

# IFFO RS V2.0



## FISHERY ASSESSMENT METHODOLOGY AND TEMPLATE REPORT

<b>Fishery Under Assessment</b>	<b>Haddock (<i>Melanogrammus aeglefinus</i>)</b>
<b>Date</b>	<b>December 2017</b>
<b>Assessor</b>	<b>Deirdre Hoare</b>

Application details and summary of the assessment outcome				
Name:				
Address:				
Country: Denmark		Zip:		
Tel. No.		Fax. No.		
Email address:		Applicant Code		
Key Contact:		Title:		
Certification Body Details				
Name of Certification Body:		SAI Global Ireland		
Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval	Whole fish / By-product
Deirdre Hoare	Conor Donnelly	1	Surveillance	By-product
Assessment Period	2016-2017			
Scope Details				
Management Authority (Country/State)		Demark		
Main Species		Haddock ( <i>Melanogrammus aeglefinus</i> )		
Fishery Location		North East Atlantic, FAO 27		
Gear Type(s)		Demersal and otter trawls, seines		
Outcome of Assessment				
Overall Outcome		Pass		
Clauses Failed		None		
Peer Review Evaluation		Approve		
Recommendation		Approve		

**Assessment Determination**

There is a robust fishery management framework at the EU and Denmark levels, which is applied specifically to the haddock stock in the assessment area. Management is supported by species-specific data collection and stock assessment. Haddock has been categorised by the IUCN as globally 'vulnerable', but Least Concern in Europe the additional available evidence suggests that there is no immediate danger of serious over-exploitation. The assessment team recommends the continued approval of this byproduct material against the IFFO RS standard.

**Peer Review Comments****Notes for On-site Auditor**

### General Results

General Clause	Outcome (Pass/Fail)
M1 - Management Framework	NA
M2 - Surveillance, Control and Enforcement	NA
F1 - Impacts on ETP Species	NA
F2 - Impacts on Habitats	NA
F3 - Ecosystem Impacts	NA

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	Haddock ( <i>Melanogrammus aeglefinus</i> )	NA	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]

## HOW TO COMPLETE THIS ASSESSMENT REPORT

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

### 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. All species regularly\* caught in the fishery 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. **Type 1 species must represent 95% of the total catch. Type 2 species may represent a maximum of 5% of the 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	NA	Denmark	C

Category A species are assessed through an examination of the data collection, stock assessment, management measures, and stock status relating to the species. Category B species are assessed using a risk-based assessment covering similar areas. Category C species are assessed on stock status only. Category D species are assessed using a PSA analysis as described in the relevant section of this document.

## 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.

<b>Species Name</b>		<b>Haddock <i>Melanogrammus aeglefinus</i></b>	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	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.	Yes
	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.	Yes
			<b>Clause outcome:</b> Pass
<b>Evidence</b>			
<b>Subarea 4, Division 6.a, and Subdivision 20 (North Sea, West of Scotland, Skagerrak)</b>			
Fishery removals of Haddock are included in the stock assessment process, and inputs include commercial catches (international landings, ages from catch sampling), two survey indices: IBTS Q1, IBTS Q3.			
Fishing mortality (F) has been fluctuating above FMSY for most of the time-series and is above FMSY in 2016. Spawning–stock biomass (SSB) has been mostly above MSY Btrigger since 2002.			
<b>Divisions 7.b–k (southern Celtic Seas and English Channel)</b>			
Fishery removals of Haddock are included in the stock assessment process, and inputs include commercial catches (age composition of landings and discards); survey index (combined IGFS-WIBTS-Q4 and EVHOE-WIBTS-Q4); commercial index (IRL_OTB_HAD).			
SSB declined after 2011 but is currently well above MSY Btrigger. Fishing mortality (F) has been above FMSY for the entire time-series. Recruitment in 2016 is below average.			
<b>Division 7.a (Irish Sea)</b>			
Fishery removals of Haddock are included in the stock assessment process, and inputs include 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.			
The spawning–stock biomass (SSB) is currently at the highest observed levels as the 2013 year class has matured. SSB is currently well above MSY Btrigger. Fishing mortality (F) has been below FMSY since 2012. Recent recruitment has been above the time-series mean, although recruitment has been highly variable throughout the time-series.			
<b>Division 6.b (Rockall)</b>			
Fishery removals of Haddock are included in the stock assessment process, and inputs include commercial landings, estimated discards, age composition of catches; one survey index (Rock-WIBTS-Q3).			
The spawning–stock biomass (SSB) has increased from the lowest observed in 2014 and is estimated to be above MSY Btrigger. Fishing mortality (F) is highly variable and in 2016 is below FMSY. Recruitment during 2008–2012 is estimated to be extremely weak but has improved since. Recruitment in 2017 is estimated to be high.			

**References**

ICES advice

[http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/had.27.46a20\\_replaced.pdf](http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/had.27.46a20_replaced.pdf)

<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/had.27.7b-k.pdf>

<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/had.27.7a.pdf>

<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/had.27.6b.pdf>

*Standard clauses 1.3.2.1 - 1.3.2.4*



## **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.

## Appendix A - Determining Resilience Ratings

The assessment of Category B species described in this assessment report template utilises a resilience rating system suggested by the American Fisheries Society. This approach was chosen because it is also used by FishBase, and so the resilience ratings for many thousands of species are freely available online. As described by FishBase, the following is the process used to arrive at the resilience ratings:

*“The American Fisheries Society (AFS) has suggested values for several biological parameters that allow classification of a fish population or species into categories of high, medium, low and very low resilience or productivity (Musick 1999). If no reliable estimate of  $r_m$  (see below) is available, the assignment is to the lowest category for which any of the available parameters fits. For each of these categories, AFS has suggested thresholds for decline over the longer of 10 years or three generations. If an observed decline measured in biomass or numbers of mature individuals exceeds the indicated threshold value, the population or species is considered vulnerable to extinction unless explicitly shown otherwise. If one sex strongly limits the reproductive capacity of the species or population, then only the decline in the limiting sex should be considered. We decided to restrict the automatic assignment of resilience categories in the Key Facts page to values of  $K$ ,  $t_m$  and  $t_{max}$  and those records of fecundity estimates that referred to minimum number of eggs or pups per female per year, assuming that these were equivalent to average fecundity at first maturity (Musick 1999). Note that many small fishes may spawn several times per year (we exclude these for the time being) and large live bearers such as the coelacanth may have gestation periods of more than one year (we corrected fecundity estimates for those cases reported in the literature). Also, we excluded resilience estimates based on  $r_m$  (see below) as we are not yet confident with the reliability of the current method for estimating  $r_m$ . If users have independent  $r_m$  or fecundity estimates, they can refer to Table 1 for using this information.”*

Parameter	High	Medium	Low	Very low
Threshold	0.99	0.95	0.85	0.70
$r_{max}$ (1/year)	> 0.5	0.16 - 0.50	0.05 - 0.15	< 0.05
$K$ (1/year)	> 0.3	0.16 - 0.30	0.05 - 0.15	< 0.05
Fecundity (1/year)	> 10,000	100 - 1000	10 - 100	< 10
$t_m$ (years)	< 1	2 - 4	5 - 10	> 10
$t_{max}$ (years)	1 - 3	4 - 10	11 - 30	> 30

[Taken from the FishBase manual, “Estimation of Life-History Key Facts”, <http://www.fishbase.us/manual/English/key%20facts.htm#resilience>]

## Appendix B – Background on the 5% catch rule

The proposed fishery assessment methodology uses a species categorisation approach to divide the catch in the assessment fishery into groups. These groups are:

- **Category A:** “Target” species with a species-specific management regime in place.
- **Category B:** “Target” species with no species-specific management regime in place.
- **Category C:** “Non-target” species with a species-specific management regime in place.
- **Category D:** “Non-target” species with no species-specific management regime in place

The distinction between 'target' and 'non-target' species is made to enable the assessment to consider the impact of the fishery on all the species caught regularly, without requiring a full assessment be conducted for each. Thus 'target' species are subjected to a more detailed assessment, while 'non-target' species are considered more briefly. For the purposes of the IFFO RS fishery assessment, 'target' and 'non-target' species are defined by their prevalence in the catch, by weight. Applicants must declare which species are considered 'target' species in the fishery, and the combined weight of these must be at least 95% of the annual catch. The remaining 5% can be made up of 'non-target' species. Note also that ETP species are considered separately, irrespective of their frequency of occurrence in the catch.

The proposed use of 5% as a limit for 'non-target' species is one area in which feedback is being sought via the public consultation. The decision to propose a value of 5% ensures consistency with other fishery assessment programmes, such as the MSC which uses 5% to distinguish between 'main' and 'minor' species (see MSC Standard, SA3.4 and GSA3.4.2); and Seafood Watch, which uses 5% when defining the 'main' species for the assessment (see Seafood Watch Standard, Criterion 2). The value is also consistent with the approach used in Version 1 of the IFFO RS Standard, in which up to 5% of the raw material could be comprised of 'unassessed' species.

**Comments on this proposition are welcomed along with any other feedback on the proposed approach.**