatively high in recent years.

The biomass displays an increasing trend. The limit reference point Blimit is still defined at 100,000 tons and in the last stock assessment this limit is kept until 2024. Fishing mortality has been defined at 0.25, 20% less than previous years. The resource levels have been classified at a medium level with increasing trends in biomass and recruitment (figure 2).

The biomass is well above the limit reference point since 2011.

Therefore, 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

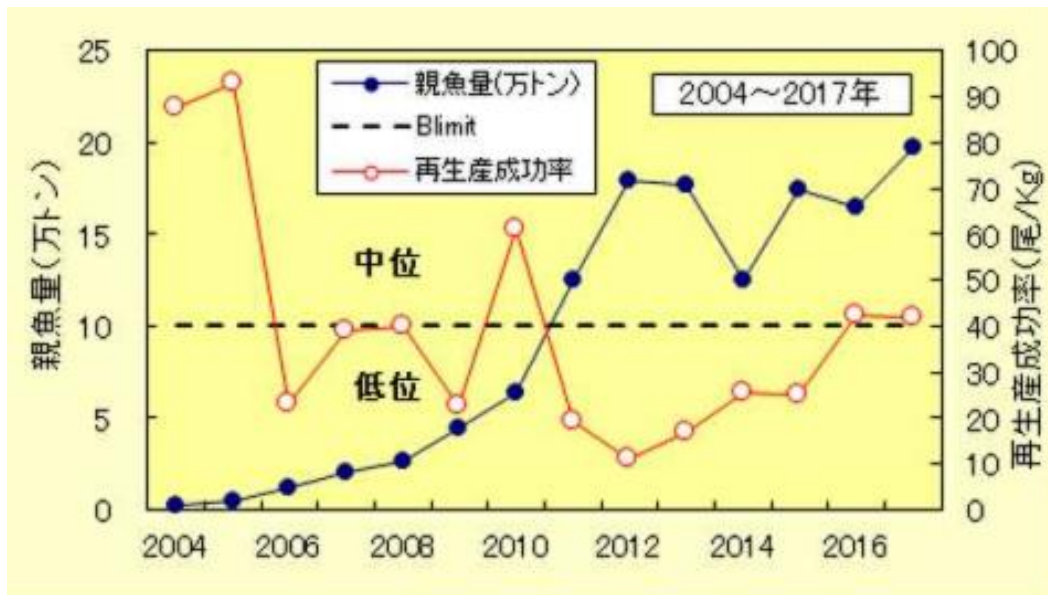


Figure 2. Stock assessment of Japanese sardine *S. melanostictus* over the period 1976 – 2017. Blue line shows biomass, red line shows catch ratio. Left scale shows stock volume (million tonnes, t) and right scale shows catch ratio (%). Catch ratio is the ratio of catch volume to resource volume. Source: FRA- Fy2018 National Resource Assessment Report Meeting Material 1-1.

References

Gaughan, D., Di Dario, F. & Hata, H. 2018. *Sardinops sagax* (errata version published in 2019). The IUCN Red List of Threatened Species 2018: e.T183347A143831586. <https://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T183347A143831586.en>.

Furuichi, S., C. Watanabe, R. Yukami, Y. Uemura, C. Isu, and M. Udagawa. 2018. 2017 stock assessment of the Japanese Pacific stock of Japanese pilchard. Fisheries Research and Education Agency of Japan

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