

FISHERY BY-CATCH REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



FISHERY By-Catch:	Sardine (<i>Sardinops sagax</i>), Horse Mackerel (<i>Trachurus trachurus capensis</i>), Mackerel (<i>Scomber Japonicus</i>) in <i>Engraulis spp.</i> Fishery
LOCATION:	South Africa
DATE OF REPORT:	January 2016
ASSESSOR:	Deirdre Hoare

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1. APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME		
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Certification Body Details		
Name of Certification Body:	SAI Global (Ireland)	
Assessor Name	Peer Reviewer	Initial/Surveillance/ Re-certification
Deirdre Hoare	Dave Garforth/ Giles Bartlett	Initial
1. Scope of Assessment		
	By-Catch 2015	
2. Fishery By-Catch		
	Sardine (<i>Sardinops sagax</i>), Horse Mackerel (<i>Trachurus trachurus capensis</i>), Mackerel (<i>Scomber Japonicus</i>) in <i>Engraulis spp.</i> Fishery	
3. Fishery By-Catch Location		
	South Africa	
4. Fishery Method		
	Pelagic	
5. Outcome of Assessment		
	Approve	

2. GUIDANCE FOR ONSITE ASSESSMENT
3. ASSESSMENT DETERMINATION

This report focuses on the bycatch or retained catch that are not covered under the whole fish report because they are not included in the Unit of Certification. However the retained catch can still be a valuable catch in the fishery, whether it is targeted or taken incidentally, and there is thus an economic incentive for capture. For the pelagic fishery anchovy (corresponding to 68.2% of landings), which is the fishery under certification, the main retained species are on average: directed sardine (22.5%), round herring (4%), horse mackerel (0.6%), chub mackerel (0.3%), small sardine (3.8%) and big sardine (0.5%). These percentages correspond to 236,978 anchovy, 78,376 for sardine and 3, 2096 tonnes for horse mackerel, sardine and chub mackerel.

It is not commercially feasible to separate Sardine, Horse mackerel, and Mackerel from Anchovy catches, and they do not exceed 15% by weight of target species. These species are not considered ETP or vulnerable by the IUCN Redlist. Apart from sardine, these species are not certified separately. Bycatch of these species does not pose a risk to the health of the stocks. The stock are likely to be above biologically based limits as the stocks are assessed together in the small pelagic fisheries.

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4. RATIONALE OF THE ASSESSMENT OUTCOME

A. THE MANAGEMENT FRAMEWORK AND PROCEDURE

LEVEL OF COMPLIANCE	
<i>The management of the fishery which includes by-catch must include a legal and administrative basis for the implementation of measures and controls to support the management of the fishery and its bycatch.</i>	
LOW	An administrative framework that ensures an efficient management of the fishery is not established.
MEDIUM	An administrative framework that ensures an efficient management of the fishery is somehow established, but there is evidence of not being efficient to ensure the management of the stock.
HIGH	A legal and administrative framework that ensures an efficient management of the fishery is established and works efficiently.

Determination: There is a legal and administrative fisheries management framework in place in South Africa, which is applied to sardine as a component of the broader small pelagic fishery. A high compliance rating remains appropriate.

Fishery management framework:

The legal foundation for the management of South African fisheries, including fisheries for sardine, anchovy and round herring, is the Marine Living Resources Act, 1998 (Act No. 18, 1998) of South Africa. The passing of the Marine Living Resources Amendment Bill 2013 has resulted in some changes to the basis for fisheries management. The Bill replaces the concept of subsistence fisheries with ‘small-scale’ fisheries, and introduces the main mechanisms by which the fisheries Minister may exert control over these; primarily, through licencing, area restrictions and quotas. The South African fishing industry is managed and regulated by the Fisheries Management Branch (FMB) of the Department of Agriculture, Forestry and Fisheries (DAFF). The FMB is the primary implementer of the Marine Living Resources Act, and its aims include the maintenance and restoration of the productive capacity and biodiversity of the marine environment, ensuring the protection of human health, and promotion of the conservation and sustainable use of marine living resources.

The Branch conducts research and monitoring on anchovy, amongst other stocks, including biannual research surveys, manned field stations, and creating Scientific Working Groups (SWGs) to gather state and invited outside specialist scientists to assess the status of the various pelagic stocks. The FMB uses this research to make recommendations regarding management measures, including total allowable catches (TACs) and fishery closures. The specific SWG relevant to the anchovy stock is the Small Pelagic Scientific Working Group, which provides advice and recommendations to ensure the sustainable utilisation of South Africa's small pelagic fish resources. Management is also founded on the use of Operational Management Procedures (OMPs), which provide, amongst other components, the process by which TAC recommendations are calculated.

Management of the sardine, mackerel and horse mackerel bycatch in the anchovy fishery:

The South African anchovy stock is managed in combination with other small pelagic species, including sardine, redeye round herring, and horse mackerel. The DAFF issues an annual TAC for each seasonal fishery, along with vessel licenses and implementing other management measures. Co-management in the small pelagic fishery is necessary due to the interactions between the component species. 2015 final TAC and TABs for the small pelagic fishery are detailed below.

ALLOCATED	(15 January 2015 to 31 December 2015)
FINAL Anchovy TAC	450 000t
Juvenile Sardine by-catch allowance (associated with anchovy directed catches)	66 375t
FINAL Directed Sardine	83 470t
Juvenile Sardine by-catch allowance (associated with sardine directed catches)	5 843t
FINAL - UNALLOCATED	<u>Other pools and precautionary upper catch limitations (PUCL's) - (15 January 2015 to 31 December 2015)</u>
Anchovy TAB for SARDINE-ONLY Right Holders	500t
Red Eye	100 000t
Adult Sardine by-catch allowance (associated with directed Red eye and anchovy fishing)	7 000t
Juvenile Sardine by-catch allowance (associated with directed Red eye)	1 000t
Horse Mackerel	12 233t
Combined total for Lantern and Lightfish	50 000t

Juvenile – smaller and equal (=) than 14cm total length

** Adult – bigger (>) than 14cm total length

Small Pelagic Final TAC for 2015 Dept. of Agriculture, Forestry & Fisheries, Republic of South Africa.

R1,2

B. STOCK ASSESSMENT PROCEDURES AND MANAGEMENT ADVICE

LEVEL OF COMPLIANCE

B. Research in support of fisheries management should exist.

LOW	Research to support the management of the bycatch stock does not exist
MEDIUM	Research to support the management of the bycatch stock exists, however research programmes could be significantly improved to decrease scientific advice uncertainty.
HIGH	Research to support the management of the bycatch stock exists, and research programmes for provision of scientific advice are considered adequate.

Determination: Research to support the management of the stock exists, and continues to be conducted at a level which permits the sustainable management of the stock.

Management of the South African small pelagic fishery is supported by a range of data collection and stock assessment activities. Anchovy and sardine populations are monitored by means of hydro-acoustic surveys conducted biannually since 1984. A summer biomass survey estimates the total size of the stock and a winter recruit survey estimates the number of fish that recruit to the population. Data for the estimation of a number of other key biological parameters (e.g. age structure, stock structure) are also collected. In addition to these fishery-independent surveys, accurate data on catch statistics including landed mass, species composition, and catch position and date are obtained from the pelagic fishery. Samples from commercial catches are processed to obtain the length and age frequency distributions of harvested fish required as input in the pelagic population

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dynamics models, in addition to other data on biological characteristics such as sex and gonad maturity stage, and fish condition.

Fishery dependent: Information collected from pelagic landing sites includes the catch weight, species composition, and catch location (grouped into 10 × 10 mile blocks). Anchovy catch data are used to ensure quotas are not exceeded. Additionally, anchovy catch data and the ratio of juvenile sardine to anchovy as observed in commercial catches during May are both used as input in the operational management procedure in the mid-year determination of the revised anchovy total allowable catch and sardine total allowable bycatch. Observers on boats have been deployed in the pelagic fishery since 1999, to provide data relating to catch weight and locality, catch composition, and length frequencies of important species, in addition to collecting some biological data.

Fishery-independent: A hydroacoustic survey programme to estimate pelagic fish biomass was initiated in 1984. These surveys cover much of the continental shelf around South Africa, although the spawner biomass survey has a greater offshore coverage than does the recruitment survey. Annual biomass estimates of anchovy and sardine spawner biomass have been made every November since 1984, resulting in an uninterrupted time series that spans 22 years.

R3,4

C. STOCK STATUS

LEVEL OF COMPLIANCE

C. The fish used to produce the fish By- catch is not considered to be critically at risk of over exploitation in accordance with the IUCN guidance.

LOW	The fish By-catch must not come from a species that is listed as extinct, or critically endangered.
MEDIUM	The fish By- catch is from a species that is classified as vulnerable, but has a management regime in place that will control the level of fishing permitted. Or if a species is deemed to be endangered but the sub-group from where the fish By- catch is harvested is deemed scientifically to be at no risk of over exploitation.
HIGH	The fish By- catch comes from a fishery that is not deemed to be at risk of over exploitation from fishing activities.

Determination: Sardine and horse mackerel have not been assessed by the IUCN. Mackerel has been assessed and is categorised as a species of least concern.

The IUCN has not assessed *Sardinops sagax*; however there are several fisheries around the world which have been certified against the MSC standard, including the Gulf of Mexico and Portugal.

Horse Mackerel (*Trachurus trachurus capensis*) has not been assessed.

Mackerel (*Scomber Japonicus*), has been assessed and categorised as a species of least concern.

R5

5. REFERENCES

R1 – South Africa OMP-14: Provided by client. OMP-14 C.L. de Moor* and D.S. Butterworth* FISHERIES/2014/DEC/SWG-PEL/60

R2 – South Africa Department of Agriculture, Forestry and Fisheries: <http://www.daff.gov.za/>

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R3 – Hutchings, L. et al, 2009: Marine fisheries monitoring programmes in South Africa. South African Journal of Science 105

R4 – Status of the South Africa Marine Fishery Resources 2014:

http://www.nda.agric.za/daDev/sideMenu/fisheries/03_areasofwork/Resources%20Research/STATUS%20OF%20THE%20SOUTH%20AFRICAN%20MARINE%20FISHERY%20RESOURCES%202014%20WEB.pdf

R5 - <http://www.iucnredlist.org/details/22697810/0>

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