



## MarinTrust Standard V2

# By-product Fishery Assessment DNK06 - Whiting (*Merlangius merlangus*) in ICES Divisions 7.b-c and 7.e-k

**MarinTrust Programme**

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**Table 1 Application details and summary of the assessment outcome**

Fishery Under Assessment	Species:	Whiting ( <i>Merlangius merlangus</i> )
	Geographical area:	FAO 27, northeast Atlantic
	Country of origin of the product:	Denmark (Flag state: Denmark)
	Stock:	Whiting in divisions 7.b–c and 7.e–k (southern Celtic Seas and western English Channel)
Date	08 <sup>th</sup> March 2024	
Report Code	DNK06	
Assessor	Ana Elisa Almeida Ayres	
Country of origin of the product - PASS	Denmark (Flag state: Denmark)	
Country of origin of the product - FAIL	N/A	

Application details and summary of the assessment outcome			
Company Name(s): FF Skagen A/S, Thyborøn			
Country: Denmark (Flag state: Denmark)			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Certification Trust/NSF	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval
Ana Elisa Almeida Ayres	Matthew Jew	0.5	Surveillance 2
Assessment Period		March 2024 – March 2025	

Scope Details	
Main Species	Whiting ( <i>Merlangius merlangus</i> )
Stock	Whiting in divisions 7.b–c and 7.e–k (southern Celtic Seas and western English Channel)
Fishery Location	FAO 27, northeast Atlantic
Management Authority (Country/ State)	European Union (Common Fisheries Policy-CFP), Danish Directorate of Fisheries ( <i>Fiskeristyrelsen</i> )
Gear Type(s)	Demersal Trawl
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor’s recommendation
Recommendation	APPROVED

## Table 2. Assessment Determination

Assessment Determination
<p>If any species is categorised as Endangered or Critically Endangered on Union for Conservation of Nature's Red List of Threatened Species - IUCN's Red List, or if it appears in the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES appendices, it cannot be approved for use as MarinTrust raw material. Whiting (<i>Merlangius merlangus</i>) is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, whiting (<i>Merlangius merlangus</i>) is eligible for approval for use as MarinTrust by-product raw material.</p> <p>There is an EU MAP for this stock and reference points are defined, so the species was initially assessed under Category C. The stock is assessed under a SAM model which uses fishery removals in the stock assessment process, and it PASSES C1.1. However, the stock is considered, in its most recent stock assessment, to have biomass below both MSY and limit biomass reference points, it FAILS Clause C1.2. As the stock fails category C, it was assessed under category D.</p> <p>Table D1 (PSA) shows that the stock as an average productivity score of 1.42 and an average susceptibility score of 2.75. The PSA risk rating results (Table D3) determined that the species passes.</p> <p>Therefore, whiting in ICES Divisions 7.b-c and 7.e-k (southern Celtic Seas and western English Channel) is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified whiting in ICES Divisions 7.b-c and 7.e-k (southern Celtic Seas and western English Channel) as Category C, the stock is subject to a specific management regime and reference points are defined.</p> <p>Fishery removals are considered in the stock assessment process. The most recent stock assessment shows that the stock is below MSY <math>B_{trigger}</math>, <math>B_{pa}</math>, and <math>B_{lim}</math>. Therefore, because the stock has biomass below the limit reference point, it fails Category C and the assessor correctly assessed the stock under Category D.</p> <p>The assessor correctly assigned attribute values to each of the categories in Table D1. The assessor correctly calculated the productivity and susceptibility scores, and the stock passes Category D.</p> <p>Whiting in ICES Divisions 7.b-c and 7.e-k (southern Celtic Seas and western English Channel) passes Category D and therefore should be approved under the MarinTrust Standard v.2.3.</p>
Notes for On-site Auditor
N/A

## Species Categorisation

**NB:** If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in CITES Appendix 1, it **cannot** be approved for use as a MarinTrust raw material.

### IUCN Red list Category

By-product material from a species listed by IUCN (the International Union for Conservation of Nature) under the Red List for the following categories shall immediately fail the assessment;

- EXTINCT (E) AND EXTINCT IN THE WILD (EW)
- CRITICALLY ENDANGERED (CR) facing an extremely high risk of extinction in the wild.
- ENDANGERED (EN) facing a very high risk of extinction in the wild.

By-product material may be used from the following categories provided that all clauses in the MarinTrust standard are passed.

- VULNERABLE (VU) facing a high risk of extinction in the wild.
- NEAR THREATENED (NT) does not qualify for above now, but is close or is likely to qualify for, a threatened category in the near future.
- LEAST CONCERN (LC) Widespread and abundant.
- DATA DEFICIENT (DD) and NOT EVALUATED (NE)

## Table 3 Species Categorisation Table

Common name	Latin name	Stock	Management	Category	IUCN Red List Category <sup>1</sup>	CITES Appendix 1 <sup>2</sup>
Whiting	<i>Merlangius merlangus</i>	Whiting in ICES Divisions 7.b-c and 7.e-k (southern Celtic Seas and western English Channel)	Yes	D (Failed in C)	LC <sup>3</sup>	No

<sup>1</sup> <https://www.iucnredlist.org/>

<sup>2</sup> <https://cites.org/eng/app/appendices.php>

<sup>3</sup> <https://www.iucnredlist.org/species/198585/45097610>

## CATEGORY C SPECIES

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. Where a species fails this Clause, it should be assessed as a Category D species instead.

Species Name		Whiting ( <i>Merlangius merlangus</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.	Fail

Clause outcome: Fail

**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.**

ICES advises that when the MSY approach and precautionary considerations are applied, there should be zero catch in 2024. ICES notes the existence of a precautionary management plan, developed and adopted by one of the relevant management authorities for this stock. Management should be implemented at the stock level.

The assessment type is Analytical age-based assessment (State-space fish stock assessment model; SAM) that uses catches in the model and the forecast. The input data includes commercial catches (age composition of landings and discards); vector autoregressive spatio-temporal (VAST) standardized survey index (combined IGFS-WIBTS-Q4 [G7212] and EVHOE-WIBTS-Q4 [G9527]); maturity data (surveys and observer data; constant for all years); age-dependent natural mortalities. Discard and bycatches are included in the assessment for the full time-series.

### Catches

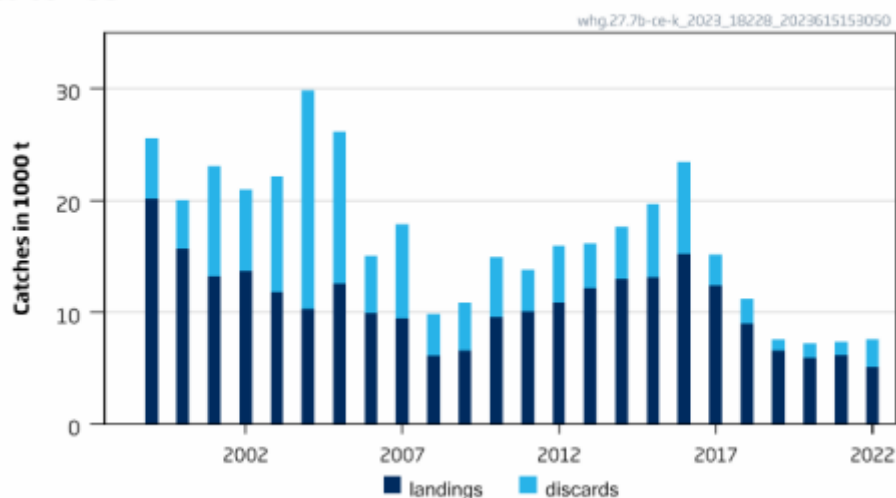


Figure 1. Catches in Whiting in divisions 27.7b–c and e–k (ICES, 2023).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process. C.1.1 is met.

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.

ICES defines the reference points in accordance with the MSY (target) and precautionary (target/limit) approaches. MSY  $B_{trigger}$  and  $B_{pa}$  are set at 50,818 tonnes,  $B_{lim}$  is set at 36,571 tonnes,  $F_{MSY}$  and  $F_{pa}$  is set at 0.375, and  $F_{lim}$  is 0.64.

Fishing pressure on the stock is above  $F_{MSY}$ ,  $F_{pa}$  and  $F_{lim}$ , and spawning-stock size is below MSY  $B_{trigger}$ ,  $B_{pa}$ , and  $B_{lim}$ .

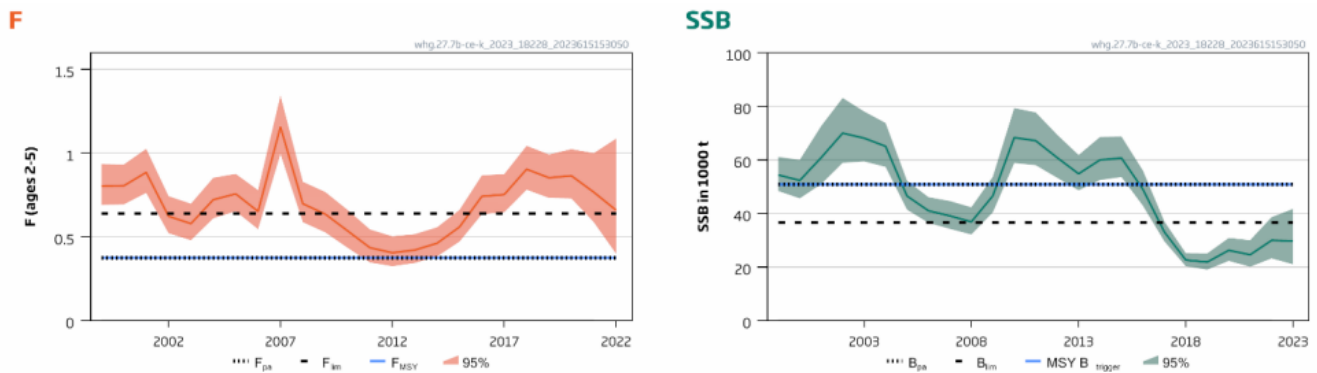


Figure 2. Whiting in divisions 27.7b–c and e–k. Summary of the stock assessment.

Therefore, the species is considered, in its most recent stock assessment, to have a biomass **BELOW** the limit reference point and it **FAILS** clause C1.2. The stock will be assessed under category D.

References

ICES. 2023. Whiting (*Merlangius merlangus*) in divisions 7.b-c and 7.e-k (southern Celtic Seas and eastern English Channel). In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, whg.27.7b-ce-k. Published 30 June 2023. Version 2: 13 July 2023. <https://doi.org/10.17895/ices.advice.21864333>

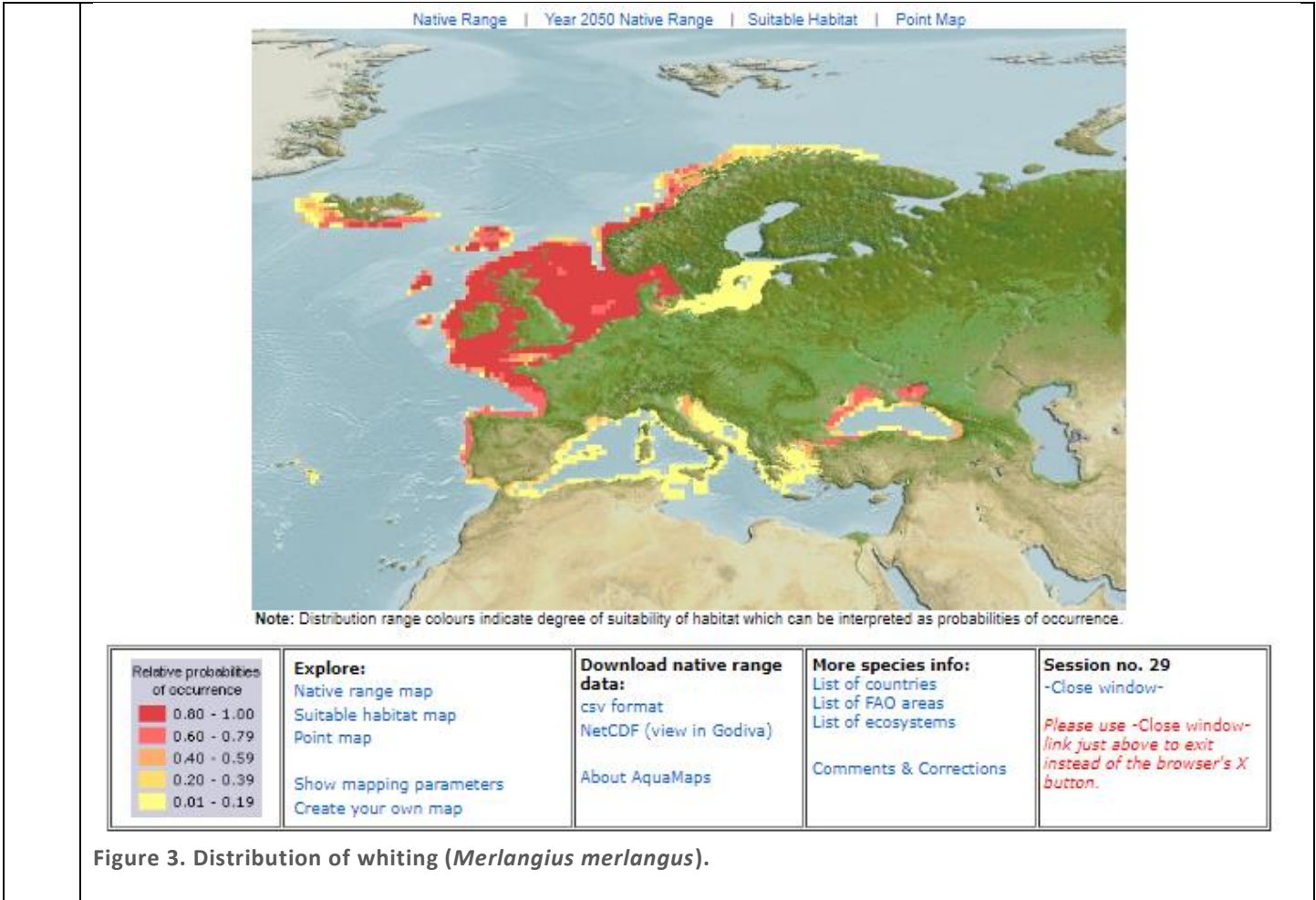
Links

MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

## CATEGORY D SPECIES

Category D species are those which 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. 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.

D1	Species Name	Whiting ( <i>Merlangius merlangus</i> )	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	2,0	1
	Average maximum age (years)	8,4	1
	Fecundity (eggs/spawning)	330,693 [ 109,358-1,000,000]	1
	Average maximum size (cm)	42,7	1
	Average size at maturity (cm)	24,3	1
	Reproductive strategy	Broadcast Spawn	1
	Mean trophic level	4,4	3
	<b>Average Productivity Score</b>		<b>1,42</b>
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	10-30%	2
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	High	3
	Selectivity of gear type	High	3
	Post-capture mortality	Retained	3
	<b>Average Susceptibility Score</b>		<b>2,75</b>
	<b>PSA Risk Rating (From Table D3)</b>		<b>Pass</b>
	<b>Compliance rating</b>		<b>Pass</b>
	<b>Further justification for susceptibility scoring (where relevant)</b>		
	<i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
	<p>The geographic range of the species encompasses the northeast Atlantic Ocean and Mediterranean Sea with the highest concentration appearing in the ICES subareas 4, 6, and 7. Although the fishing activity encompasses less than 10% of the distribution of the species, the overlap occurs in an area where the species is very populous. Score of 2 was awarded due to the high overlap with this populous region. Gear types is demersal trawl and this species lives in the water column (10-200m) above the substrate as is uses the seafloor to hunt for desired prey (shrimps, crabs, mollusks, small fish, polychaetes and cephalopods). There is high overlap with species behavior and the gear type and would also receive a score of 3. Demersal trawl gear typically has mesh size smaller than 12cm which is half of the size at maturity for this species, thus he selectivity is high. It is a commercial species, thus it is retained and receives a score of 3.</p>		



**References**

Froese, R. and D. Pauly. Editors. 2024. FishBase. World Wide Web electronic publication.  
<https://www.fishbase.se/summary/Merlangius-merlangus.html>

*Standard clauses 1.3.2.2*



Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

<b>D3</b>		<b>Average Susceptibility Score</b>		
		<b>1 - 1.75</b>	<b>1.76 - 2.24</b>	<b>2.25 - 3</b>
<b>Average Productivity Score</b>	<b>1 - 1.75</b>	PASS	PASS	PASS
	<b>1.76 - 2.24</b>	PASS	PASS	TABLE D4
	<b>2.25 - 3</b>	PASS	TABLE D4	TABLE D4