**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

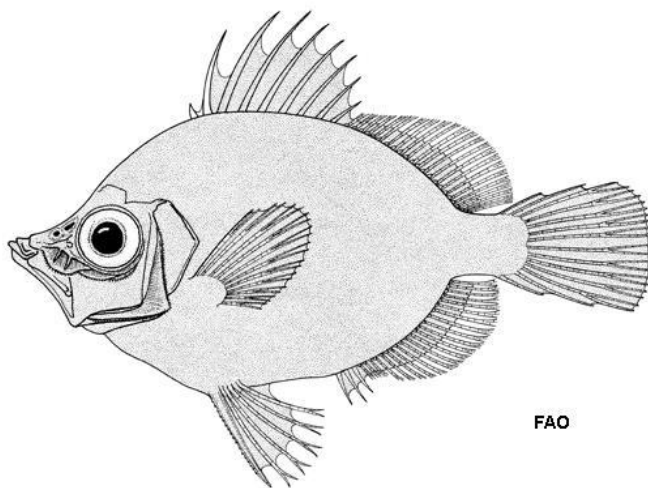# Global Standard for Responsible Supply of Marine Ingredients
Fishery Assessment Methodology and Template Report V2.0

Source FAO **R1**

| Fishery Under Assessment | **Boarfish *Capros aper*** <br> Northeast Atlantic |
|---|---|
| Date | April 2019 |
| Assessor | Jim Daly |

| Application details and summary of the assessment outcome | | | | |
|---|---|---|---|---|
| Name:  Pelagia | | | | |
| Address: | | | | |
| Country: UK, Ireland | | Zip: | | |
| Tel. No.: | | Fax. No.: | | |
| Email address: | | Applicant Code | | |
| Key Contact: Geraldine Fox | | Title: Quality Manager Killybegs | | |
| Certification Body Details | | | | |
| Name of Certification Body: | | SAI Global Ltd | | |
| **Assessor Name** | **Peer Reviewer** | **Assessment Days** | **Initial/Surveillance/Re-approval** | **Whole fish/ By-product** |
| Jim Daly | Conor Donnelly | 0.5 | Initial | By-product |
| **Assessment Period** | 2018 | | | |

| Scope Details | |
|---|---|
| **Management Authority (Country/State)** | EU |
| **Main Species** | Boarfish *Capros aper* |
| **Fishery Location** | Northeast Atlantic |
| **Gear Type(s)** | Mid-water trawl |
| **Outcome of Assessment** | |
| **Overall Outcome** | PASS |
| **Clauses Failed** | NONE |
| **Peer Review Evaluation** | PASS |
| **Recommendation** | PASS |

## Assessment Determination

Catch advice was provided by ICES for the first time in 2012 after a period when catches increased significantly (2006-2011). Initially, advice was based on the precautionary approach.

In 2012 and 2013 an assessment was developed using catch data, a number of groundfish surveys and a new acoustic survey that had started in 2011 with industry collaboration. This assessment was however, only considered appropriate as a basis for Category 1 (MSY based) advice until 2014. Since 2014 the stock has been considered only suitable for Category 3 advice (assessment indicative of trends but not absolute levels of stock size and fishing mortality). This remains the case at the time of this assessment.

A benchmark assessment is scheduled for 2020 (Marine Institute, Ireland). Advice for this stock will most likely be based on the current approach when the ICES working group (WGWIDE) meets in August 2019.

No reference points are currently defined. Recent attempts to derive proxies for the MSY reference points did not lead to reliable results (source Marine Institute Pers. Comm.)

The Pelagic Advisory Council (PELRAC) proposed a revised draft management plan for boarfish which included a number of measures to minimise bycatch of other species and included closed seasons, enacted in legislation in Ireland, though not in other Countries. According to information obtained by the assessment team (Pers. Comm) two Irish flagged pelagic trawlers are the only vessels (including other EU flagged States) currently targeting the fishery.

The comparative lack of scientific information on the status of the population in the assessment area means that a risk-assessment style approach must be taken. The fishery was assessed using the risk-based Productivity, Susceptibility Analysis (PSA) as per IFFO-RS v 2.0 procedures for Category D species. The species has passed this risk-based assessment **(Table D1)**

Boarfish (*Capros aper*) has been assessed for the IUCN Red List as a species of least concern and is not on the current list of CITES endangered species (websites accessed 26.04.19). The species is classified as having a low resilience rating with a minimum population doubling time of 4.5 - 14 years (**R2**).

Boarfish (*Capros aper*) is approved by the assessment team for the production of fishmeal and fish oil under the IFFO-RS v 2.0 by-products standard.

| |
|---|
| **Peer Review Comments** |
| Agree recommendation |
| **Notes for On-site Auditor** |
| |

Note: This table should be completed for whole fish assessments only.

## Species-Specific Results

| Category | Species | % landings | Outcome (Pass/Fail) | |
|---|---|---|---|---|
| Category A | | | A1 | |
| | | | A2 | |
| | | | A3 | |
| | | | A4 | |
| Category B | | | | |
| Category C | | | | |
| Category D | Boarfish (*Capros aper*) | <5% | **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]

## HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

### Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** of the minimum requirements.

### By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

### 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 |
|---|---|---|---|---|---|
| Boarfish | *Capros aper* | NE Atlantic | N/A | EU | D |

## 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. In a by-product assessment, Category C species are those which are subject to a species-specific management regime, and are usually targeted species in fisheries for human consumption.

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. A Category C species does not meet the minimum requirements of clause C1 should be re-assessed as a Category D species.

| Species Name | | |
|---|---|---|
| **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. |

| | 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. | |
|---|---|---|---|
| | | **Clause outcome:** | |

**Evidence**

<br><br><br>

**References**

<br>

*Standard clauses 1.3.2.2*

# 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: | Boarfish *Capros aper* | | |
|----|---------------|------------------------|------|-------|
| | **Productivity Attribute** | | **Value** | **Score** |
| | Average age at maturity (years) | | 2-5 | 2 |
| | Average maximum age (years) | | 26-30 | 2 |
| | Fecundity (eggs/spawning) | | No data | - |

| | | | |
|---|---|---|---|
| Average maximum size (cm) | | 30 | 1 |
| Average size at maturity (cm) | | 8.2 | 1 |
| Reproductive strategy | | BROADCAST | 1 |
| Mean trophic level | | 3.1 | 2 |
| **Average Productivity Score** | | | **1.5** |
| **Susceptibility Attribute** | | **Value** | **Score** |
| Overlap of adult species range with fishery | | Up to 50% stock NE Atlantic | 2 |
| Distribution | | Not used | |
| Habitat | | No data | |
| Depth range | | 40-700m | 1 |
| Selectivity | | X 2 MESH | 3 |
| Post-capture mortality | | Short tows | 2 |
| **Average Susceptibility Score** | | | **2.0** |
| **PSA Risk Rating (From Table D3)** | | | **PASS** |

**References**

**R1** FAO Species guide Boarfish http://firms.fao.org/firms/resource/13849/en

**R2** Fishbase Boarfish:

https://www.fishbase.in/Summary/SpeciesSummary.php?ID=54&AT=boarfish

**R3** ICES WGWIDE 2016**:** Boarfish (*Capros aper*) in subareas 6–8 (Celtic Seas, English Channel, and Bay of Biscay)

http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2016/WGWIDE/05%20WGWIDE%20report%20-%20Sec%2003%20Boarfish%20in%20subareas%206–8.pdf

**R4** ICES Stock Annex 2018: Boarfish (*Capros aper*) in Subareas 6–8 (Celtic Seas, English Channel, and Bay of Biscay

http://www.ices.dk/sites/pub/Publication%20Reports/Stock%20Annexes/2018/boc.27.4-8_SA.pdf

This map was computer-generated and has not yet been reviewed.
*Capros aper* AquaMaps Data sources: GBIF OBIS

**Boarfish native range (adapted from Aquamaps, accessed 26.04.19) R2**

*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. | |
| D4.2 | There is no substantial evidence that the fishery has a significant negative impact on the species. | |
| | **Outcome:** | |
| **Evidence** | | |
| | | |
| **References** | | |
| *Standard clause 1.3.2.2* | | |