IFFO RS Limited

T: +44 (0) 2030 539 195
E: Standards@iffors.com
W: www.iffors.com

Unit C, Printworks | 22 Amelia Street
London, SE17 3BZ | United Kingdom

Global Standard for Responsible Supply of Marine Ingredients

Fishery Assessment Methodology and Template Report V2.0

Fishery Under Assessment	Turbot *Scophthalmus maximus* North East Atlantic
Date	January 2018
Assessor	Conor Donnelly

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**
Conor Donnelly	Sam Dignan	1	Re-approval	By-product
Assessment Period	2017			

Scope Details	
Management Authority (Country/State)	EU/Common Fisheries Policy
Main Species	Turbot (*Scophthalmus maximus*)
Fishery Location	North East Atlantic
Gear Type(s)	Bycatch in beam trawl, otter trawl and static gear fisheries. Small targeted gillnet fishery
Outcome of Assessment	
Overall Outcome	PASS
Clauses Failed	None
Peer Review Evaluation	Approve
Recommendation	Re-approval

Assessment Determination
Species-specific data collection, stock assessment is limited; ICES advice and proxies of MSY reference points are given for Sub-Area (North Sea). The EU quota is managed as a shared stock with brill (*Psetta maxima*). ICES advises that management of both under a combined species TAC prevents effective control of the exploitation rates of the individual species and could lead to overexploitation of either species. The Dutch demersal fishing industry provides information on national Producer Organisation measures to prevent early exhaustion of the quota (North Sea stock). These measures include the introduction of minimum landing sizes, currently 32 cm. IUCN has categorised turbot as a species of least concern (accessed 23.02.18). The species does not appear in the CITES appendices (accessed 23.02.18). Due to the absence of reference points for all stocks this species was assessed as a Category D species using a Productivity-Susceptibility Analysis (PSA) model. In the opinion of the assessor potential impacts of the fishery on this species are considered during the management process and reasonable measures (including minimum landing sizes for the North Sea stock) are taken to minimise these impacts. Turbot is recommended for use as a by-product species under the current IFFO RS Standard.
Peer Review Comments
Agree with determination
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	Turbot *Scophthalmus maximus*		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
Turbot	*Scophthalmus maximus*	North East Atlantic		No species-specific management regime in place	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:		
	Productivity Attribute	**Value**	**Score**
	Average age at maturity (years)	*3-5	2
	Average maximum age (years)	*25	2
	Fecundity (eggs/spawning)	*>10,000	1
	Average maximum size (cm)	*60	2
	Average size at maturity (cm)	*34.7	2
	Reproductive strategy	*Eggs pelagic	1
	Mean trophic level	*4.4	3
	Average Productivity Score		**1.86**
	Susceptibility Attribute	**Value**	**Score**
	Overlap of adult species range with fishery	*>50% stock in area	3
	Distribution		
	Habitat	*Demersal	3
	Depth range	*20-70m	3
	Selectivity	**70-99mm mesh size	3
	Post-capture mortality	Tows > 3 hours	3
	Average Susceptibility Score		**3**
	PSA Risk Rating (From Table D3)		**FAIL**
	Compliance rating		

References

*R1 FISHBASE: http://www.fishbase.org/Summary/SpeciesSummary.php?ID=1348&AT=turbot EU
**R2 Annex I COUNCIL REGULATION (EC) No 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organism

Standard clauses 1.3.2.2

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	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	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	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		
	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

Denmark, the UK and Ireland are Member States of the European Union, and therefore in Community waters implement the Common Fisheries Policy (CFP). In force since 1983, the CFP aims to reconcile resource conservation with the preservation of income and jobs in coastal zones that offer few alternatives in terms of production or employment. It therefore covers not just resources but also markets and structures.

For the North Sea stock (ICES Subarea IV) a management framework is in place. The quota is managed as a shared stock with brill (*Psetta maxima*). ICES advises that recruitment is variable without a trend. Fishing mortality (F) is estimated to have decreased since the mid-1990s and has been stable for the past ten years. SSB has increased since the late 1990s.

The Dutch demersal fishing industry provides information on national Producer Organisation measures to prevent early exhaustion of the quota. These measures include the introduction of minimum landing sizes, currently at 32 cm (North Sea stock). The North Sea stock currently provides around 70% of the turbot catches*.

For remaining turbot stocks for which ICES advice is given (Division 3.a (Skagerrak & Kattegat); Subdivisions 22-32 (Baltic Sea) no biomass reference points are calculated; however ICES provide precautionary advice based on procedures in place for data-limited stocks. Catch data, including discards, need to be improved to get a better understanding of the state of turbot in these areas.

Potential impacts of the fishery on this species are considered during the management process, and reasonable measures (including minimum landing sizes for the North Sea stock) are taken to minimise these impacts. Catch data and reference points need to be established for all areas in the fishery.

References

EU Fishing Quotas (2018): Council Regulation (EU) No 2018/120 (23.01.18): http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/ (accessed 22.02.18)

Mesh Sizes: Annex I COUNCIL REGULATION (EC) No 850/98 (30.03.98) for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms.

ICES Advice (Turbot) 2017 (North Sea Area Subarea IV) :
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/tur.27.4 replaced.pdf

ICES 2012a: Implementation of Advice for Data-limited Stocks ICES CM 2012/ACOM:68 42 pp.

* SEAFISH: Species guide (Turbot):
http://www.seafish.org/media/Publications/SeafishSpeciesGuide_Turbot_201401.pdf
(accessed 23.02.18)

CITES appendices http://checklist.cites.org (accessed 23.02.18)
IUCN Red List http://www.iucnredlist.org/search (accessed 23.02.18)

*FISHBASE: http://www.fishbase.org/Summary/SpeciesSummary.php?ID=1348&AT=turbot (accessed 26.02.18)

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.