IFFO RS V2.0

FISHERY ASSESSMENT METHODOLOGY AND TEMPLATE REPORT

Fishery Under Assessment	**Whiting (*Merlangius merlangus*)**
Date	**November 2017**
Assessor	**Deirdre Hoare**

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Application details and summary of the assessment outcome				
Name:				
Address:				
Country: France		**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	Sam Dignan	1	Surveillance	By-product
Assessment Period	2016-2017			
Scope Details				
Management Authority (Country/State)	France			
Main Species	Whiting (*Merlangius merlangus)*			
Fishery Location	North East Atlantic			
Gear Type(s)	Demersal trawl, Nephrops trawl, purse seine			
Outcome of Assessment				
Overall Outcome	Pass			
Clauses Failed	None			
Peer Review Evaluation	Maintain approval, do not approval 7a whiting			
Recommendation	Maintain approval			

Assessment Determination
There is a robust fishery management framework at the EU and France levels which is applied specifically to the whiting stocks in the assessment area – although there is a considerable discrepancy between the management units and the scientific stock units. Management is supported by species-specific data collection and stock assessment, but improvements in the scientific understanding of the majority of stocks could be made. The IUCN has categorised *Merlangius merlangus* as a species of least concern, and it does not appear in the CITES appendices. The assessment team recommends approving this byproduct material against the IFFO RS standard.
Peer Review Comments
Recommend that whiting in ICES Division 7.a (Irish Sea) is not approved due to; 1) in its most recent stock assessment the species was considered to have a biomass below the limit reference point (or proxy), AND; 2) there is no evidence that removals are considered by scientific authorities to be negligible.
Notes for On-site Auditor
Division 7.a (Irish Sea) Whiting is not approved and must be segregated from the approved material.

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	Whiting (*Merlangius merlangus)*	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
Whiting	*Merlangius merlangus*	North East Atlantic stocks	NA	France	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.

Species Name		**Whiting** *Merlangius merlangus*	
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.	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
		Clause outcome:	Pass

Evidence

Division 6.a (West of Scotland)

Fishery removals of whiting are included in the stock assessment process. Input data include commercial landings, estimated discards, age composition of catches; five survey indices (ScoGFSWIBTS-Q1, ScoGFS-WIBTS-Q4, IGFS-WIBTS-Q4, UKS-WIBTS-Q1 and UKS-WIBTS-Q4).

The spawning-stock biomass (SSB) has been increasing since 2006 but remains very low compared to the historical estimates and is well below Blim. Fishing mortality (F) has declined continuously since around 2000 and is now very low. Zero catches are advised by ICES and removals are considered to be negligible.

Division 3.a (Skagerrak and Kattegat)

Fishery removals of whiting are included in the stock assessment process. Input data include commercial catches. Catches have been relatively low in recent years after a substantial industrial fishery ceased in the mid-1990s. The state of the stock is not known.

Subarea 4 and Division 7.d (North Sea and eastern English Channel)

Fishery removals of whiting are included in the stock assessment process. Input data include commercial catches (international landings, ages from catch sampling by métier) and two survey indices (IBTS Q1 & Q3 ages 1 to 5). Spawning-stock biomass (SSB) has fluctuated around, and is now above MSY Btrigger. Fishing mortality (F) has been above FMSY throughout the time-series. Since 2003 recruitment (R) has been generally lower than in previous years. The majority of whiting caught are discards in the Nephrops fishery and are below the minimum landings size. Despite the introduction of several technical measures to reduce fin fish catch and discards in the Nephrops fishery, the total discards estimates remain high. Given the continued high discards and low TAC this stock could become a major 'choke species' for the Division 7.a Nephrops fishery in the context of the landing obligation.

Division 7.a (Irish Sea)
Fishery removals of whiting are included in the stock assessment process. Input data include commercial catches (weights, ages and length frequencies from catch sampling) and Survey indices (NIGFSWIBTS-Q1, NIGFS-WIBTS-Q4, NI MIK).

The present stock size is extremely low. SSB has been declining since the start of the time-series and has been well below Blim since the mid-1990s. Recruitment has been low since the early 1990s. Large variations in fishing pressure has been estimated in recent years and F has been above Flim for the entire time-series.

Divisions 7.b–c and 7.e–k (southern Celtic Seas and western English Channel)
Fishery removals of whiting are included in the stock assessment process. Input data include commercial landings, estimated discards, age composition of catches and one survey index (EVHOE-WIBTSQ4 & IGFS-WIBTS-Q4 combined: IGFSEVHOE).

The spawning–stock biomass (SSB) has remained well above MSY Btrigger since 2009. Fishing mortality (F) has been below FMSY since 2008, and has increased in recent years. Recruitment has been below average since 2010 with the exception of the 2013 year class, which is estimated to be the second highest in the series.

Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)
Fishery removals of whiting are included in the stock assessment process. Input data include landings.

Landings have been reasonably stable over the time period. The available information is insufficient to evaluate stock trends and exploitation status.

References

ICES advice 2017
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2016/2016/whg-scow.pdf
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/whg.27.3a.pdf
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/whg.27.47d.pdf
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/whg.27.7a.pdf
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/whg.27.7b-ce-k.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 rm. 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 approached 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.