

FISHERY BY-PRODUCT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



R1

FISHERY By-Product:	Sardine (<i>Sardina pilchardus</i>)
LOCATION:	Morocco (FAO 34)
DATE OF REPORT:	September 2016
ASSESSOR:	Deirdre Hoare

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1. APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME		
Name:		
Address:		
Country:	Zip:	
Tel. No.	Fax. No.	
Email address:	Applicant Code	
Key Contact:	Title:	
Certification Body Details		
Name of Certification Body:		
Assessor Name	Peer Reviewer	Initial/Surveillance/ Re-certification
Deirdre Hoare	Sam Dignan	Surveillance
Assessment Details		
1. Scope of Assessment	By-Product Surveillance 2016	
2. Fishery By-Product	Sardine (<i>Sardina pilchardus</i>)	
3. Fishery By-Product Location	Morocco	
4. Fishery Method	Pelagic trawl	
5. Outcome of Assessment	Approve byproduct	

2. GUIDANCE FOR ONSITE ASSESSMENT
3. ASSESSMENT DETERMINATION
<p>Sardine in Morocco is managed as a component of the small pelagic fishery. Management measures are applied to the fishery but it is not clear the extent to which these are species-specific. Species-specific research is conducted but does not appear to be sufficient to indicate stock status. The byproduct material should be approved at a medium compliance level.</p>

4. RATIONALE OF THE ASSESSMENT OUTCOME		
A. THE MANAGEMENT FRAMEWORK AND PROCEDURE		
LEVEL OF COMPLIANCE		
<i>The management of the fishery used to produce the By- Product must include a legal and administrative basis for the implementation of measures and controls to support the management of the fishery.</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.	
<p><i>Determination: There is a legal and administrative framework in place for fisheries management in Morocco. Although this framework is applied to the small pelagic fishery, there is limited evidence of species-specific management measures.</i></p> <p>The primary government authority with responsibility for marine fisheries in Morocco is the Department of Maritime Fisheries and Aquaculture (DPMA) under the Ministry of Agriculture and Maritime Fishing (MAPM). The DPMA has a range of stated objectives, including:</p> <ul style="list-style-type: none"> • Ensure the development and rational exploitation of fishery resources in the Moroccan EEZ, including the development and implementation of fishery management plans. • Conduct the scientific and technical research, including economic and social aspects, necessary to enable the management and development of marine fisheries. • Ensure the protection and preservation of the marine environment, including management of shipwrecks. • Promote international cooperation, including scientific exchange. • Prepare laws and regulations to achieve the other goals. <p>In addition to these core missions, the DPMA is also tasked with implementing the Halieutis Plan, introduced by His Majesty King Mohammed VI in September 2009. The three core objectives of the plan are:</p> <ol style="list-style-type: none"> 1. Sustainability: to ensure the sustainability of the marine fisheries sector for future generations. 2. Performance: to efficiently manage equipment and infrastructure, and ensure quality control of fishery products. 3. Competitiveness: to ensure that Moroccan fisheries are economically competitive. <p>The Halieutis Plan forms the basis of all recent DPMA activity, and the majority of programs now in place are associated with one of the three objectives.</p> <p>Additional agencies under the supervision of the DPMA include the National Board of Fisheries (ONP), responsible for the implementation of policies relating to the artisanal fleet and fleet upgrades; the National Institute for Fisheries Research (INRH), which carries out any scientific activities required to support the sustainable exploitation and monitoring of fishery resources, ecosystems and the environment; four regional ‘chambres’, each responsible for one of the fishery regions (Mediterranean, North Atlantic, Central Atlantic and South Atlantic); and the National Council for the Protection and Exploitation of Fisheries Resources. There are also local delegations which manage marine fishery activities in each of 18 districts.</p>		
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The legal basis for the management of fisheries in Morocco originates primarily from the Code of Maritime Trade (1919) and the Bill on Marine Fisheries, 1973. The national regulations include management of access to fisheries, measures to protect the resources, and fishery management plans.

Species-specific management

In the Moroccan Atlantic and Mediterranean, sardine is managed as one of six main target species of the small pelagic fishery, which also includes anchovy, two *Trachurus* species, chub mackerel and sardinella. Since February 2010, the Moroccan small pelagic fishery has been subject to a management plan with the objective of ensuring the sustainable exploitation of the resource and maximising its value. While the management plan includes such technical measures as a TAC, regional and seasonal closures, and effort restriction rules, it is not clear whether these are based on species-specific concerns or applied to the fishery as a whole. As such there is limited evidence to demonstrate whether management measures are applied to sardine specifically.

R2, R3

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

Determination: Research to support the management of the resource does exist, and produces species-specific data. However, it is insufficient to indicate whether or not Moroccan sardine stocks are currently being exploited sustainably.

There are a number of fishery-dependent and -independent data sources available to scientific organisations and fishery managers, and many of these provide species-specific information. Landings data are available for all countries participating in the North-Western sardine fishery, and CPUE data are available for Moroccan waters, as well as length frequency distributions and age/length and weight/length estimates. A number of acoustic surveys have been conducted on the small pelagic stocks, although their availability appears to vary from year to year. Estimates of recruitment and biomass were generated from the results of a July-August acoustic survey carried out by the R/V ATLANTIDA in 2011, but there was no evidence available to the assessment team to indicate what fishery-independent surveys have been conducted since that time.

R4

C. STOCK STATUS

LEVEL OF COMPLIANCE

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

LOW	The fish By-Product must not come from a species that is listed as extinct, or critically endangered.
MEDIUM	The fish By- Product 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- Product is harvested is deemed scientifically to be at no risk of over exploitation.
HIGH	The fish By- Product comes from a fishery that is not deemed to be at risk of over exploitation from fishing activities.

Determination: Although sardine has been categorised by the IUCN as a species of least concern, also the species has been certified against the MSC Standard elsewhere in the world.

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Sardina pilchardus has been classified as a species of least concern in the Mediterranean and Eastern Central Atlantic for the IUCN red list. There are also several sardine fisheries which have been certified against the MSC Standard, including Cornwall sardine and Bay of Biscay purse seine sardine.

R5– R7

5. REFERENCES

R1 – Image of *Sardina pilchardus* by Mariano García Rodríguez

<http://www.fishbase.se/photos/UploadedBy.php?autoctr=11739&win=uploaded>

R2 - MAPM website, 'Missions': <http://bit.ly/1wmKOfk>

R3 - Halieutis plan overview: <http://www.maroc.ma/en/content/halieutis>

R4 - MPM small pelagic fishery management plan overview: <http://www.mpm.gov.ma/wps/myportal/Portall-MPM/P%C3%A4che%20%20maritime/Plans-amenagement/Petitsplagiques>

R5 – IUCN red list: <http://www.iucnredlist.org/details/198580/3>

R6 – MSC certified fisheries, Cornwall sardine: <https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/cornwall-sardine/cornwall-sardine>

R7 – MSC certified fisheries, Bay of Biscay sardine: <https://www.msc.org/track-a-fishery/fisheries-in-the-program/in-assessment/north-east-atlantic/bay-of-biscay-purse-seine-sardine/bay-of-biscay-purse-seine-sardine/>