



MarinTrust Standard V2

Whole fish Fishery Assessment *South Africa Small Pelagic fishery*

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Application details and summary of the assessment outcome			
Name(s):			
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 1
Assessment Period	To June 2022		
Scope Details			
Management Authority (Country/State)		Department of Environment, Forestry and Fisheries (DEFF) South Africa	
Main Species		Anchovy (<i>Engraulis encrasicolus</i>); Redeye round herring (<i>Etrumeus whiteheadi</i>)	
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 – see peer review report	
Recommendation		Maintain fishery approval	

Table 2. Assessment Determination

Assessment Determination
<p>All five of the species considered by this assessment are categorised by the IUCN as Least Concern, and none appear in the CITES appendices. They are therefore eligible for use as MarinTrust raw materials.</p> <p>The species categorisation stage of this surveillance assessment incorporates additional catch composition data not used in the initial MT assessment, leading to slightly different outcomes. Catch data from factory audits and government reports suggest that Hector’s lanternfish and lightfish, two species previously included in the assessment, constitute less than 0.1% of the catch and do not need to be assessed. Conversely, the same data sources indicate that maasbanker, or Cape horse mackerel, can represent as much as 4% of the catch and therefore has been included in this assessment. Finally, while the initial assessment separated two species of anchovy, the catch data and management approach do not distinguish between the two stocks and therefore it was considered more appropriate to assess them as a combined stock, an approach applied in other MT assessments such as Denmark sandeel.</p> <p>As at the time of the initial MT assessment, the South African small pelagic fishery continues to be managed by the Department of Forestry, Fisheries and the Environment (DFFE) according to the Operational Management Plan (OMP) established in 2018, and the advice provided by the Marine Resource Assessment and Management Group (MARAM) at the University of Cape Town. There have been no substantial changes to any aspect of the fishery covered by sections M or F.</p> <p>The anchovy stock continues to be managed following the scientific advice, which in turn is based on the results of biannual hydroacoustic surveys and the procedure set out in OMP-18. The stock continues to be in good shape relative to the proxy reference points established by the OMP.</p> <p>As it is not managed using reference points, redeye round herring was assessed using Table Bb. As a species with High resilience, it passes the assessment due to the current estimated biomass being well above the long-term average. However, due to the nature of averages this can only ever be temporary, and it is worth noting that unless reference points and/or a species-specific management plan are developed for this stock, it will eventually fail the assessment in the future.</p> <p>The three Type 2 species also meet the requirements of the MT fishery assessment. There is some evidence that sardine has been caught in more significant quantities in recent years. For the purposes of this surveillance assessment it has been categorised as a Type 2 species – see the species categorisation section for an explanation of why. However, if it regularly constitutes more than 5% of the total catch, it will need to be assessed as a Type 1 species in future, as it has been in the past.</p>
Fishery Assessment Peer Review Comments
<p>The peer reviewer agrees with the assessor’s determination, noting that the management framework and surveillance, control and enforcement system meets the requirements of the MarinTrust Standard. The main target species, anchovy, meets requirements for data collection, stock assessment, harvest strategy and is in a healthy status. The peer reviewer agrees with the assessor’s decision of considering anchovy as a single combined stock (<i>Engraulis encrasicolus</i> & <i>Engraulis capensis</i>) and assessed only under Category A, noting that this reflects the management approach applied in the fishery, and is in line with other MT fishery assessments conducted under similar circumstances.</p> <p>The peer reviewer also agrees with the assessment of other species comprising the bulk of the remainder of the catch, the Redeye round herring, which is the second main species caught; and the bycatch species, Sardine, Cape horse mackerel (Maasbanker) and Chub mackerel.</p> <p>With regards to sardine, the stock is still in poor status and exceptional circumstances have been declared since 2018, so that the OMP-18 process cannot be routinely applied to this stock. Conservative TACs have been proposed (e.g. nil TACs west of Agulhas in 2021). The peer reviewer agrees with the assessor’s evidence referring to the MT assessment guidance and showing that removals by the fishery under assessment are considered by scientific authorities to be negligible.</p> <p>The peer reviewer notes the indirect impacts of the fishery on endangered/declining ETP bird species and measures to address this including closures around important bird island habitat, which is showing some</p>

success, the consideration of forage requirements in the small pelagic stock assessment process and further mitigation provided by the lack of full uptake of the TAC.

The internal peer reviewer agrees that the species listed in this report, are recommended for approval for use in the assessment area under the current Marin Trust Standard v 2.0 for whole fish.

Notes for On-site Auditor

Confirm the proportion of sardine regularly present in the catch.

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	
	Chub mackerel	0-2%	PASS	

Table 5 Species Categorisation Table

Common name	Latin name	Stock	IUCN Redlist Category ¹	% of landings	Management	Category
Anchovy	<i>Engraulis encrasicolus</i> & <i>Engraulis capensis</i>	FAO 47	Least Concern ²	33-90%	Yes	A
Redeye herring	<i>Etrumeus whiteheadi</i>	FAO 47	Least Concern ³	10-50%	No	B
Sardine	<i>Sardinops sagax</i>	FAO 47	Least Concern ⁴	0-29%	Yes	C
Cape horse mackerel	<i>Trachurus capensis</i>	FAO 47	Least Concern ⁵	0-4%	No	D
Chub mackerel	<i>Scomber japonicus</i>	FAO 47	Least Concern ⁶	0-2%	No	D

Species categorisation rationale

Catch composition in the South Africa small pelagic fishery appears highly variable and is complex to interpret. Five main sources of data were available to inform the species categorisation for this assessment:

- 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.

There is considerable variation between these sources, and each comes with caveats as to how relevant it is to the current assessment. The information from each source is summarised in the table below:

	Anchovy	Sardine	Redeye	Horse mackerel	Mackerel	Lantern / Light fish	Other
Application 1	90%	n/a	10%	n/a	n/a	n/a	n/a
Application 2	73%	1%	22%	1%	n/a	0.5%	2.5%
Factory data 1	32.7%	8.2%	50.4%	4.1%	1.5%	n/a	3.2%
Factory data 2	59.3%	29.1%	10.5%	0.3%	0.5%	n/a	0.3%
2019 DEFF total catch ⁷	71.7%	2.2%	20.4%	0.4%	1.7%	n/a	3.6%
Range	33-90%	0-29%	10-50%	0-4%	0-2%	0-1%	0-4%

Based on the information above, the following decisions were made:

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.

Note: The initial assessment of this fishery, carried out in summer 2021, involved the extension of the scope to cover a second anchovy species, *E. capensis*. This species was assessed as a separate stock, under Category B. However, no distinction appears to be made between the two species in the OMP or other management documentation, and landings data do not appear to distinguish

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/170306/6737373>

⁷ https://www.dffe.gov.za/sites/default/files/reports/statusofsouthafrican_marinefisheryresources2020.pdf

between the two. In practice this means that the data used for both the Category A and Category B anchovy in the 2021 assessment actually covered both species.

For the purpose of the present assessment, the anchovy will be considered as a single combined stock and assessed only under Category A. This reflects the management approach applied in the fishery, and is in line with other MT fishery assessments conducted under similar circumstances (e.g., Danish sandeel).

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 2022). 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 2022a). 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 2022):

- 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 2022).

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 2022b). 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 (2022). “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 (2022a). “Home”. <http://www.maram.uct.ac.za/>

Marine Resource Assessment and Management Group (2022b). “Publications 2022”. <http://www.maram.uct.ac.za/maram/publications/2022>

South African Pelagic Fishing Industry Association (2022). “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
<p>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.</p>		
<p>M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations.</p>		
<p>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 Of 1998.</p>		
<p>There is an organisation responsible for monitoring compliance with fishery laws and regulations, therefore M2.1 is met.</p>		
<p>M2.2 There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.</p>		
<p>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.</p>		
<p>There is a framework of sanctions which are applied when laws and regulations are found to have been broken, therefore M2.2 is met.</p>		
<p>M2.3 There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.</p>		
<p>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.</p>		
<p>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.</p>		
<p>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 transshipments 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.</p>		
<p>Compliance is actively monitored through a range of measures, and therefore M2.4 is met.</p>		
<p>References</p> <p>FAO (2015). Agreement on Port State Measures (PSMA). http://www.fao.org/port-state-measures/background/en/</p>		

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, <i>Engraulis encrasicolus</i> & <i>Engraulis capensis</i>														
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	
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 <i>et al</i> 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. 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 and TACs (Total Allowable Catches), TABs (Total Allowable Bycatches) and PUCLs (Precautionary Upper Catch Limits) of the main species in the South African small pelagic fishery, 1990-2019 (DFFE 2020).																
Catch										TAC/TAB/PUCL						
Year	Anchovy	Total sardine	Directed sardine	Bycatch sardine	Horse mackerel	Chub mackerel	Round herring	Meso-pelagic fish	TOTAL	Anchovy TAC	Sardine directed TAC	Sardine TAB	Round herring PUCL	Horse mackerel PUCL	Meso-pelagic PUCL	TOTAL TAC, TAB and PUCL
1990	152	57	42	15	8	0	46	1	263	150	42	0	0	0	0	192
1991	151	53	40	13	1	10	34	1	249	150	37	0	0	0	0	187
1992	349	55	34	21	2	0	48	1	455	350	32	0	0	0	0	382
1993	236	51	30	21	12	0	57	1	357	360	27	0	0	0	0	387
1994	156	95	50	44	8	2	54	1	316	150	50	45	0	0	0	245
1995	178	121	77	44	2	3	77	1	382	210	75	42	0	0	0	327
1996	41	108	79	29	19	1	47	0	216	70	76	29	0	0	0	175
1997	60	119	92	27	13	4	92	0	289	60	88	50	0	0	0	198
1998	108	133	109	24	27	0	53	7	327	175	106	35	0	0	0	316
1999	180	132	118	14	2	0	59	0	373	231	136	26	0	0	0	393
2000	267	135	124	12	5	0	37	0	445	291	126	38	0	5	0	460
2001	288	192	173	19	1	0	55	0	535	451	182	50	0	5	0	688
2002	213	261	245	16	8	0	55	0	537	360	258	54	0	5	0	677
2003	259	290	274	16	1	0	43	0	593	282	250	44	100	5	0	681
2004	190	374	366	8	2	0	47	0	614	423	457	69	100	5	0	1 054
2005	283	247	240	6	6	0	28	0	564	297	397	60	100	5	0	859
2006	134	217	206	11	5	0	42	0	398	362	204	71	100	5	0	743
2007	253	140	135	5	2	0	48	0	443	537	162	49	100	5	0	853
2008	266	91	86	5	2	1	64	0	424	518	91	38	100	5	0	752
2009	174	94	89	5	2	1	40	0	312	569	90	43	100	5	0	808
2010	217	112	88	25	4	1	88	0	423	573	90	115	100	5	0	883
2011	120	112	89	23	11	0	65	7	315	390	90	54	100	12	0	646
2012	307	109	98	12	2	0	68	0	487	473	101	27	100	5	50	756
2013	79	92	88	4	1	0	31	0	203	450	90	66	100	12	50	769
2014	240	98	89	9	3	1	34	0	376	450	90	66	100	15	50	771
2015	238	95	80	15	2	1	14	0	350	450	83	73	100	12	50	769
2016	262	80	63	17	2	4	54	0	401	354	65	45	100	12	50	626
2017	217	37	31	6	1	2	55	0	314	450	45	41	100	8	50	694
2018	253	38	35	3	1	2	48	6	348	315	65	37	100	9	50	576
2019	165	5	2	3	1	4	47	3	230	350	12	11	100	9	50	532

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. 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

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

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.

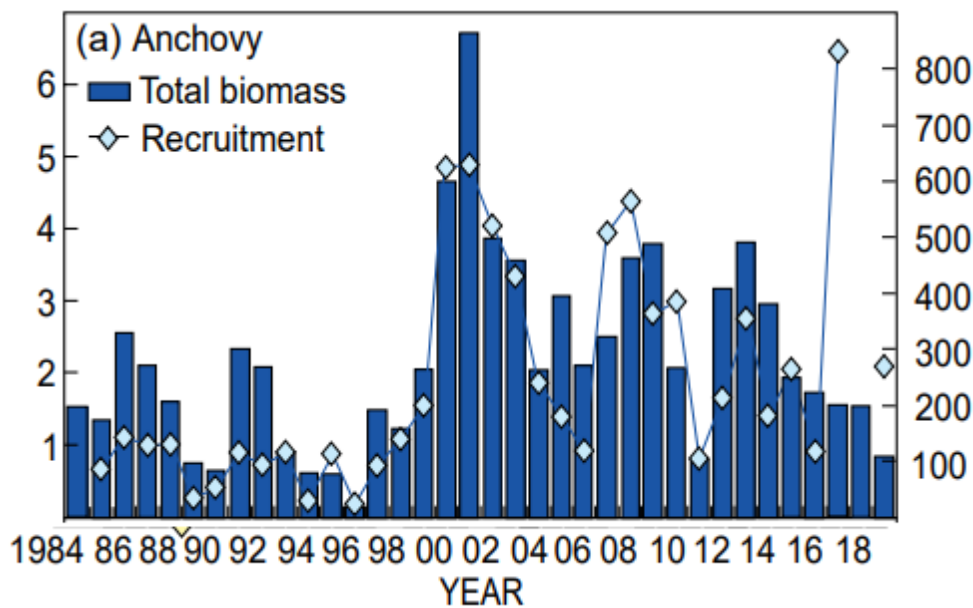
The most recent stock assessment for which details are available appears to be the same as that identified by the initial MT assessment, conducted in 2020 and published in July of that year (de Moor 2020). Usually, the details of such assessments are uploaded to the MARAM website, but this does not appear to be the case for 2021. MARAM has produced TAC recommendations for the 2021 and 2022 seasons which are based on biomass estimates and other stock assessment data as usual, and therefore it is logical to assume that one or more stock assessments has been conducted since 2020 but not yet made public. In any case, the requirement of A2.1 is that a stock assessment be conducted at least every three years, which remains the case. Additionally, as previously recognised by the initial MT assessment, the stock assessments take into account all fishery removals and the biological characteristics of the species. A2.1 is met.

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 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 biomass (left-hand scale, in millions of tonnes) and recruitment (right-hand scale, in billions of individuals) of anchovy in the South African small pelagic fishery, 1984 – 2019 (DFFE 2020).

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. Two TAC recommendations have been made since the initial MT assessment was completed. The most recent advice was for the initial 2022 anchovy TAC, and was published in January 2022 based on the December 2021 hydroacoustic survey data, which estimated anchovy biomass to be between 798,535t and 971,004t. This resulted in an initial TAC recommendation for 2022 of 247,500t (de Moor 2022). Similarly, a final TAC recommendation for 2021 was published in July 2021, also using the procedure set out in OMP-18 (de Moor 2021).

Scientific authorities produce multiple recommendations for an appropriate level of fishery removals each year, which reflects the biological characteristics of the stock. 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 (MARAM 2022), although there appears to be a delay for the 2021 assessment. However, 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 SWG-PEL Meeting 14th July 2020. Marine Resource Assessment and Management Group (MARAM) Department of Mathematics and Applied Mathematics. University of Cape Town. <https://doi.org/10.25375/uct.14034719.v1>

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

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Marine Resources Assessment and Management Group (2022). Research output, 2022. <http://www.maram.uct.ac.za/maram/publications/2022>

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 MT assessment, 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 (e.g., DFFE 2022). 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.

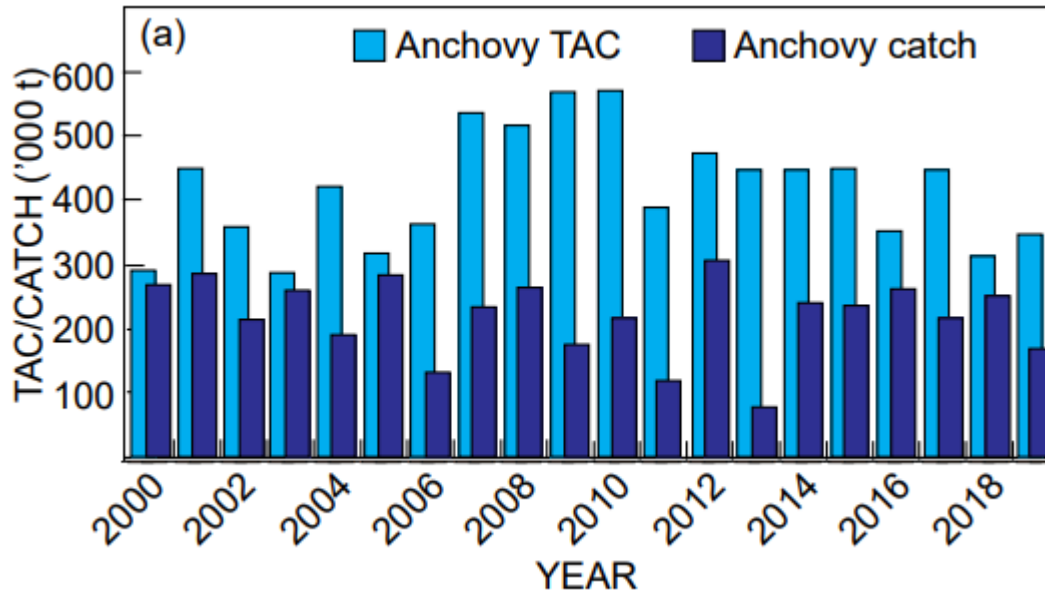
There is a mechanism in place by which total fishing mortality of anchovy is restricted, therefore A3.1 is met.

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. The table below shows anchovy TACs and total catch for every year 2000-2019. Throughout this period the total catch has never exceeded the TAC, and because the TAC is set according to the scientific advice, this means that the advice has not been exceeded. Landings data do not yet appear

to be available for 2020 or 2021; however, TAC recommendations are available, as are the final TACs demonstrating that advice continues to be followed. The most recent of these is the initial 2022 anchovy TAC recommendation of 247,500t (de Moor 2022), which is reflected in the actual initial 2022 TAC of 247,500t (DFFE 2022).

Fishery removals continue to be in line with the scientific advice, therefore A3.2 is met.



Total Allowable Catches (TACs) and subsequent landings of anchovy in the South African small pelagic fishery, 2000-2019 (DFFE 2020).

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

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

Department of Forestry, Fisheries and the Environment (2022). Small pelagic TAC, TAB and Pool for the 2022 season. https://sapfia.org.za/?offshore_dl=3800

Standard clause 1.3.2.1.3

Links

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

A4 Stock Status - Minimum Requirements							
A4.1	<p>The stock is at or above the target reference point, OR IF NOT:</p> <p>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:</p> <p>The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.</p>						
Clause outcome:							
PASS							
<p>A4.1 The stock is at or above the target reference point, OR IF NOT:</p> <p>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:</p> <p>The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.</p> <p>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.</p> <p>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.</p>							
<p>References</p> <p>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</p> <p>de Moor, C.L. (2022). Initial anchovy TAC recommendation for 2022, using OMP-18rev. https://doi.org/10.25375/uct.19426154.v1</p>							
<p>Links</p> <table border="1" style="width: 100%;"> <tr> <td>MarinTrust Standard clause</td> <td>1.3.2.1.4</td> </tr> <tr> <td>FAO CCRF</td> <td>7.2.1, 7.2.2 (e)</td> </tr> <tr> <td>GSSI</td> <td>D6 01</td> </tr> </table>		MarinTrust Standard clause	1.3.2.1.4	FAO CCRF	7.2.1, 7.2.2 (e)	GSSI	D6 01
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.

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

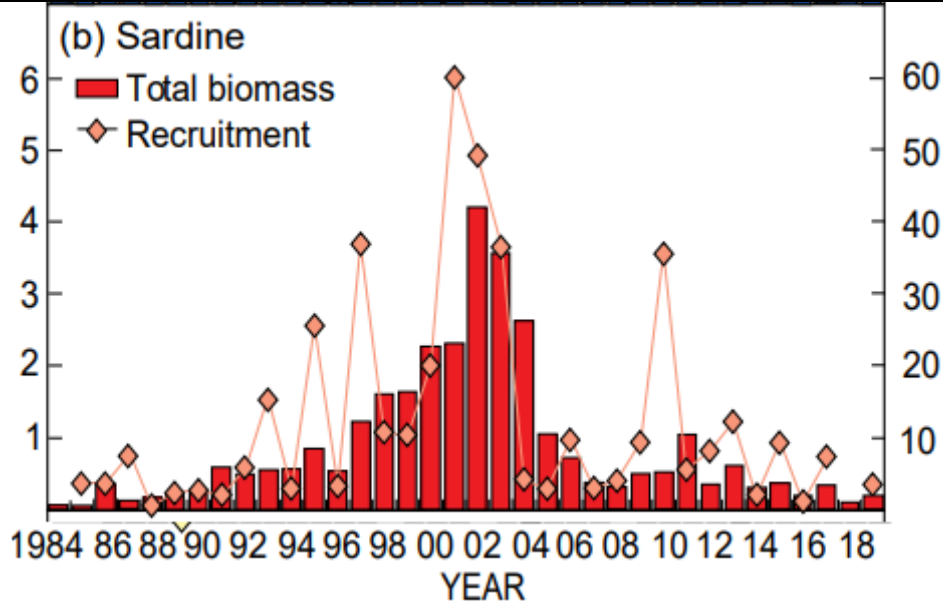
Species Name		Redeye herring, <i>Etrumeus whiteheadi</i>																																																												
B1	Species Name	Redeye herring																																																												
	Table used (Ba, Bb)	Bb																																																												
	Outcome	PASS																																																												
Evidence:																																																														
<p>As at the time of the initial assessment, there are no reference points established for the redeye herring stock, and therefore it must be assessed using Table Bb. The resilience of the species has been determined to be High (Fishbase 2022).</p> <p>Although in absolute terms the annual catch of redeye herring appears to be around the level of the long-term average, no estimates of fishing mortality are available. Biomass was estimated to be well above the long-term average in the most recent Status of South African Marine Fishery Resources report (DFFE 2020). It should be noted that the most recent biomass estimate is from 2019. While the MT fishery assessment guidance does not explicitly include a requirement regarding how recent a biomass estimate must be to remain valid for the purposes of scoring this clause, 3 years is likely the upper end of the acceptable range and the stock may face challenges in the next surveillance assessment if no more recent estimate becomes available.</p> <p>Having established these three facts (Resilience = High; $B > B_{av}$; F and F_{av} unknown), Table Bb was used to produce an assessment outcome of PASS.</p>																																																														
<p>(c) West Coast round herring</p> <p>Legend: ■ Total biomass ◆ Recruitment</p> <table border="1"> <caption>Estimated biomass and recruitment data from the chart</caption> <thead> <tr> <th>Year</th> <th>Total biomass (millions of tonnes)</th> <th>Recruitment (billions of individuals)</th> </tr> </thead> <tbody> <tr><td>1984</td><td>0.1</td><td>2</td></tr> <tr><td>1986</td><td>0.3</td><td>5</td></tr> <tr><td>1988</td><td>0.5</td><td>8</td></tr> <tr><td>1990</td><td>0.8</td><td>12</td></tr> <tr><td>1992</td><td>0.7</td><td>10</td></tr> <tr><td>1994</td><td>0.5</td><td>8</td></tr> <tr><td>1996</td><td>0.6</td><td>10</td></tr> <tr><td>1998</td><td>1.2</td><td>18</td></tr> <tr><td>2000</td><td>1.4</td><td>20</td></tr> <tr><td>2002</td><td>1.0</td><td>15</td></tr> <tr><td>2004</td><td>1.8</td><td>25</td></tr> <tr><td>2006</td><td>1.6</td><td>22</td></tr> <tr><td>2008</td><td>1.2</td><td>35</td></tr> <tr><td>2010</td><td>2.0</td><td>20</td></tr> <tr><td>2012</td><td>1.9</td><td>18</td></tr> <tr><td>2014</td><td>1.4</td><td>28</td></tr> <tr><td>2016</td><td>1.3</td><td>20</td></tr> <tr><td>2018</td><td>1.4</td><td>22</td></tr> <tr><td>2019</td><td>2.3</td><td>30</td></tr> </tbody> </table> <p>Estimated biomass (left-hand scale, in millions of tonnes) and recruitment (right-hand scale, in billions of individuals) of redeye round herring in the South African small pelagic fishery, 1984 – 2019 (DFFE 2020).</p>			Year	Total biomass (millions of tonnes)	Recruitment (billions of individuals)	1984	0.1	2	1986	0.3	5	1988	0.5	8	1990	0.8	12	1992	0.7	10	1994	0.5	8	1996	0.6	10	1998	1.2	18	2000	1.4	20	2002	1.0	15	2004	1.8	25	2006	1.6	22	2008	1.2	35	2010	2.0	20	2012	1.9	18	2014	1.4	28	2016	1.3	20	2018	1.4	22	2019	2.3	30
Year	Total biomass (millions of tonnes)	Recruitment (billions of individuals)																																																												
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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, <i>Sardinops sagax</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.	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
<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>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 <i>et al</i> 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.</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>There are no formal reference points established for South African sardine; however, a proxy reference point is factored into OMP-18. The OMP establishes a large number of variables to be used when determining the TACs for sardine and anchovy in a given year. One such variable is $B^{S_{crit}}$, described 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 2022a). As such it is reasonable to consider $B^{S_{crit}}$ to constitute a proxy limit reference point.</p> <p>Exceptional Circumstances have been declared for sardine since December 2018 (de Moor 2022b). This means that sardine biomass has been estimated to be below the proxy limit reference point in every November for the past three years. For this reason, the stock does 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”.</p>			



Estimated biomass (left-hand scale, in millions of tonnes) and recruitment (right-hand scale, in billions of individuals) of sardine in the South African small pelagic fishery, 1984 – 2019 (DFFE 2020).

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 Exceptional Circumstances clause of OMP-18 establishes a robust management response to sardine biomass falling below the proxy limit reference point, and this response is evidenced in the management measures which have been applied since 2018. The directed sardine TAC has been reduced from 65,000t in 2018, the year before Exceptional Circumstances were declared (DFFE 2020), to just 2,000t in 2022 (DFFE 2022). This small directed TAC is also restricted to areas east of 20°E, to reflect the current understanding of relative stock prevalence in the east and west. In addition to the directed TAC, a total sardine bycatch allowance of 14,085t is set for the components of the fishery targeting anchovy and redeye. This bycatch allowance is included under the explicit requirement that catches of sardine should be absolutely minimised wherever possible, by avoiding fishing in areas where a relatively high proportion of sardine is found mixed with anchovy schools (DFFE 2022). This requirement is a component of the small pelagic fishing licence. For context, it is also worth noting that the MARAM scientific advice for quotas in 2022 states that a total sardine bycatch of 10,400t would represent a ‘small’ amount (de Moor 2022a). Sardine bycatch in 2019, the most recent year for which information is available, were around 3,000t (DFFE 2020).

In conclusion, 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.

Considering these facts, and referring again to the MT fishery assessment guidance quoted above, the assessor concludes that C1.2 is met.

There is one final note worth mentioning with regards to the small pelagic OMP. In addition to the variable $B^{S_{crit}}$, described above, a second potential proxy limit reference point is also defined. x^S is “the proportion of $B^{S_{crit}}$ below which the metarule sets the directed sardine TAC to zero”. The value of x^S is currently set at 0.25, meaning that a biomass estimate of 25% of $B^{S_{crit}}$ or lower will result in a directed sardine TAC of zero. Thus, it would be equally reasonable to consider x^S the proxy limit reference point, in which case the sardine stock is currently estimated to have a biomass above the proxy limit reference point. Under these assumptions C1.2 would also be met.

References

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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), <i>Trachurus capensis</i>	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	3-4 years	1
	Average maximum age (years)	22 years	2
	Fecundity (eggs/spawning)	>20,000	1
	Average maximum size (cm)	60cm	1
	Average size at maturity (cm)	32.5cm	1
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	3.5	3
	Average Productivity Score		1.43
	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
	<p>Further justification for susceptibility scoring (where relevant) <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i> Estimates of average age at maturity, average maximum age and fecundity do not appear to be available for Maasbanker, and have been estimated based on the closely-related horse mackerel.</p>		
<p>References</p> <p>Fishbase, Maasbanker: https://www.fishbase.se/summary/5382</p> <p>Fecundity, age at maturity and maximum age taken from Horse mackerel, <i>Trachurus trachurus</i>: https://www.fishbase.se/summary/1365</p>			
<p><i>Standard clauses 1.3.2.2</i></p>			

D1	Species Name	Chub Mackerel, <i>Scomber japonicus</i>	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	2-3 years	1
	Average maximum age (years)	7.9 years	1
	Fecundity (eggs/spawning)	>20,000	1
	Average maximum size (cm)	64cm	1
	Average size at maturity (cm)	26cm	1
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	3.4	3
	Average Productivity Score		1.29
	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)		
	<i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
References			
Fishbase, chub mackerel: https://www.fishbase.se/summary/117			
<i>Standard clauses 1.3.2.2</i>			

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

D3		Average Susceptibility Score		
		1 - 1.75	1.76 - 2.24	2.25 - 3
Average Productivity Score	1 - 1.75	PASS	PASS	PASS
	1.76 - 2.24	PASS	PASS	TABLE D4
	2.25 - 3	PASS	TABLE D4	TABLE D4

D4	Species Name	n/a	
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
<p>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.</p> <p>F1.1 Interactions with ETP species are recorded.</p> <p>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).</p> <p>Interactions with ETP species are recorded, therefore F1.1 is met.</p> <p>F1.2 There is no substantial evidence that the fishery has a significant negative effect on ETP species.</p> <p>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 (<i>Phalacrocorax capensis</i>, Endangered); cape gannet (<i>Morus capensis</i>, Endangered); and African penguin (<i>Spheniscus demersus</i>, Endangered).</p> <p>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 <i>et al</i> 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.</p> <p>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.</p> <p>F1.3 If the fishery is known to interact with ETP species, measures are in place to minimise mortality.</p> <p>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.</p> <p>Measures are in place to minimise indirect impacts of the fishery on ETP species, therefore F1.3 is met.</p>			
References			
<p>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</p>			

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

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section F2. The conclusions of the initial assessment are summarised here for convenience; please refer to the initial assessment report (Global Trust 2021) for more detail.

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 r_m . 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.org/manual/English/key%20facts.htm#resilience>]

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)

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	South Africa Small Pelagic fishery
Management authority (Country/State)	South Africa
Main species	Anchovy (<i>Engraulis encrasicolus</i>); Redeye round herring (<i>Etrumeus whiteheadi</i>)
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.

The assessors have provided a detailed examination of the fishery with appropriate levels of evidence, and which follows the MT Guidance standards as required.

The following comments are of note:

- Could the assessor provide detail on the “other fish” in catch composition as it is reported as ~4% of catch – can they confirm that none of the species in “other” comprise more than 0.1% of the total catch
- The assessment determination section could include a statement on control and enforcement
- Is there any evidence that the sanctions are applied/ cases where the punishment on offending vessels has been executed?
- For category B species the assessor noted the most recent biomass estimate is from 2019 and a more current biomass estimate or e.g. survey biomass trends or research/commercial CPUE indices will be required to provide some indication of the long-term biomass ~~and~~ in future assessments
- Is there any evidence of stock status of ETP species over time (have they decreased)?
- Is there any evidence of vessel crew having on board and utilising by-catch mitigation measures – is this included as mandatory in the fishing licence or in legislation?
Given the higher % of sardine in factory report 2 – is there any links between seasonality of this increased sardine catch and key foraging/breeding times for ETP species?

General Comments on the Draft Report provided to the peer reviewer

A well-presented review with good level of references and detail.

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?	Yes		
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	Yes		
3. Are the scores in the following sections accurate (i.e. do the scores reflect the evidence provided)?	Yes		
Section M - Management	Yes		
Category A Species	Yes		
Category B Species	Yes		
Category C Species	Yes		
Category D Species	Yes		
Section F – Further Impacts	Yes		

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?
The scoring is consistent with the MT standard and the appropriate evidence is provided within the assessment report.
Certification body response

2. Has the fishery assessment been fully completed, using the recognised MARINTRUST fishery assessment methodology and associated guidance?
The fishery assessment has been fully completed following the MARINTRUST methodology and notwithstanding the remarks in this peer review report (see summary and below).

The assessment determination section could include a statement on control and enforcement and other impacts of the fishery in this section as per the guidance. Good detail has been provided on the reasoning for species categorisation.

An internal review of the assessment has been conducted, and they have provided detailed thoughts on accuracy of the assessment decision.

Certification body response

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

The species categorisation section explains the variability of the catches and the assessor provides clear justification for decisions made. Table 5 indicates the catch composition is made up of 33-90% Anchovy. There is one Category B species (Redeye round herring 10-50% of catch), one category C species (Sardine 0-29%) and two Category D species (Cape horse mackerel / Maasbanker and Chub mackerel).

Could the assessor provide detail on the “other fish” in catch composition as it is reported as ~4% of catch – can they confirm that none of the species in “other” comprise more than 0.1% of the catch?

Certification body response

3M. Are the scores in “Section M – Management” clearly justified?

The scores in this section are clearly justified by the assessor with reference also to initial assessment report (Global Trust 2021) from which there has been little change. The assessor has supported responses by links to references.

Comment:

In section M1.1 is there any evidence the management body is involved in training?

Is there any evidence that the management system includes mechanisms for the engagement and involvement of relevant environmental NGOs?

Is there any evidence that the sanctions are applied/ cases where the punishment on offending vessels has been executed? Do fishers provide additional information to managers to support the effective management of the fishery? E.g reporting suspected illegal activity? Are there any reports of failed enforcement?

In the Global Trust 2021 report it states “South Africa is in the process of improving its Vessel

Monitoring Systems (VMS), which should bring about a more stringent monitoring and surveillance regime by applying the most advanced VMS technologies” has this improvement been enacted and how has it enhanced enforcement?

Certification body response

3A. Are the “Category A Species” scores clearly justified?

The scores in this section are clearly justified by the assessor, with appropriate references given. Recent stock assessments appear to have been conducted but not yet made public, TACs are set via stock assessment through an Operational Management Procedure and stocks are managed relative to a proxy limit reference point, and TACS based on scientific advice have not been exceeded.

Comments:

Section A1.2 – is there evidence of a management plan for the fishery (is this part of the OMP?)? And does it detail the monitoring and data collection requirements?

Certification body response

3B. Are the “Category B Species” scores clearly justified?

The scores in this section are clearly justified by the assessor, (Resilience = High; $B > B_{av}$; F and F_{av} unknown). As noted by the assessor the most recent biomass estimate is from 2019 and a more current biomass estimate or e.g. survey biomass trends or research/commercial CPUE indices will be required to provide some indication of the long-term biomass trends in future assessments.

Certification body response

3C. Are the “Category C Species” scores clearly justified?

The scores in this section are justified by the assessor. As noted sardine biomass has been estimated to be below the proxy limit reference point for the past three years, however management measures have responded

and reduced the TAC to 2000t and the amount of sardine bycatch is also restricted. Both the assessor and internal reviewer agree that sardine catches appear to be negligible, however as stated in Table 5 the range from different data sources for the sardine catch proportion is 0-29%, explained by the assessor as likely a seasonal impact causing a peak in the factory data. Higher catches of sardine would require it to be assessed as a Type 1 species. Any further evidence regarding these peaks in sardine catches (especially in relation to impacts for seasonality with ETP species key foraging times) should be considered in management

Certification body response

3D. Are the “Category D Species” scores clearly justified?

The scores in this section for both species follow the MT guidance standards and meet the criteria.

Certification body response

3F. Are the scores in “Section F – Further Impacts” clearly justified?

The scores in this section are justified by the assessor with details on the scale of the observer program – is there more evidence of the observer findings?

Comments:

Is data available on number of by-catch incidents (by species) and mortality rates available?

The assessor states there has been no recovery of the ETP species - is there any evidence of stock status of ETP species over time (have they decreased)?

Is there any evidence of vessel crew having on board and utilising by-catch mitigation measures – is this included as mandatory in the fishing licence or in legislation? E.G is there any evidence of mitigation measures e.g. seal scaring devices, escape panels, bird scaring lines and net cleaning between hauls to reduce bycatch?

Given the higher % of sardine in factory report 2 – is there any links between seasonality of this increased sardine catch and key foraging/breeding times for ETP species?

Is there evidence of what data collection programs and ecosystem modelling that the technical groups conduct in order to consider the impact of removal of target stocks on ecosystem functioning?

Certification body response

F1.1 The best available evidence for the ETP catches of the Latvian fleet pelagic trawl fleet (not just the vessels under the BV MSC certificate) is from ICES WGBYC 2018. Levels of observer coverage are already stated in this assessment.

F2.2 Whilst this would be useful, in practice difficult, as the onsite auditor would only be able to confirm with the applicant the landings coming into the factory (i.e. sprat and herring), though no harm in double-checking this.

Optional: General comments on the Peer Review Draft Report

The fishery meets the MT standards and has been correctly reviewed by the assessor with a good level of detail provided and useful references. Future assessments should further consider the sardine catches over the year and in relation to key foraging times of ETP species, and more detail could be provided on “other species” within the catch, however there is confidence in the assessment report evidence and outcome.

Certification body response