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



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Fishery Under Assessment	Haddock (<i>Melanogrammus aeglefinus</i>) France ICES IVa-c, VIa, VIIa,b,d-h,j
Date	July 2019
Assessor	Jim Daly

Application details and summary of the assessment outcome				
Name: Bioceval				
Address:				
Country: France		Zip:		
Tel. No.:		Fax. No.:		
Email address:		Applicant Code		
Key Contact:		Title:		
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/CFP/France
Main Species	Haddock (<i>Melanogrammus aeglefinus</i>)
Fishery Location	North East Atlantic ICES IVa-c, VIa, VIIa,b,d-h,j
Gear Type(s)	Demersal and otter trawls, seines
Outcome of Assessment	
Overall Outcome	Pass
Clauses Failed	None
Peer Review Evaluation	Agree with outcome
Recommendation	Approve

Assessment Determination

ICES regions where advice is given does not precisely match the stock units for assigned quotas. This assessment uses ICES advice from Subarea IV and Subdivision 20 (North Sea): Division VIIa (Irish Sea) and Divisions VII b-k (Southern Celtic Seas and English Channel).

Haddock are caught in mixed fisheries with cod and whiting; ICES take this into account when publishing their stock advice. Biomass and fishing mortality reference points are available in most of the assessment area. The high level of fishing mortality in some parts of the assessment area is a concern. Catch data provided through sampling programmes such as Fully Documented Fisheries (FDF) assist ICES in monitoring trends. All fishery removals are considered when quotas are calculated.

It is proposed (EU 2018) to replace the five existing single-species based multi-annual plans (MAP) (including haddock) adopted by separate regulations by bringing all multi-annual plans (MAP) for different demersal stocks into one Regulation. The EU Plan (Regulation) is not adopted by Norway, thus is not used as the basis of the advice for the shared stock in Subarea IV, Division VIa, and Subdivision 20 (North Sea, West of Scotland, Skagerrak). Instead ICES was requested by the EC to provide advice based on the MSY approach and to include the 2016 MAP advice as a catch option.

Fishery removals of the species in the fishery under assessment are included in the stock assessment process. The species is considered, in its most recent stock assessment to have a biomass above the limit reference point. IUCN has categorised haddock (Europe) as a species of least concern; the species is not on the current list of CITES appendices of endangered species (sites accessed 08.07.19).

The assessment team recommends maintaining the approval of haddock as by-product material under the IFFO RS Standard v 2.0.

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	Haddock (<i>Melanogrammus aeglefinus</i>)		PASS	
Category D				

[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
Haddock	<i>Melanogrammus aeglefinus</i>	North East Atlantic		EU/CFP	C

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		Haddock (<i>Melanogrammus aeglefinus</i>)	
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.	PASS
	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.	PASS
Clause outcome:			PASS
Evidence			
C1.1:			
ICES Advice:			
<p>The ICES regions where advice is given does not precisely match the stock units for assigned quotas. A range of additional management measures are in place, but these vary between regions, as does the extent to which management plans are in place.</p> <p>For Haddock in Subarea IV and Subdivision 20 (North Sea) survey indices are used which are considered to be sufficiently representative of the whole stock. No combined survey index for the whole area is available. Differences from the 2017 assessment arise due to a new key run for natural mortality estimates, and the addition of data for 2017 (ICES, 2018). Input data is derived from commercial catches (international landings, ages from catch sampling) and two survey indices: IBTS Q1, IBTS Q3. Maturity data are assumed to be fixed over time and knife-edged at age 3, while natural mortality data vary with age and over time.</p> <p>For Haddock in Division VIIa (Irish Sea) four survey indices (NIGFS-WIBTS-Q1 NIGFS-WIBTS-Q4, NIMIK, UKFSPW); annual maturity and growth data from the NIGFS-WIBTS-Q1 survey and from commercial landings in Quarter 1 are used. Commercial catch-at-age data also form part of the assessment. Discards and bycatch are included in the assessment for the full time-series.</p>			

For Haddock in Divisions VII b-k (Southern Celtic Seas and English Channel) commercial catches (age composition of landings and discards); survey index (combined surveys IGFS-WIBTS-Q4 and EVHOE-WIBTS-Q4); commercial index (IRL_OTB_HAD); maturity data (surveys and observer data; constant for all years) and natural mortalities are included in the assessment. Discards and bycatch are included in the assessment for the full time-series.

Fishery removals of the species in the fishery under assessment are included in the stock assessment process. These include official landings as well as discards for all three ICES Areas (R3: ICES Advice).

The species passes Clause C1.1.

C1.2:

Subarea IV, Division VIa, and Subdivision 20 (North Sea, West of Scotland, Skagerrak):

Fishing mortality (F) has been fluctuating above FMSY for most of the time-series. Spawning-stock biomass (SSB) has been above MSY Btrigger in most of the years since 2002. Recruitment since 2000 has been characterized by a low average level with occasional larger year classes, the size of which is diminishing (**Figure 1**):

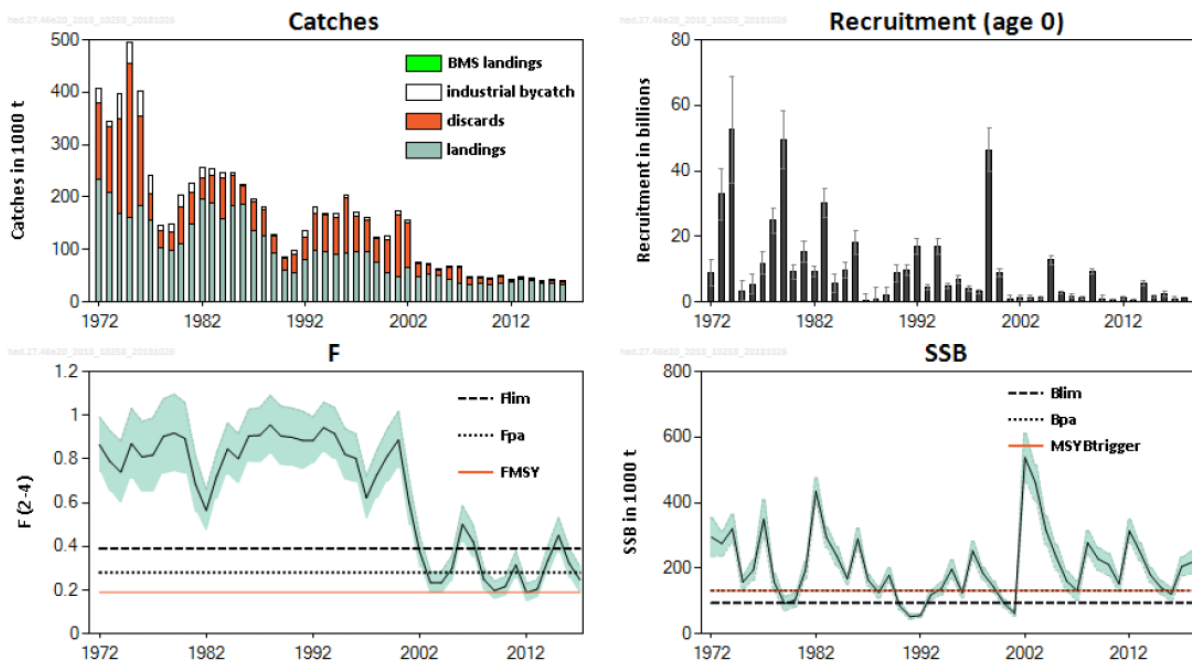


Figure 1: Haddock in Subarea IV, Division VIa, and Subdivision 20. Summary of the stock assessment. Shaded areas (F, SSB) and error bars (R) indicate ± 2 standard error (approximate 95% confidence intervals). **R3**

ICES assessed that fishing pressure on the stock is above FMSY and below Fpa and Flim; SSB is above MSY Btrigger, Bpa, and Blim:

Table 1 Haddock in Subarea 4, Division 6.a, and Subdivision 20. State of the stock and fishery relative to reference points. **R3**

	Fishing pressure			Stock size						
	2015	2016	2017	2016	2017	2018				
Maximum sustainable yield	F_{MSY}	✘	✘	✘	Above	MSY $B_{trigger}$	✘	✔	✔	Above trigger
Precautionary approach	F_{pa} , F_{lim}	✘	○	✔	Harvested sustainably	B_{pa} , B_{lim}	○	✔	✔	Full reproductive capacity
Management plan	F_{MGT}	—	—	—	Not applicable	B_{MGT}	—	—	—	Not applicable

An EU multiannual management plan (MAP) has been proposed for this stock (EU, 2016). This plan is not adopted by Norway, thus, is not used as the basis of the advice for this shared stock. ICES was requested by the EC to provide advice based on the MSY approach and to include the 2016 MAP as a catch option.

Division VIIa (Irish Sea):

The spawning-stock biomass (SSB) is currently estimated at the highest level, well above MSY $B_{trigger}$. Fishing mortality (F) has been below FMSY since 2012. Recruitment is highly variable throughout the time-series but is estimated to be below average in 2016 and 2017. ICES assesses that fishing pressure on the stock is below FMSY, F_{pa} , and F_{lim} , and that spawning stock size is above MSY $B_{trigger}$, B_{pa} , and B_{lim} .

Divisions VII b-k (Southern Celtic Seas and English Channel):

Spawning-stock biomass has declined since 2011 and is above MSY $B_{trigger}$. Fishing mortality (F) has been above FMSY for the entire time-series. Recruitment in 2017 was below the average and among the lowest estimated. ICES assesses that fishing pressure on the stock is above FMSY, but below F_{pa} and F_{lim} , and that the spawning-stock size is above MSY $B_{trigger}$, B_{pa} , and B_{lim} .

The Greater North Sea ecoregion includes the North Sea, English Channel, Skagerrak, and Kattegat. The ICES Fisheries Overviews Greater North Sea Ecoregion Report for 2017 provides a summary of the status of resources and the level of exploitation relative to agreed objectives and reference points. Sandeel and haddock, caught using otter trawls/seines, account for the largest fraction of the demersal landings.

The report concludes that, in terms of tonnage of catch, most of the fish stocks harvested from the North Sea are being fished at levels consistent with achieving good environmental status (GES) under the EU’s Marine Strategy Framework Directive; however, the reproductive capacity of the stocks has not generally reached this level. Almost all the fisheries in the North Sea catch more than one species; controlling fishing on one species therefore affects other species as well. ICES has developed a number of scenarios for fishing opportunities that take account of these technical interactions.

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy) **and passes Clause C1.2.**

R1-R7

References

R1 EU Fishing Quotas (2019):

- Council Regulation (EU) No. 2019/124 fixing for 2019 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: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0124&from=EN>

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 ICES Advice *Melanogrammus aeglefinus*:

- ICES (Nov 2018) Subarea IV, Division VIa, and Subdivision 20 North Sea, West of Scotland, Skagerrak:
<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/had.27.46a20.pdf>
- Irish Sea (Division VIIa):
<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/had.27.7a.pdf>
- Divisions VII b-k (Southern Celtic Seas and English Channel):
<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/had.27.7b-k.pdf>

R4 Commission Delegated Regulation:

- (EU) 2016/2375 of 12 October 2016 establishing a discard plan for certain demersal fisheries in North-Western waters. Official Journal of the European Union, L 352/39.
<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2375&from=EN>.

R5 ICES Greater North Sea Ecoregion Report Chapter 9.2 29pp (Published July 2017):

- http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/Greater_North_Sea_Ecoregion_Fisheries_Overview.pdf

R6 North Western Waters Multi-annual Plan Proposal: (March 2018)

- Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a multiannual plan for fish stocks in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulation (EU) 2016/1139 establishing a multiannual plan for the Baltic Sea, and repealing Regulations (EC) No 811/2004 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018PC0149&from=EN>

R7 IUCN Red list: <https://www.iucnredlist.org/species/13045/45097487>; CITES: http://checklist.cites.org/#/en/search/output_layout=alphabetical&level_of_listing=0&show_synonyms=1&show_author=1&show_english=1&show_spanish=1&show_french=1&scientific_name=had_dock&page=1&per_page=20

Standard clauses 1.3.2.2