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Global Standard for Responsible Supply of Marine Ingredients
Fishery Assessment Methodology and Template Report V2.0

IFFO RS
Global Standard for Responsible Supply
of Marine Ingredients

Fishery Under Assessment	Monkfish (Anglerfish) (*Lophius piscatorius /L. budegassa*)
Date	February 2018
Assessor	Jim Daly

Application details and summary of the assessment outcome		
Name: Pelagia		
Address: Killybegs		
Country:	Zip:	
Tel. No.:	Fax. No.:	
Email address:	Applicant Code	
Key Contact:	Title:	
Certification Body Details		
Name of Certification Body:	SAI Global	

Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval	Whole fish/ By-product
Jim Daly	Conor Donnelly	1	Surveillance	By-product
Assessment Period	2017			

Scope Details	
Management Authority (Country/State)	EU/Common Fisheries Policy
Main Species	Monkfish (Anglerfish)
Fishery Location	North East Atlantic (ICES IVa-c, Via,b,d-h,j)
Gear Type(s)	Beam trawls, Seines, Gill and Tangle Nets.
Outcome of Assessment	
Overall Outcome	Pass
Clauses Failed	None
Peer Review Evaluation	Agree with recommendation
Recommendation	Approve

Assessment Determination
L.piscatorius is a long-lived, late-maturing, slow-growing species with fluctuating levels of recruitment that may make it susceptible to overfishing. It is heavily targeted by bottom trawl fisheries in the North Atlantic where overfishing and habitat destruction has been documented. IUCN has categorised monkfish as a species of least concern. The species does not appear in the CITES appendices (both sites accessed 08.03.18). Productivity and susceptibility (PSA) ratings were calculated for this species. The assessment team recommends the approval of monkfish as a by-product species under the current IFFO RS Standard with a medium rating based on calculated PSA attributes.

Peer Review Comments

Notes for On-site Auditor

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A			A1	
			A2	
			A3	
			A4	
Category B				
Category C				
Category D	Monkfish (Anglerfish)		PASS	

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

SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the 'target' or 'main' species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the 'bycatch' or 'minor' species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The 'stock' column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The 'management' column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it **cannot** be approved for use as an IFFO RS raw material. This applied to whole fish as well as by-products.

TYPE 1 SPECIES (Representing 95% of the catch or more)
Category A: Species-specific management regime in place.
Category B: No species-specific management regime in place.

TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)
Category C: Species-specific management regime in place.
Category D: No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Monkfish/Anglerfish	*(Lophius piscatorius / L. budegassa)*	North East Atlantic		EU/CFP	D

CATEGORY D SPECIES

In a whole fish assessment, 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. In a by-product assessment, Category D species are those which are not subject to a species-specific management regime. In both cases, 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.

The process for assessing Category D species involves the use of a Productivity-Susceptibility Analysis (PSA) to further subdivide the species into 'Critical Risk', 'Major Risk' and 'Minor Risk' groups. If there are no Category D species in the fishery under assessment, this section can be deleted.

Productivity and susceptibility ratings are calculated using a process derived from the APFIC document "Regional Guidelines for the Management of Tropical Trawl Fisheries, which in turn was derived from papers by Patrick *et al* (2009) and Hobday *et al* (2007). Table D1 should be completed for each Category D species as follows:

- Firstly, the best available information should be used to fill in values for each productivity and susceptibility attribute.
- Table D2 should be used to convert each attribute value into a score between 1 and 3.
- The average score for productivity attributes and the average for susceptibility attributes should be calculated.
- Table D3 should be used to determine whether the species is required to meet the requirements of Table D4. A species which does not need to meet the requirements of D4 is automatically awarded a pass.
- Table D4 should be used to assess those species indicated by Table D3 to determine a pass/fail rating.
- Any Category D species which has been categorised by the IUCN Red List as Endangered or Critically Endangered, or which appears in the CITES appendices, automatically results in a fail.

D1	Species Name:	*L. piscatorius / L. budegassa*		
	Productivity Attribute		**Value**	**Score**
	Average age at maturity (years)		>4	3
	Average maximum age (years)		24 years	2
	Fecundity (eggs/spawning)		1,000,000	1
	Average maximum size (cm)		100	2
	Average size at maturity (cm)		60	2
	Reproductive strategy		Demersal broadcast	1
	Mean trophic level		4.5	3
		Average Productivity Score		**2.0**
	Susceptibility Attribute		**Value**	**Score**
	Overlap of adult species range with fishery		<25% in area	2
	Distribution			
	Habitat			
	Depth range		Demersal	3

Selectivity		*Mesh size ≥100mm	3
Post-capture mortality		Trawl > 3 hours	3
		Average Susceptibility Score	**2.75**
		PSA Risk Rating (From Table D3)	**FAIL**
		Compliance rating	**Medium**

References R1-R4:

R1 FISHBASE:

- http://www.fishbase.org/Summary/SpeciesSummary.php?ID=716&AT=ANGLER+FISH

*R2 EU Technical Measures (Consolidated):

- Annex I Council Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01998R0850

R3 CITES Species Endangered list: http://checklist.cites.org/#/en

R4 IUCN Red list: http://www.iucnredlist.org/search

Standard clauses 1.3.2.2

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk — Score 3	Medium productivity/ Medium risk — Score 2	High productivity/ Low risk — Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk — Score 3	Medium susceptibility/ Medium risk — Score 2	Low susceptibility/ Low risk — Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

Note: Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

D3		Average Susceptibility Score		
		1.00 – 1.75	1.76 – 2.24	2.25 – 3.00
Average Productivity Score	1.00 – 1.75	PASS	PASS	PASS
	1.76 – 2.24	PASS	PASS	TABLE D4
	2.25 – 3.00	PASS	TABLE D4	TABLE D4

D4	Species Name		*L.piscatorius / L. budegassa*	
	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.		PASS
	D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.		PASS
Outcome:				PASS

Evidence

Species-specific management:

Joint quotas are set for the two anglerfish species in stock units relevant to this assessment, as follows (2017 quotas in brackets):

- Union waters of 2a and 4: (13,521t) **16,335t**
- VI, Vb, international waters of XII and XIV (7,650t) **9,180t**
- VII (33,516t) **33, 516t** (Precautionary TAC)

The assessment team considers that, for part of the assessment area, potential impacts of the fishery on this species are considered during the management process.

ICES Advice:
- **Subareas IV, VI, Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat):**

The assessment area and TAC areas do not match. The ICES framework for category 3 stocks was applied (ICES, 2012). Stocks relevant to this assessment are categorised as data limited. No reference points have been defined. There is no minimum landing size for monkfish, although an EU marketing regulation sets a minimum sale weight of 500g. Management mechanisms in place in the assessment area (including technical control measures and effort restrictions when targeting other species) should lead to a decrease in fishing mortality for stocks relevant to this assessment.

The stock size indicator shows an increasing biomass since 2011. The relative harvest rate has been relatively stable since 2014. ICES is not aware of any agreed precautionary management plan for anglerfish in this area. There is a single MSC certified fishery in the North East Atlantic (Gillnet Fisheries, ISF Iceland).

The assessment team considers that there is no substantial evidence that the fishery has a significant negative impact on either species.   R5-R7

References R5-R7:

R5 EU Fishing Quotas (2018):
- Council Regulation (EU) No. 2018/120 fixing for 2018 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters:

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0120

R6 ICES Advice (2017) *L.piscatorius.budegassa*: (Subareas IV, VI, Division IIIa):
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/anf.27.3a46.pdf

R7 MSC Track a Fishery:
https://fisheries.msc.org/en/fisheries/@@search?q=certified+saithe&start=0&stop

Standard clause 1.3.2.2

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.