MarinTrust Standard V2

Whole fish Fishery Assessment

WF11: South Africa Small Pelagic Fishery

Table 1 Application details and summary of the assessment outcome

Application details and summary of the assessment outcome			
Name(s): Lucky Star Ltd. (St Helena Bay); Lucky Star Ltd. (Amawandle Pelagic); Pioneer Fishing (West Coast) Pty Ltd (St Helena Bay); West Point Processors (Pty) Ltd.			
Country: South Africa			
Email address:	**Applicant Code**		
Certification Body Details			
Name of Certification Body:	Global Trust Certification		
Assessor Name	**CB Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/ Re-approval**
Sam Peacock	Léa Lebechnech	2.5	Surveillance 2
Assessment Period	June 2023 – June 2024		
Scope Details			
Management Authority (Country/State)	Department of Environment, Forestry and Fisheries (DFFE) South Africa		
Main Species	Anchovy (*Engraulis encrasicolus*); Redeye round herring (*Etrumeus whiteheadi*)		
Fishery Location	FAO 47 Atlantic, Southeast. South Africa EEZ.		
Gear Type(s)	Purse seine and pelagic trawl		
Outcome of Assessment			
Overall Outcome	Pass		
Clauses Failed	None		
CB Peer Review Evaluation	Approve		
Fishery Assessment Peer Review Group Evaluation	Approve		
Recommendation	Maintain fishery approval		

Table 2. Assessment Determination

Assessment Determination

In most areas of this assessment, there do not appear to have been any substantial changes since the 2022 surveillance report. These areas include:

- Species categorisation, where there is no new catch composition data and no significant changes in management approach. It is worth noting that the development of a stock assessment for redeye herring is underway, which may lead to formal reference points in future. If this is the case, then future assessments may move the stock from Category B to Category A.
- The management legal and administrative framework, and the associated monitoring and control systems.
- The impacts of the fishery on ETP species, habitats and ecosystems.
- The Productivity and Susceptibility scores of the two Category D species.

Anchovy continues to be managed using OMP-18, following the advice provided by MARAM. There has been no substantial update to the stock assessment nor do there appear to be any more recent biomass estimates than those identified by the 2022 surveillance, and so there is no change in the conclusions of the report with regards to the health of the stock.

Redeye round herring was once again assessed under Category B, using updated estimates of current stock biomass. The resilience of the species is high, biomass remains above the long-term average, and fishing mortality is unknown (although catch is fairly constant). As per Table Bb, the stock continues to meet the MT requirements.

Finally, sardine was once again assessed under Category C. Although the stock biomass remains under the proxy limit reference point, it continues to be managed under "Exceptional Circumstances". As at the time of the previously surveillance, catches are relatively low. Additionally, there is now evidence that the stock is recovering. As previously, the stock meets the MT requirements.

Overall the assessor concludes that this fishery should remain approved as a source of raw material for MT-certified marine ingredients. However, it is important to note the following key areas for additional scrutiny during the 2024 re-assessment:

- The 2023 Status of the South African Marine Fishery Resources report was not available in full at the time of the current assessment, and its contents should be checked to ensure they do not contradict any of the conclusions of this surveillance report.
- The full catch composition details which will presumably be provided by the above report should be incorporated into the species categorisation process. Additionally, it would be useful to receive updated catch estimates from the applicant.
- No full stock assessment appears to have been conducted for anchovy since 2020. At the time of the next re-assessment this will exceed the 3 year minimum required by A2.1.

Fishery Assessment Peer Review Comments

The assessment made for the report seemed well produced, being the only concern the uncertainty on fishing mortality of sardine in despite the stable catches of last years. Besides, it is stated that there is now evidence that the stock is recovering; I would have said that the existing evidence is not yet consistent enough to hypothesize a recovery of the sardine stock.

Also, in the report it is stated that anchovy and sardine (among others) are important prey items for ETP species. That importance makes that interactions of ETP species with the fleet actually exist, then they cannot be considered rare, they are very common, at least in areas of high productivity as the Benguela large marine ecosystem.

Overall recommendation: Approve.

Notes for On-site Auditor

Table 3 General Results

General Clause	Outcome (Pass/Fail)
M1 - Management Framework	PASS
M2 - Surveillance, Control and Enforcement	PASS
F1 - Impacts on ETP Species	PASS
F2 - Impacts on Habitats	PASS
F3 - Ecosystem Impacts	PASS

Table 4 Species- Specific Results

List all Category A and B species. List approximate total percentage (%) of landings which are Category C and D species; these do not need to be individually named here

Category	Species	% landings	Outcome (Pass/Fail)	
Category A	Anchovy	33-90%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category B	Redeye round herring	10-50%	PASS	
Category C	Sardine	0-29%	PASS	
Category D	Cape horse mackerel / Maasbanker	0-4%	PASS	
	Atlantic chub mackerel	0-2%	PASS	

Table 5 Species Categorisation Table

Common name	Latin name	Stock	IUCN Redlist Category[1]	% of landings	Management	Category
Anchovy	*Engraulis encrasicolus* & *Engraulis capensis*	FAO 47	Least Concern[2]	33-90%	Yes	A
Redeye herring	*Etrumeus whiteheadi*	FAO 47	Least Concern[3]	10-50%	No	B
Sardine	*Sardinops sagax*	FAO 47	Least Concern[4]	0-29%, but recently <5%	Yes	C
Cape horse mackerel	*Trachurus capensis*	FAO 47	Least Concern[5]	0-4%	No	D
Atlantic chub mackerel	*Scomber colias*	FAO 47	Least Concern[6]	0-2%	No	D
Species categorisation rationale						

The species categorisation section of the 2022 MT surveillance assessment of this fishery used five sources of catch composition data:

- Two sets of catch composition information submitted by the applicants through the MT application documentation.
- Two sets of catch composition information collected by the on-site auditor during the factory assessment.
- Total catch data for the entire small pelagic fishery in 2019, published by the Department of Environment, Forestry and Fisheries[7].

The catch compositions suggested by each of these sources varied considerably, and in interpreting them the surveillance assessment reached the following conclusions:

1. Anchovy and redeye are clearly Type 1 species, as all five sources indicate they are present in the catch in significant quantities.
2. Horse mackerel and mackerel are clearly Type 2 species, as both are present in the catch in relatively small quantities.
3. Lanternfish and light fish are excluded from the assessment, as four of the five sources indicate that they represent less than 0.1% of landings.
4. Sardine is challenging to interpret. However, the total catch data and self-reported data from the factories indicate that sardine is present in relatively small quantities in the catch. The factory data provides a snapshot of catch taken in one part of the season, and therefore is less likely to be representative of the long-term average than the other sources – particularly the government data. For the purposes of this assessment, sardine has therefore been categorised as a Type 2 species.

For the purposes of the present surveillance assessment, there does not appear to be any new catch composition data available to justify changing the above conclusions. The DFFE data source – "Status of the South African Marine Fishery Resources 2020" – does not appear to have been published in any years since 2020, and although the conclusions of the 2023 report have been presented to consultants[8], the report itself appears not to be available yet[9].

In the absence of any new catch composition data, the species categorisation for this surveillance report has not been changed.

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[1] https://www.iucnredlist.org/
[2] https://www.iucnredlist.org/species/198568/15546291
[3] https://www.iucnredlist.org/species/154968/15530233
[4] https://www.iucnredlist.org/species/183347/143831586
[5] https://www.iucnredlist.org/species/21113101/43156455
[6] https://www.iucnredlist.org/species/170357/6767497
[7] https://www.dffe.gov.za/sites/default/files/reports/statusofsouthafrican_marinefisheryresources2020.pdf
[8] https://periculumconsult.co.za/f/2023-status-of-south-african-marine-fishery-resources
[9] https://www.dffe.gov.za/fisheries_formsanddocuments#strategyreports

MANAGEMENT

The two clauses in this section (M1, M2) relate to the general management regime applied to the fishery under assessment. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. A fishery must meet all the minimum requirements in every clause before it can be recommended for approval.

M1	Management Framework – Minimum Requirements	
M1.1	There is an organisation responsible for managing the fishery.	PASS
M1.2	There is an organisation responsible for collecting data and assessing the fishery.	PASS
M1.3	Fishery management organisations are publicly committed to sustainability.	PASS
M1.4	Fishery management organisations are legally empowered to take management actions.	PASS
M1.5	There is a consultation process through which fishery stakeholders are engaged in decision-making.	PASS
M1.6	The decision-making process is transparent, with processes and results publicly available.	PASS
	Clause outcome:	PASS

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section M1. The conclusions of the initial assessment are summarised here for convenience; please refer to the initial assessment report (Global Trust 2021) for more detail.

M1.1   There is an organisation responsible for managing the fishery.

Since 2019, management of marine fisheries in South African waters has been the responsibility of the Fisheries Management Branch of the Department of Forestry, Fisheries and the Environment (DFFE, also referred to in some documentation as DEFF). The purpose of the fisheries branch is "to promote the development, management, monitoring and sustainable use of marine living resources and the development of South Africa's fisheries sectors" (DFFE 2023). The branch has six sub-programmes: aquaculture and economic development; fisheries research and development; marine resource management; monitoring, control and surveillance; fisheries operations support; and chief financial officer.

There is an organisation responsible for managing the fishery, therefore M1.1 is met.

M1.2   There is an organisation responsible for collecting data and assessing the fishery.

The fisheries research and development programme of the Fisheries Management Branch is responsible for data collection and analysis in support of the management of the fishery. The work of the research programme is supported by the Marine Resource Assessment and Management (MARAM) Group at the University of Cape Town (MARAM 2023a). The MARAM Group is funded by DFFE and provides an analytical basis for fishery management decisions, including drafting the Operational Management Procedures (OMPs) which set out the rules by which the small pelagic fishery is managed.

There are organisations responsible for collecting data and assessing the fishery, therefore M1.2 is met.

M1.3   Fishery management organisations are publicly committed to sustainability.

The stated strategic objectives of the DFFE Fisheries Branch are (DFFE 2023):

* Ensure increased production and productivity in prioritised areas as well as value chains.
* Lead and coordinate government food security initiatives.
* Ensure the conservation, protection, rehabilitation and recovery of depleted and degraded natural resources.

Similarly, the objectives of each of the Fisheries Branch sub-programmes also incorporate sustainability objectives. For example, the fisheries research and development programme aims to "ensure the promotion of the sustainable development of fisheries resources and ecosystems by conducting and supporting appropriate research", while the marine resource management programme "ensures the sustainable utilisation and equitable and orderly access to the marine living resources through improved management and regulation" (DFFE 2023).

The core South African fisheries management legislation, the Marine Living Resources Act of 1998, also includes sustainability as a central objective, stating that it aims to "provide for the conservation of the marine ecosystem, the long-term sustainable utilisation of marine living resources and the orderly access to exploitation, utilisation and protection of certain marine living resources; and for these purposes to provide for the exercise of control over marine living resources in a fair and equitable manner to the benefit of all the citizens of South Africa; and to provide for matters connected therewith" (MLRA 1998).

Fishery management organisations are publicly committed to sustainability, therefore M1.3 is met.

M1.4   Fishery management organisations are legally empowered to take management actions.

The key fisheries legislation in South Africa is the Marine Living Resources Act of 1998, as amended in 2000, 2014 and 2016. The Act empowers the Minister to manage fisheries through catch limits and management areas; sets out the process for the granting of 'local' and 'commercial' fishing rights; established the Fisheries Transformation Council; sets out the framework for the management of foreign and high-seas fishing; prohibits certain fishing methods and gears; and empowers fishery observers and fishery control officers in the enforcement of regulations.

Fishery management organisations are empowered to take management actions, therefore M1.4 is met.

M1.5   There is a consultation process through which fishery stakeholders are engaged in decision-making.

Consultation of fishery stakeholders is facilitated through two main bodies: the Small Pelagic Scientific Working Group, made up of representatives of DFFE, MARAM and industry associations and empowered to decide on interim and final quotas for the fishery, based on the OMP; and the South African Pelagic Fishing Industry Association, which has a long history of working closely with DFFE including the provision of research funding.

There is a consultation process in place, therefore M1.5 is met.

M1.6   The decision-making process is transparent, with processes and results publicly available.

Papers produced by MARAM are published on the MARAM website (MARAM 2023b). These include details on the stock assessment process and outcomes, estimates of the current status of the resource, and the scientific basis for the OMPs. Quotas and other management measures are published on the DFFE website, along with regulations and application paperwork. Additionally, all of the information required to produce this assessment report was publicly available online.

The decision-making process is transparent, therefore M1.6 is met.

References

Department of Forestry, Fisheries and the Environment (2023). "Fisheries Management". https://www.dffe.gov.za/branches/fisheriesmanagement

Global Trust Certification (2021). South Africa small pelagic fishery initial assessment, July 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF11%20Anchovy%20South%20Africa_Initial_2021_scope%20extension_final%20version.pdf

Marine Living Resources Act, No. 18 of 1998, as amended. https://sherloc.unodc.org/cld/uploads/res/document/marine-living-resources-act-18-of-1998_html/MLRA.pdf

Marine Resource Assessment and Management Group (2023a). "Home". http://www.maram.uct.ac.za/

Marine Resource Assessment and Management Group (2023b). "Publications 2022". http://www.maram.uct.ac.za/maram/publications/2022

South African Pelagic Fishing Industry Association (2023). "Overview". https://sapfia.org.za/

Links	
MarinTrust Standard clause	1.3.1.1, 1.3.1.2
FAO CCRF	7.2, 7.3.1, 7.4.4, 12.3
GSSI	D.1.01, D.4.01, D2.01, D1.07, D1.04,

M2	Surveillance, Control and Enforcement - Minimum Requirements		
	M2.1	There is an organisation responsible for monitoring compliance with fishery laws and regulations.	PASS
	M2.2	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.	PASS
	M2.3	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.	PASS
	M2.4	Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.	PASS
		Clause outcome:	PASS

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section M2. The conclusions of the initial assessment are summarised here for convenience; please refer to the initial assessment report (Global Trust 2021) for more detail.

M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations.

Compliance in South African fisheries is primarily the responsibility of the monitoring, control and surveillance programme of the Fisheries Branch, supported by the police, navy and customs. Fisheries control officers are empowered by Chapter 6 of the Marine Living Resources Act 0f 1998.

There is an organisation responsible for monitoring compliance with fishery laws and regulations, therefore M2.1 is met.

M2.2 There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.

Sanctions for non-compliance are set out in the MLRA. Chapter 6 empowers fishery control officers to seize and confiscate vessels, gear, catch and any other property on board fishing vessels. Chapter 7 sets out penalties including fines and imprisonment.

There is a framework of sanctions which are applied when laws and regulations are found to have been broken, therefore M2.2 is met.

M2.3 There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.

As at the time of the initial assessment, South Africa remains a party to the FAO Agreement on Port State Measures to Prevent, Deter and Eliminate IUU fishing. Similarly, the number of infringements and penalties issued by the South African authorities are available on request from the DFFE. No evidence of widespread non-compliance or IUU fishing in the small pelagic fishery was uncovered during the information review conducted for this surveillance assessments, and therefore M2.3 is met.

M2.4 Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.

VMS is mandatory onboard vessels operating within the South African EEZ, as a condition of the fishing licence permit. The VMS system is monitored to ensure vessels do not operate within Marine Protected Areas or carry out illegal transhipments at sea. DFFE inspectors inspect landings, conduct at-sea inspections, and also audit catch, landing and processing records to ensure compliance and consistency. All catches are inspected and weighed at landing points by monitors and/or fisheries inspectors, with a focus on monitoring quota use, bycatch quantities, and gear types. An observer programme is in place for the small pelagic fishery, albeit with the primary purpose of data collection, and skippers are required to return logbooks detailing the activities of every fishing trip.

Compliance is actively monitored through a range of measures, and therefore M2.4 is met.

References

FAO (2015). Agreement on Port State Measures (PSMA). http://www.fao.org/port-state-measures/background/en/

Global Trust Certification (2021). South Africa small pelagic fishery initial assessment, July 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF11%20Anchovy%20South%20Africa_Initial_2021_scope%20extension_final%20version.pdf

Marine Living Resources Act, No. 18 of 1998, as amended. https://sherloc.unodc.org/cld/uploads/res/document/marine-living-resources-act-18-of-1998_html/MLRA.pdf

| Links	
MarinTrust Standard clause	1.3.1.3
FAO CCRF	7.7.2
GSSI	D1.09

CATEGORY A SPECIES

The four clauses in this section apply to Category A species. Clauses A1 - A4 should be completed for **each** Category A species. If there are no Category A species in the fishery under assessment, this section can be deleted. A Category A species must meet the minimum requirements of all four clauses before it can be recommended for approval. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. The species must achieve a pass rating against all requirements to be awarded a pass overall. **If the species fails any of these clauses it should be re-assessed as a Category B species.**

Species Name	Anchovy, *Engraulis encrasicolus* & *Engraulis capensis*		
A1	**Data Collection - Minimum Requirements**		
	A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	PASS
	A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	PASS
		Clause outcome:	PASS

The main source of evidence for this clause in the 2022 surveillance assessment was the DFFE report "Status of the South African Marine Fishery Resources 2020". Although available evidence suggests a version of the report for 2023 exists in a draft form, it does not yet appear to have been published. Some basic insights have been made public via presentations delivered by DFFE, and these have been incorporated below.

A1.1 Landings data are collected such that the fishery-wide removals of this species are known.

Landings data in the small pelagic fishery are recorded in vessel logbooks and confirmed through the presence of inspectors at landings (Coetzee *et al* 2019). Total landing estimates are reported to DFFE and subsequently published periodically in the Status of the South African Marine Fishery Resources report, most recently in 2020, and some basic results are also available for the 2023 report. The accuracy of landings data is further confirmed through the observer programme and catch sampling regimes. Landings data are collected such that fishery-wide removals of the species are known, and therefore A1.1 is met.
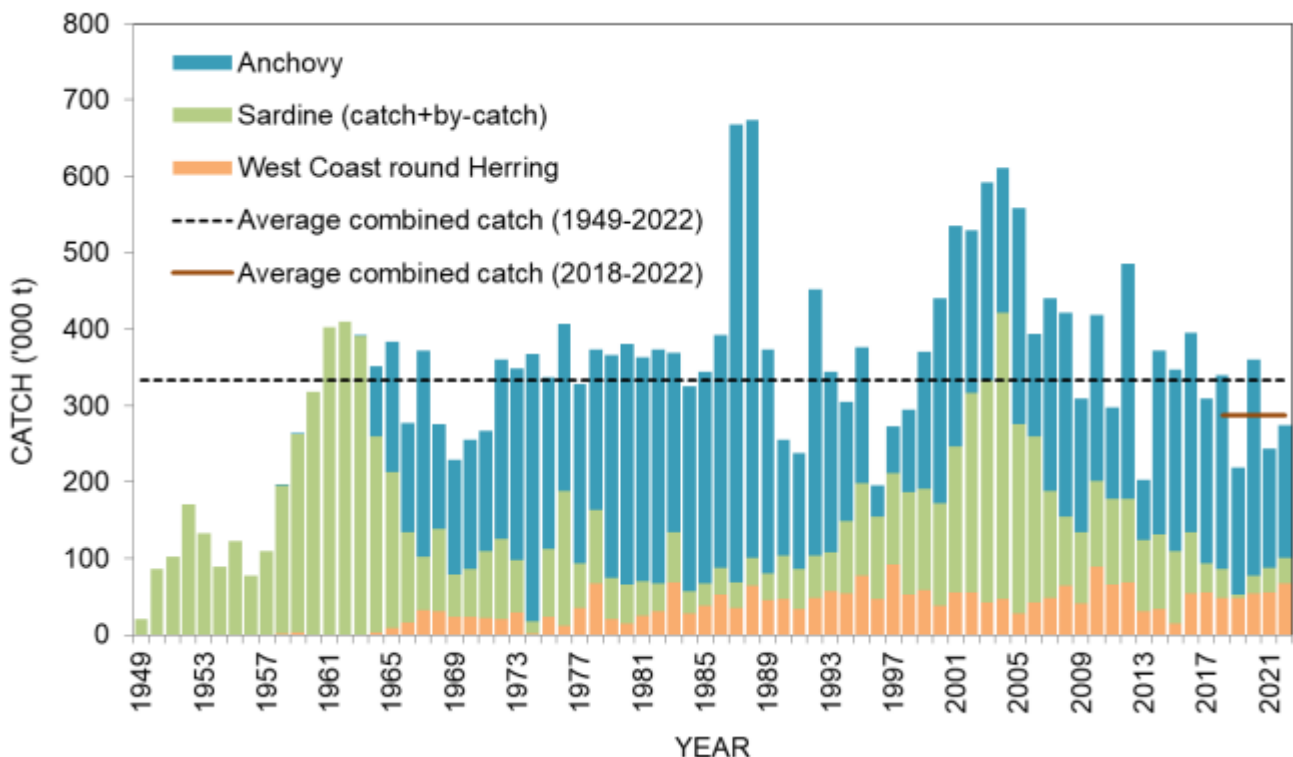
Catches of sardine, anchovy and redeye round herring by the small pelagic fishery, 1950-2022 (DFFE 2023)

A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.

A range of additional information sources are incorporated into the anchovy assessment process, and inform estimates of stock status. Biomass and distribution of anchovy are estimated biannually via hydroacoustic surveys, which have been conducted in the summer and winter of every year since 1984. Surveys are conducted twice a year and used to produce updated TAC recommendations due to the biological characteristics of anchovy, which mean that stock size can fluctuate rapidly. Samples taken during the acoustic surveys also inform the assessment process (DFFE 2020); these include length, age and weight frequency data and estimates of recruit numbers. Although no surveys were conducted in 2021, survey results for 2022 are in the process of being analysed (DFFE 2023). In addition to total landings, commercial catch data is also used to estimate monthly catch length frequencies, catch sex and maturity distributions, and fish condition.

Taken together these data are used to produce estimates of stock status which scientific authorities generally appear to consider to be reliable. A1.2 is met.

References

Coetzee, J.C., de Moor, C.L. and Butterworth, D.S. (2019). A summary of the South African sardine (and anchovy) fishery. https://open.uct.ac.za/bitstream/handle/11427/30781/MARAM_IWS_2019_Sardine_BG1.pdf

DFFE (2020). Status of the South African Marine Fishery Resources 2020. https://www.dffe.gov.za/sites/default/files/docs/publications/statusofsouthafrican_marinefisheryresources2020.pdf

DFFE (2023). Portfolio Committee on Forestry, Fisheries and the Environment, 21 March 2023. Status of the South African Marine Fishery Resources. https://static.pmg.org.za/230328Status_of_Resources.pdf

Links

MarinTrust Standard clause	1.3.2.1.1, 1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	7.3.1, 12.3
GSSI	D.4.01, D.5.01, D.6.02, D.3.14

A2	Stock Assessment - Minimum Requirements		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	PASS
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	PASS
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	PASS
	A2.4	The assessment is subject to internal or external peer review.	PASS
	A2.5	The assessment is made publicly available.	PASS
		Clause outcome:	PASS

A2.1 A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.

The most recent stock assessment appears to remain the 2020 assessment (de Moor 2020) identified by the initial MT assessment (de Moor 2022b). As this was produced within the last three years, it continues to be sufficient to meet the requirements of A2.1; however, this will cease to be the case by the time of the 2024 MT assessment and the assessor at that time should ensure a new stock assessment has been conducted.

A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.

Explicit reference points are not established for the anchovy stock. However, anchovy has been jointly managed with sardine using an Operational Management Procedure (OMP) since 1994, and TACs are currently set according to the rules described in

OMP-18. OMP-18 sets out the variables underpinning the stock assessment and TAC-setting process. These include B^A_{NOV}, which is defined as the "historical average 1984 to 1999 November survey estimate of anchovy total biomass", and B^A_{crit}, defined as "November survey estimated biomass threshold below which Critical Biomass metarules are invoked for anchovy" (de Moor 2018). OMP-18 also states that "the directed anchovy initial TAC is based on how the most recent November survey estimate of survey biomass relates to the historical average between 1984 and 1999 [i.e., B^A_{NOV}]". Therefore, it is reasonable to conclude that B^A_{NOV} is a proxy target reference point, and B^A_{crit} is a proxy limit reference point.

The stock assessments for anchovy produce estimates of biomass, and supplementary documentation published by MARAM produces recommendations for TACs based on the outcomes of the stock assessments and the content of OMP-18. Therefore, in practical terms the scientific authorities provide an estimate of the current status of the biological stock, relative to proxy reference points. A2.2 is met.
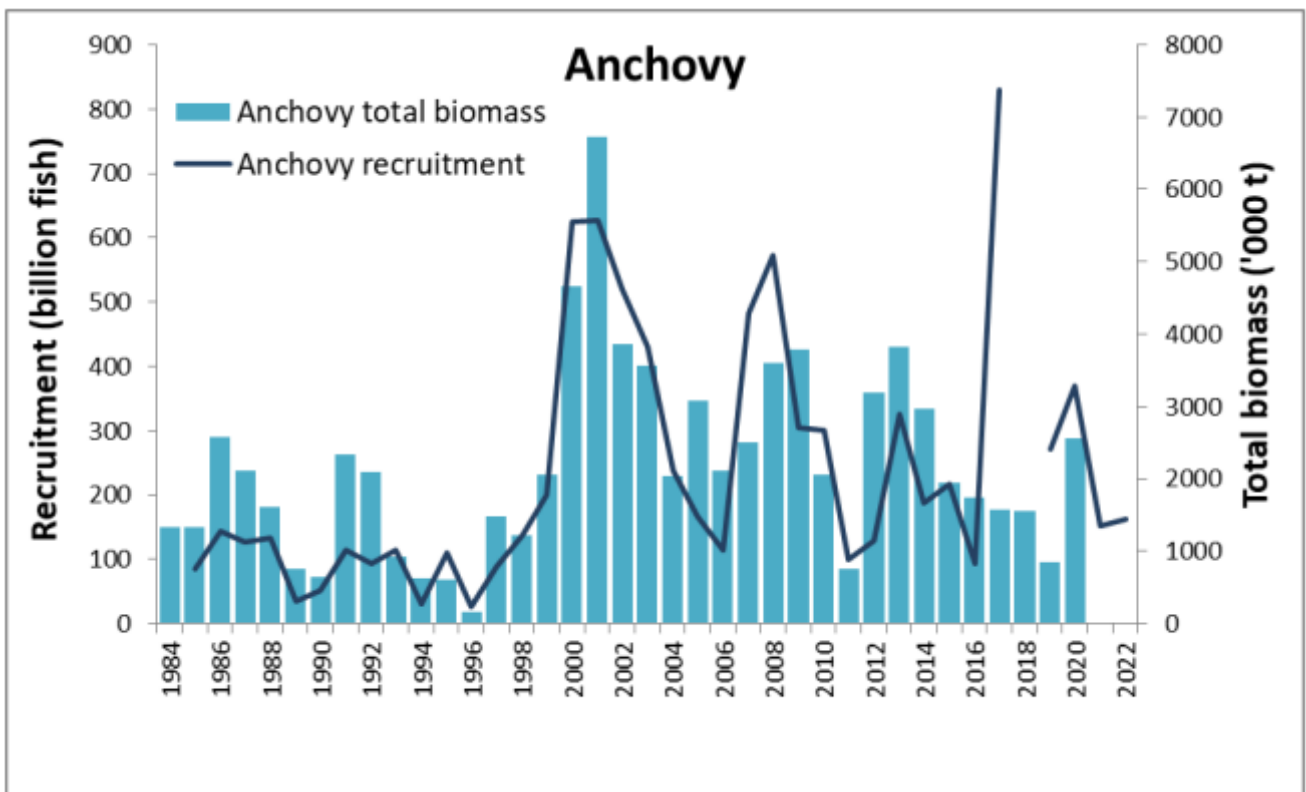
Estimated abundance and recruitment of anchovy (DFFE 2023)

A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.

MARAM publishes advice recommending anchovy TACs based on the OMP, currently OMP-18, and the outcomes of the stock assessment. The 2022 surveillance identified two TAC recommendations which had been made since the initial MT assessment was completed: firstly, for the final 2021 TAC (de Moor 2021); and secondly for the initial 2022 anchovy TAC (de Moor 2022).

Since the 2022 surveillance, additional catch advice has been produced by MARAM. The recommendation for the final 2022 anchovy TAC was 341,109t – 350,000t, reflecting "uncertainty resulting from problems associated with the December 2021 hydroacoustic survey" (de Moor 2022a). A recommendation has also been made for the initial 2023 TAC; however the full report has yet to be published (MARAM 2023).

MARAM continues to provide recommendations for the appropriate volume of fishery removals, and A2.3 is met.

A2.4 The assessment is subject to internal or external peer review.

The initial MT assessment identified the small pelagic Working Group, consisting of scientists from DFFE, MARAM and industry, as an important peer review mechanism. Recommendations and other documentation published by MARAM are also subjected to internal peer review by MARAM group members. A2.4 is met.

A2.5 The assessment is made publicly available.

Stock assessments are generally made available on the MARAM website (e.g. MARAM 2023), and although the 2022 surveillance identified a delay for the 2021 assessment, the documentation is now available (MARAM 2021). The process by which TAC recommendations are reached is publicly available (de Moor 2018), as are the recommendations themselves (e.g., de Moor 2022). A2.5 is met.

References

de Moor, C.L. (2018). The 2018 Operational Management Procedure for the South African sardine and anchovy resources. https://open.uct.ac.za/bitstream/handle/11427/33220/FISHERIES_2018_DEC_SWG-PEL_37%20OMP-18.pdf

de Moor, C.L. (2020). The South African anchovy assessment with annual maturity ogives. https://zivahub.uct.ac.za/articles/report/The_South_African_anchovy_assessment_with_annual_maturity_ogives/13669787

de Moor, C.L. (2021). Final anchovy TAC for 2021. https://doi.org/10.25375/uct.16431630.v1

de Moor, C.L. (2022). Initial anchovy TAC recommendation for 2022, using OMP-18rev. https://doi.org/10.25375/uct.19426154.v1

de Moor, C.L. (2022a). Final anchovy TAC for 2022, using OMP-18rev. https://zivahub.uct.ac.za/articles/report/Final_anchovy_TAC_for_2022_using_OMP_18rev/21741017/1

DFFE (2023). Portfolio Committee on Forestry, Fisheries and the Environment, 21 March 2023. Status of the South African Marine Fishery Resources. https://static.pmg.org.za/230328Status_of_Resources.pdf

MARAM (2021). Research output, 2021. https://science.uct.ac.za/maram/publications-research-output/2021

MARAM (2023). Research output, 2023. https://science.uct.ac.za/maram/publications-research-output/2023

Links

MarinTrust Standard clause	1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	12.3
GSSI	D.5.01, D.6.02, D.3.14

A3	Harvest Strategy - Minimum Requirements		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	PASS
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	PASS
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	PASS
		Clause outcome:	PASS

A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.

As at the time of the initial and 2022 surveillance MT assessments, total fishing mortality continues to be restricted through Total Allowable Catches (TACs) and Total Allowable Bycatches (TABs). The MRLA empowers the Minister to set TACs and apportion them between rights holders. TACs are published on the DFFE website. TACs are set in two stages: an initial TAC set based primarily on biomass estimates from the hydroacoustic surveys conducted in November / December; and a final TAC which takes into account catch data and the results of the winter survey.

There is a mechanism in place by which total fishing mortality of anchovy is restricted, therefore A3.1 is met.

A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.

Anchovy TACs are set according to the MARAM advice, which is in turn based on the OMP. Some information regarding total catches in 2022 is available; however the full detailed analysis has not yet been made available as the 2023 Status of South African Marine Fishery Resources report has not been published. A summary presentation indicates that the total catch of anchovy, red eye round herring and sardine in 2022 was 274,000t (DFFE 2023). The final recommendation for the 2022 anchovy TAC was 341,109t - 350,000t (de Moor 2022), and therefore landings of anchovy were below the level recommended. A3.2 continues to be met.

A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).

There is no explicit limit reference point established for the stock; however as set out in A2.2, a variable which it is reasonable to consider as a proxy limit reference point is defined in OMP-18. Anchovy biomass is estimated to be considerably above this proxy; however, the OMP sets out exactly what would happen if the biomass estimate were to fall below this level. The fishery would not automatically close; however, the TAC recommendation would fall to a much lower level, approaching zero when a second reference point is reached. The sardine stock which is also a component of the small pelagic fishery (and is explored in more detail in section C) is subject to an identical control rule which has seen the directed sardine TAC reduce to relatively tiny values since the proxy limit reference point was breached. The initial MT assessment concluded that this approach constitutes adequate evidence that A3.3 is met, and there have been no substantial changes to the OMP since that time. Therefore A3.3 continues to be met.

References

de Moor (2022). Final anchovy TAC for 2022, using OMP-18rev.
https://zivahub.uct.ac.za/articles/report/Final_anchovy_TAC_for_2022_using_OMP_18rev/21741017/1

DFFE (2023). Portfolio Committee on Forestry, Fisheries and the Environment, 21 March 2023. Status of the South African Marine Fishery Resources. https://static.pmg.org.za/230328Status_of_Resources.pdf

Standard clause 1.3.2.1.3

Links	
MarinTrust Standard clause	1.3.2.1.3, 1.3.2.1.4
FAO CCRF	7.2.1, 7.22 (e), 7.5.3
GSSI	D3.04, D6.01

A4	**Stock Status - Minimum Requirements**		
	A4.1	The stock is at or above the target reference point, OR IF NOT: The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT: The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.	PASS
		Clause outcome:	PASS

A4.1 The stock is at or above the target reference point, OR IF NOT:

The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:

The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.

Due to the uncertainty of the 2021 survey outcomes, and the delay in the release of the 2022 survey results, there is no new estimate of biomass available for the sardine stock. Therefore, the analysis in this section remains unchanged from the 2022 MT surveillance, as follows:

There is no explicit target reference point established for the anchovy stock. However, as set out in A2.2 it is reasonable to consider B^A_{NOV} to constitute a proxy target reference point, currently set at 1.38 million tonnes (de Moor 2018). The most recent TAC recommendation states that the estimated anchovy biomass in December 2021 was 798,535t – 971,004t (de Moor 2022). Therefore, the stock is probably not above the target reference point as does not meet the first component of this clause.

As noted in A3.3, there is evidence from the sardine component of the fishery, which uses an identical control rule, that a fall below the limit reference point would result in a rapid and significant reduction in TAC recommendations and final TACs, ultimately resulting in the closure of the targeted fishery. The initial MT assessment concluded that this constitutes adequate evidence that A4.1 is met, and there have been no substantial changes to the OMP since that time. Therefore A4.1 continues to be met.

References

de Moor, C.L. (2018). The 2018 Operational Management Procedure for the South African sardine and anchovy resources. https://open.uct.ac.za/bitstream/handle/11427/33220/FISHERIES_2018_DEC_SWG-PEL_37%20OMP-18.pdf

de Moor, C.L. (2022). Initial anchovy TAC recommendation for 2022, using OMP-18rev. https://doi.org/10.25375/uct.19426154.v1

Links	
MarinTrust Standard clause	1.3.2.1.4
FAO CCRF	7.2.1, 7.2.2 (e)
GSSI	D6 01

CATEGORY B SPECIES

Category B species are those which make up greater than 5% of landings in the applicant raw material, but which are not subject to a species-specific research and management regime sufficient to pass all Category A clauses. If there are no Category B species in the fishery under assessment, this section can be deleted.

Category B species are assessed using a risk-based approach. The following process should be completed once for each Category B species.

If there are estimates of biomass (B), fishing mortality (F), and reference points

It is possible for a Category B species to have some biomass and fishing mortality data available. When sufficient information is present, the assessment team should use the following risk matrix to determine whether the species should be recommended for approval.

TABLE B(A) - F, B AND REFERENCE POINTS ARE AVAILABLE

Biomass is above MSY / target reference point	Pass	Pass	Pass	Fail	Fail
Biomass is below MSY / target reference point, but above limit reference point	Pass, but re-assess when fishery removals resume	Pass	Fail	Fail	Fail
Biomass is below limit reference point (stock is overfished)	Pass, but re-assess when fishery removals resume	Fail	Fail	Fail	Fail
Biomass is significantly below limit reference point (Recruitment impaired)	Fail	Fail	Fail	Fail	Fail
	Fishery removals are prohibited	**Fishing mortality is below MSY or target reference point**	**Fishing mortality is around MSY or target reference point, or below the long-term average**	**Fishing mortality is above the MSY or target reference point, or around the long-term average**	**Fishing mortality is above the limit reference point or above the long-term average (Stock is subject to overfishing)**

If the biomass / fishing pressure risk assessment is not possible

Initially, the resilience of each Category B species to fishing pressure should be estimated using the American Fisheries Society procedure described in Musick, J.A. (1999). This approach is used as the resilience values for many species and stocks have been estimated by FishBase and are already available online. For details of the approach, please refer to Appendix A. Determining the resilience provides a basis for estimating the risk that fishing may pose to the long-term sustainability of the stock. Table B(b) should be used to determine whether the species should be recommended for approval.

TABLE B(B) - NO REFERENCE POINTS AVAILABLE. B = CURRENT BIOMASS; B_{AV} = LONG-TERM AVERAGE BIOMASS; F = CURRENT FISHING MORTALITY; F_{AV} = LONG-TERM AVERAGE FISHING MORTALITY.

	High	Medium	Low	Very Low
B > B_{av} and F < F_{av}	Pass	Pass	Pass	Fail
B > B_{av} and F or F_{av} unknown	Pass	Pass	Fail	Fail
B = B_{av} and F < F_{av}	Pass	Pass	Fail	Fail
B = B_{av} and F or F_{av} unknown	Pass	Fail	Fail	Fail
B > B_{av} and F > F_{av}	Pass	Fail	Fail	Fail
B < B_{av}	Fail	Fail	Fail	Fail
B unknown	Fail	Fail	Fail	Fail
Resilience	**High**	**Medium**	**Low**	**Very Low**

Assessment Results

Species Name	Redeye herring		
B1	Species Name		Redeye herring
	Table used (Ba, Bb)		Bb
	Outcome		PASS

Previous MT assessments established that there are no reference points formally established for this stock, and as this remains the case it has once again been assessed using table Bb. However, recently work has been undertaken to develop a full stock assessment for the resource (de Moor 2022), which may lead to the establishment of reference points and enable the MT assessment of this stock under Category A in future.

The resilience of the species is High, as previously (Fishbase 2023).

Biomass was estimated in the most recent Status of South African Marine Fishery Resources report (DFFE 2020) to be well above the long-term average. The 2022 MT surveillance report noted that this estimate dated from 2019 and "the stock may face challenges in the next surveillance assessment if no more recent estimate becomes available". However, the 2022 initial stock assessment includes estimates of biomass indicating it has increased since the 2019 estimate. Therefore the biomass can be assumed to remain above the long-term average.
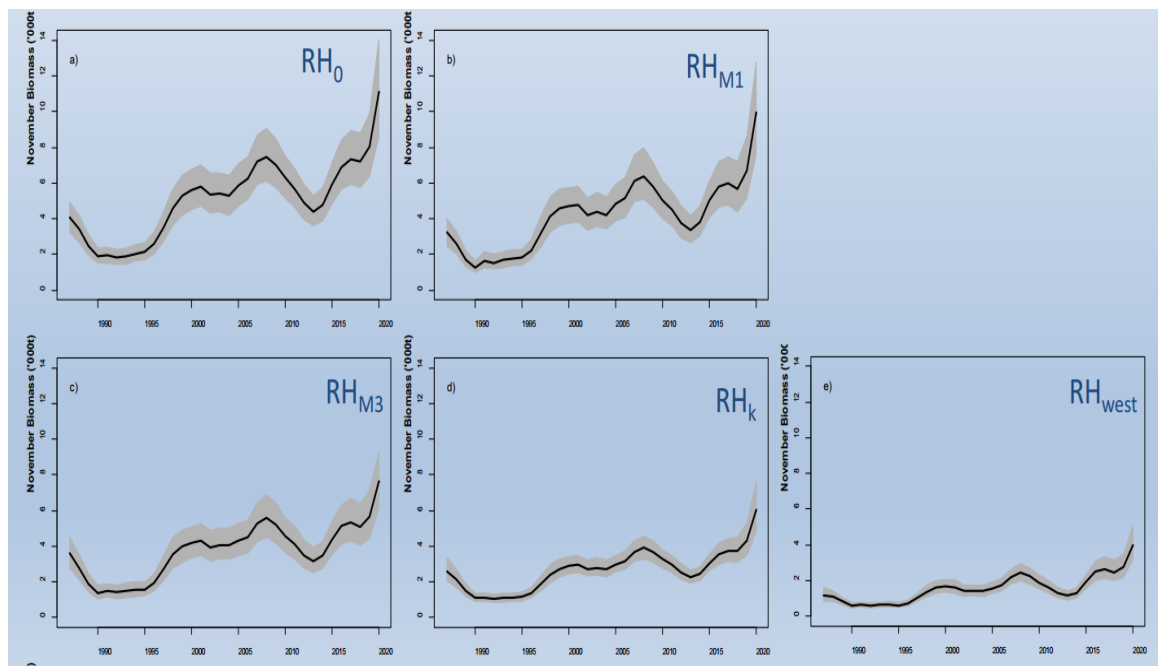
Estimated "true biomass" of redeye herring from the 2022 stock assessment. Each graph represents a different stock assessment model (de Moor 2023)

As previously, there do not appear to be any available estimates of current or historical fishing mortality levels.

Having established that, as at the time of the previous surveillance assessment, Resilience is High; $B > B_{av}$; and that F and F_{av} are unknown, Table Bb was used to produce an assessment outcome of PASS.

References

de Moor, CL (2022). Assessment of South African round herring: Initial results. https://zivahub.uct.ac.za/articles/report/Assessment_of_South_African_round_herring_Initial_results/21257577/1

de Moor, CL (2023). Finalised assessment of South African round herring, using data from 1987 to 2021. https://zivahub.uct.ac.za/articles/presentation/Finalised_assessment_of_South_African_round_herring_using_data_from_1987_to_2021/22574794

Fishbase (2023). Redeye herring, *Etrumeus whiteheadi*. https://www.fishbase.se/summary/1456

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

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 may be assessed as a Category D species instead, EXCEPT if there is evidence that it is currently below the limit reference point.

Species Name		Sardine	
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.

As in previous MT assessments, landings data are collected from all components of the small pelagic fishery, whether they are targeting anchovy, redeye herring, or sardine. Catch data is recorded in logbooks and confirmed by the presence of DFFE officials at the point of landing (Coetzee *et al* 2019). Historically, sardine landings have often been equal to or exceeded landings of other species in the fishery (DFFE 2020), and despite relatively low landings in recent years sardine is treated as equally significant within the OMP and quota-setting process as anchovy (de Moor 2018). For these reasons, all fishery removals of sardine are factored into the stock assessment process, and 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.

Previous MT assessments established that there are no formal reference points established for South African sardine, but that the management plan (OMP-18) established B^S_{crit} as the "November survey estimated biomass threshold below which Critical Biomass metarules are invoked for sardine" (de Moor 2018). In practice this is the level of biomass below which the sardine fishery is placed into "Exceptional Circumstances" and directed quotas are set using "ad hoc advice based on short-term projections" (de Moor 2023), and as such it is reasonable to consider B^S_{crit} to constitute a proxy limit reference point.

Exceptional Circumstances were declared for sardine in 2018, and have remained in place since (de Moor 2023). This means that sardine biomass has been estimated to be below the proxy limit reference point in every November for the past five years. As established during previous MT assessments, the stock continues to not meet the first half of C1.2 and can only pass the clause if "removals by the fishery under assessment are considered by scientific authorities to be negligible".

The MarinTrust assessment guidance states that "Stock assessments rarely specify if fishery removals are negligible. Here the assessor must look for evidence such as management measures being implemented for stock rebuilding and that the management measures are not contradicting scientific advice" (MT 2022). The 2022 MT surveillance concluded the following:

"Although there is no explicit statement from scientific authorities that the current level of fishery removals is negligible, the evidence demonstrates that:

a) The directed sardine fishery is currently extremely small compared to historical catches, and this is a direct result of severe TAC reductions which in turn are a response to sardine biomass falling below the proxy limit reference point.
b) The amount of sardine bycatch permitted by quotas is restricted to levels which scientific authorities consider 'small', and in practice actual landings are even smaller as efforts to minimise sardine bycatch appear to be effective.

These two points remain true; the directed sardine fishery remains relatively small, and there is no evidence that the quantity of sardine caught as bycatch has increased substantially. Additionally, the most recent stock assessment for the two sardine components indicates biomass has generally been increasing since Exceptional Circumstances were put in place (see below).
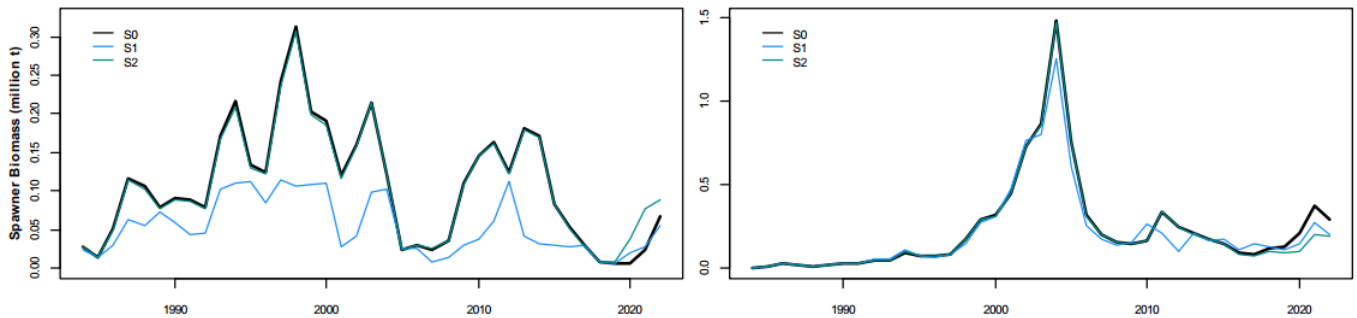
Estimated spawning biomass for the west (left) and south (right) sardine components. S0, S1 and S2 represent the three stock assessment models used to generate the estimates (de Moor 2023)

The assessor concludes that as in the previous MT surveillance, sardine catches can be considered "negligible" for the purposes of this clause, and C1.2 is met.

References

Coetzee, J.C., de Moor, C.L. and Butterworth, D.S. (2019). A summary of the South African sardine (and anchovy) fishery. https://open.uct.ac.za/bitstream/handle/11427/30781/MARAM_IWS_2019_Sardine_BG1.pdf

de Moor, C.L. (2018). The 2018 Operational Management Procedure for the South African sardine and anchovy resources. https://open.uct.ac.za/bitstream/handle/11427/33220/FISHERIES_2018_DEC_SWG-PEL_37%20OMP-18.pdf

de Moor, C.L. (2023). Sardine projections based on constant catch scenarios for 2023. https://figshare.com/articles/report/Sardine_projections_based_on_constant_catch_scenarios_for_2023/22574878

Department of Forestry, Fisheries and the Environment (2020). Status of the South African Marine Fishery Resources 2020. https://www.dffe.gov.za/sites/default/files/docs/publications/statusofsouthafrican_marinefisheryresources2020.pdf

MarinTrust (2022). Whole fish fishery assessment interpretation and guidance document, V2.1, Issued January 2022.

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 make up less than 5% of landings and 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	Maasbanker (Cape horse mackerel)	
Productivity Attribute		**Value**	**Score**
Average age at maturity (years)		5.1 years	1
Average maximum age (years)		22 years	2
Fecundity (eggs/spawning)		Unknown	-
Average maximum size (cm)		60cm	1
Average size at maturity (cm)		30.2cm	1
Reproductive strategy		Broadcast spawner	1
Mean trophic level		3.5	3
		Average Productivity Score	**1.5**
Susceptibility Attribute		**Value**	**Score**
Availability (area overlap)		>30% overlap	3
Encounterability (the position of the stock/species within the water column relative to the fishing gear)		Pelagic/neritic – high overlap	3
Selectivity of gear type		Small individual frequently caught	3
Post-capture mortality		Retained	3
		Average Susceptibility Score	3
		PSA Risk Rating (From Table D3)	PASS
		Compliance rating	PASS

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

Computer-generated distribution map for Maasbanker, from Fishbase (https://www.fishbase.se/summary/5382)
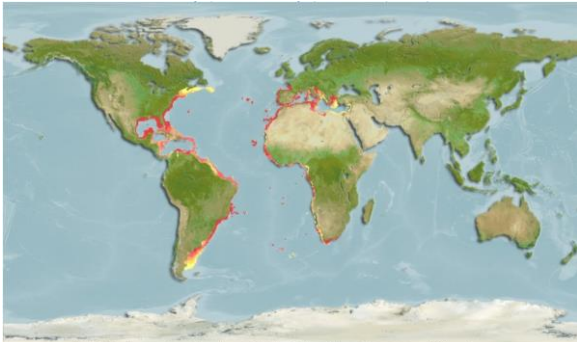
References

Standard clauses 1.3.2.2

D1	Species Name		Chub mackerel	
	Productivity Attribute		**Value**	**Score**
	Average age at maturity (years)		1.9 years	1
	Average maximum age (years)		7.7 years	1
	Fecundity (eggs/spawning)		Unknown	-
	Average maximum size (cm)		55cm	1
	Average size at maturity (cm)		22.9cm	1
	Reproductive strategy		Broadcast spawner	1
	Mean trophic level		3.9	3
			Average Productivity Score	**1.33**
	Susceptibility Attribute		**Value**	**Score**
	Availability (area overlap)		<10% overlap	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		Pelagic/neritic – high overlap	3
	Selectivity of gear type		Small individual frequently caught	3
	Post-capture mortality		Retained	3
			Average Susceptibility Score	2.5
			PSA Risk Rating (From Table D3)	PASS
			Compliance rating	PASS

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

Atlantic chub mackerel distribution, from Fishbase (https://www.fishbase.se/summary/Scomber-colias.html)

References

Fishbase, Atlantic chub mackerel: https://www.fishbase.se/summary/Scomber-colias.html

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

FURTHER IMPACTS

The three clauses in this section relate to impacts the fishery may have in other areas. A fishery must meet the minimum requirements of all three clauses before it can be recommended for approval.

F1	Impacts on ETP Species - Minimum Requirements		
	F1.1	Interactions with ETP species are recorded.	PASS
	F1.2	There is no substantial evidence that the fishery has a significant negative effect on ETP species.	PASS
	F1.3	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.	PASS
		Clause outcome:	PASS

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section F1. The conclusions of the initial assessment are summarised here for convenience; please refer to the initial assessment report (Global Trust 2021) for more detail.

F1.1 Interactions with ETP species are recorded.

Catches in the small pelagic fishery are recorded in logbooks by skippers, including any interactions with ETP species, and landings are monitored by DFFE inspectors. Observer coverage in the small pelagic fishery is around 8%, and is used to record interactions with ETP species and confirm the data from the fishery as a whole. Government reports include examples of ETP catch in South African longline and demersal trawl fisheries, but state that the small pelagic fishery rarely if ever interacts with ETP species (DFFE 2020).

Interactions with ETP species are recorded, therefore F1.1 is met.

F1.2 There is no substantial evidence that the fishery has a significant negative effect on ETP species.

Logbook and observer data suggest that direct interactions between the fishery and ETP species are rare. However, several sources indicate that the removal of important prey species such as anchovy and sardine may have indirect impacts on ETP species in South African waters. Species potentially impacted by a reduction in prey availability include cape cormorants (*Phalacrocorax capensis*, Endangered); cape gannet (*Morus capensis*, Endangered); and African penguin (*Spheniscus demersus*, Endangered).

While the initial assessment noted that prey availability is a potential factor in the conservation status of these species, it also concluded that the available evidence suggests a number of other factors – including disease, oil spills and other human activity – also play a significant role (Coetzee *et al* 2019). Several studies into penguins, in particular, concluded that "even with a large reduction in the sardine TAC, there would be little benefit for penguins", and thus that the fishery is unlikely to be hindering the recovery of the species.

The MT fishery assessment guidance states that "significant negative effect means that the fishery is highly likely to hinder the recovery of ETP species". The initial assessment concluded that the available evidence suggested this is not currently the case, and therefore F1.2 is met.

F1.3 If the fishery is known to interact with ETP species, measures are in place to minimise mortality.

As noted above, there are considered to be few if any direct interactions between the fishery and ETP species. Measures are in place to minimise the indirect impacts of the fishery, particularly closed areas around islands important for seabird breeding. These include Bird Island, Robben Island and Dassen Island, with Bird Island in particular being an important habitat for all three endangered bird species listed above.

Measures are in place to minimise indirect impacts of the fishery on ETP species, therefore F1.3 is met.

References

Coetzee, J.C., de Moor, C.L. and Butterworth, D.S. (2019). A summary of the South African sardine (and anchovy) fishery. https://open.uct.ac.za/bitstream/handle/11427/30781/MARAM_IWS_2019_Sardine_BG1.pdf

Department of Forestry, Fisheries and the Environment (2020). Status of the South African Marine Fishery Resources 2020. https://www.dffe.gov.za/sites/default/files/docs/publications/statusofsouthafrican_marinefisheryresources2020.pdf

Global Trust Certification (2021). South Africa small pelagic fishery initial assessment, July 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF11%20Anchovy%20South%20Africa_Initial_2021_scope%20extension_final%20version.pdf

Links	
MarinTrust Standard clause	1.3.3.1
FAO CCRF	7.2.2 (d)
GSSI	D4.04, D.3.08

F2	**Impacts on Habitats - Minimum Requirements**		
	F2.1	Potential habitat interactions are considered in the management decision-making process.	PASS
	F2.2	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.	PASS
	F2.3	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.	PASS
		Clause outcome:	PASS

As previously, the pelagic gears used in this fishery represent a very low risk to physical habitats. The scores in this section are therefore unchanged.

F2.1 Potential habitat interactions are considered in the management decision-making process.

Pelagic gears are considered to intrinsically pose a very low risk to physical habitats. DFFE management activity does include consideration of habitats but this is focussed on gear types which are likely or certain to interact, such as demersal trawls.

Habitat interactions are considered in the management decision-making process, therefore F2.1 is met.

F2.2 There is no substantial evidence that the fishery has a significant negative impact on physical habitats.

Given the gear types used in the fishery, there is a presumption of minimal interactions with marine habitats. This is confirmed through the observer programme and other compliance mechanisms including inspections at sea and in port, and VMS.

There is no evidence that the fishery interacts with habitats and therefore F2.2 is met

F2.3 If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.

The small pelagic fishery does not interact with physical habitats, and therefore no such measures are necessary. In South African fisheries using other gear types, measures such as closed areas and gear restrictions are in place. Clause F2.3 is met.

References	

Global Trust Certification (2021). South Africa small pelagic fishery initial assessment, July 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF11%20Anchovy%20South%20Africa_Initial_2021_scope%20extension_final%20version.pdf

Links	
MarinTrust Standard clause	1.3.3.2
FAO CCRF	6.8
GSSI	D.2.07, D.6.07, D3.09

F3	Ecosystem Impacts - Minimum Requirements		
	F3.1	The broader ecosystem within which the fishery occurs is considered during the management decision-making process.	PASS
	F3.2	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.	PASS
	F3.3	If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.	PASS
		Clause outcome:	PASS

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section F3. The conclusions of the initial assessment are summarised here for convenience; please refer to the initial assessment report (Global Trust 2021) for more detail.

F3.1 The broader ecosystem within which the fishery occurs is considered during the management decision-making process.

The management system for the South African small pelagic fishery has utilised an ecosystem-based approach since OMP-14. Evidence of this approach can be seen in the experimental closure of areas to protect seabird populations, and analyses conducted to attempt to quantify the indirect impacts of the fishery on the ecosystem through prey removal.

The MLRA includes a requirement that fisheries management measures apply the precautionary principle, and this is reflected in the development of the current OMP, OMP-18. The DFFE report "Status of the South African Fishery Resources" includes consideration of the ecosystem impacts of each individual fishery and South African fisheries in general (DFFE 2020). The 2020 status report notes that OMP-18 was simulation-tested to ensure certain probabilities that sardine and anchovy abundances would not fall below specified thresholds, and also estimated risks posed to African penguin populations of various catch thresholds. Finally, the development of OMP-18 also incorporated consideration of spatial management of sardine, specifically the possibility of multiple sardine stocks in the region and the impacts of this possibility on localised predators.

The broader ecosystem is considered in the management process, therefore F3.1 is met.

F3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.

The initial assessment concluded that there is no evidence that the fishery has a significant negative impact on the marine ecosystem. In conducting the present surveillance assessment, no new information was uncovered to change this conclusion and therefore clause F2.2 is met.

F3.3 If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.

Sardine and anchovy are considered to play an important role in the marine ecosystem, as important prey species for predators including several ETP species (see F1). The potential impacts of the fishery on these prey species were factored into the development of OMP-18, as explained in F3.1 above, and as the OMP is the main mechanism through which the annual catch limits are determined (de Moor 2018), this represents strong evidence that the importance of anchovy and sardine as prey species has been factored into the total permissible fishery removals. F3.3 is therefore met.

References

de Moor, CL (2018). The 2018 Operational Management Procedure for the South African sardine and anchovy resources. https://open.uct.ac.za/bitstream/handle/11427/33220/FISHERIES_2018_DEC_SWG-PEL_37%20OMP-18.pdf

Department of Forestry, Fisheries and the Environment (2020). Status of the South African Marine Fishery Resources 2020. https://www.dffe.gov.za/sites/default/files/docs/publications/statusofsouthafrican_marinefisheryresources2020.pdf

Global Trust Certification (2021). South Africa small pelagic fishery initial assessment, July 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF11%20Anchovy%20South%20Africa_Initial_2021_scope%20extension_final%20version.pdf

Links	
MarinTrust Standard clause	1.3.3.3
FAO CCRF	7.2.2 (d)
GSSI	D.2.09, D3.10, D.6.09

SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.

Appendix A - Determining Resilience Ratings

The assessment of Category B species described in this assessment report template utilises a resilience rating system suggested by the American Fisheries Society. This approach was chosen because it is also used by FishBase, and so the resilience ratings for many thousands of species are freely available online. As described by FishBase, the following is the process used to arrive at the resilience ratings:

"*The American Fisheries Society (AFS) has suggested values for several biological parameters that allow classification of a fish population or species into categories of high, medium, low and very low resilience or productivity (Musick 1999). If no reliable estimate of r_m (see below) is available, the assignment is to the lowest category for which any of the available parameters fits. For each of these categories, AFS has suggested thresholds for decline over the longer of 10 years or three generations. If an observed decline measured in biomass or numbers of mature individuals exceeds the indicated threshold value, the population or species is considered vulnerable to extinction unless explicitly shown otherwise. If one sex strongly limits the reproductive capacity of the species or population, then only the decline in the limiting sex should be considered. We decided to restrict the automatic assignment of resilience categories in the Key Facts page to values of K, t_m and t_{max} and those records of fecundity estimates that referred to minimum number of eggs or pups per female per year, assuming that these were equivalent to average fecundity at first maturity (Musick 1999). Note that many small fishes may spawn several times per year (we exclude these for the time being) and large live bearers such as the coelacanth may have gestation periods of more than one year (we corrected fecundity estimates for those cases reported in the literature). Also, we excluded resilience estimates based on r_m (see below) as we are not yet confident with the reliability of the current method for estimating rm. If users have independent r_m or fecundity estimates, they can refer to Table 1 for using this information*.*"*

Parameter	High	Medium	Low	Very low
Threshold	0.99	0.95	0.85	0.70
r_{max} (1/year)	> 0.5	0.16 - 0.50	0.05 - 0.15	< 0.05
K (1/year)	> 0.3	0.16 - 0.30	0.05 - 0.15	< 0.05
Fecundity (1/year)	> 10,000	100 - 1000	10 - 100	< 10
t_m (years)	< 1	2 - 4	5 - 10	> 10
t_{max} (years)	1 - 3	4 - 10	11 - 30	> 30

[Taken from the FishBase manual, "Estimation of Life-History Key Facts", http://www.fishbase.us/manual/English/key%20facts.htm#resilience]

Appendix B – MarinTrust Fishery Assessment Peer Review Template

This section comprises a summary of the fishery being assessed against version 2 of the MarinTrust Standard.

Fishery under assessment	Small pelagics
Management authority (Country/State)	Department of Environment, Forestry and Fisheries (DFFE) South Africa
Main species	Anchovy (*Engraulis encrasicolus*); Redeye round herring (*Etrumeus whiteheadi*)
Fishery location	FAO 47 Atlantic, Southeast. South Africa EEZ.
Gear type(s)	Purse seine and pelagic trawl
Overall recommendation. (Approve/ Fail)	Approve

Summary: in this section, provide any additional information about the fishery that the reviewers feel is significant to their decision.
In the table 5 (species categorization) it assigned 0 to 29% for sardine, this makes sardine a category B species type 1. However, catches of at least the last decade show much smaller percentages than 29%. This could be clarified in the table 5.

General Comments on the Draft Report provided to the peer reviewer
The assessment made for the report seemed well produced, being the only concern the uncertainty on fishing mortality of sardine in despite the stable catches of last years. Besides, it is stated that there is now evidence that the stock is recovering; I would have said that the existing evidence is not yet consistent enough to hypothesize a recovery of the sardine stock. Also, in the report it is stated that anchovy and sardine (among others) are important prey items for ETP species. That importance makes that interactions of ETP species with the fleet actually exist, then they cannot be considered rare, they are very common, al least in areas of high productivity as the Benguela large marine ecosystem.

Summary of Peer Review Outcomes

Peer reviewers should review the fishery assessment report with the primary objective of answering the key questions listed in the table below. Where the situation is more complicated, reviewers may instead answer "See Notes".

	YES	NO	See Notes
A – Fishery Assessment			
1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	X		
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?			X
3. Are the scores in the following sections accurate (i.e. do the scores reflect the evidence provided)?			
Section M - Management	X		
Category A Species	X		
Category B Species	X		
Category C Species	X		
Category D Species			
Section F – Further Impacts	X		

Detailed Peer Review Justification

Peer reviewers should provide support for their answers in the boxes provided, by referring to specific scoring issues and any relevant documentation as appropriate.

Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).

Boxes may be extended if more space is required.

1. Is the scoring of the fishery consistent with the MarinTrust standard, and clearly based on the evidence presented in the assessment report?
Scoring agreed. The assessor noted that the fishery is in its third year without an assessment, although it is known that it would be available later this year.
Certification body response
n/a

2. Has the fishery assessment been fully completed, using the recognised MARINTRUST fishery assessment methodology and associated guidance?
Yes
Certification body response

n/a

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3. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?

Yes, but it could be needed to make clear that sardine is not exceeding 5% of catches, as it is stated -apparently- in table 5

Certification body response

Species categorisation table has been updated to make the recent proportion of sardine in the catch clear.

3M. Are the scores in "Section M – Management" clearly justified?	
M1.1 There is an organisation responsible for managing the fishery.	Yes
There is an organisation responsible for collecting data and assessing the fishery.	Yes
Fishery management organisations are publicly committed to sustainability.	Yes
Fishery management organisations are legally empowered to take management actions.	Yes
There is a consultation process through which fishery stakeholders are engaged in decision-making.	Yes
The decision-making process is transparent, with processes and results publicly available.	Yes

Certification body response

n/a

3A. Are the "Category A Species" scores clearly justified?

Scoring agreed

Certification body response

n/a

3B. Are the "Category B Species" scores clearly justified?

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Scoring agreed
Certification body response
n/a

3C. Are the "Category C Species" scores clearly justified?
Scoring agreed
Certification body response
n/a

3D. Are the "Category D Species" scores clearly justified?
Scoring agreed
Certification body response
n/a

3F. Are the scores in "Section F – Further Impacts" clearly justified?
Scoring agreed
Certification body response
n/a

Optional: General comments on the Peer Review Draft Report

It is important to notice that in most of MT reviews is stated more or less the same: there are logs to register interaction, but these are rare so that the fishery wouldn't be impacting ETP species. How that can be supported if there is no analysis of the collected data? A scientific study should be needed to support the impression that fisheries are not affecting ETP species.

Certification body response

As a surveillance assessment, this report is primarily aimed at determining whether any major aspects of the fishery have changed since the previous assessment. It heavily references the 2021 full re-assessment of this fishery, which in turn contains more detailed references for the statement that the fishery does not have a significant negative impact on ETP species.

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Glossary

Non-target: Species for which the gear is not specifically set, although they may have immediate commercial value and be a desirable component of the catch. OECD (1996), Synthesis report for the study on the economic aspects of the management of marine living resources. AGR/FI(96)12

Target: In the context of fishery certification, the target catch is the catch of stock under consideration by the unit of certification – i.e. the fish that are being assessed for certification and ecolabelling. (GSSI)