



MarinTrust Standard V2

By-product Fishery Assessment

DNK26

Cod (*Gadus morhua*)

in ICES Subdivisions 22-24

MarinTrust Programme

Unit C, Printworks

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Table 1 Application details and summary of the assessment outcome

| | | |
|---|-----------------------------------|--|
| Fishery Under Assessment | Species: | Cod (<i>Gadus morhua</i>) |
| | Geographical area: | FAO 27 northeast Atlantic Ocean |
| | Country of origin of the product: | Denmark, Germany, Poland, Sweden |
| | Stock: | Cod in subdivisions 22-24 (Western Baltic Stock) |
| Date | May 2024 | |
| Report Code | DNK26 | |
| Assessor | Sam Peacock | |
| Country of origin of the product - PASS | Denmark, Germany, Poland, Sweden | |
| Country of origin of the product - FAIL | n/a | |

| Application details and summary of the assessment outcome | | | |
|---|---------------------|---------------------------------------|----------------------------------|
| Company Name(s): Thyborøn | | | |
| Country: Denmark | | | |
| Email address: | | Applicant Code: | |
| Certification Body Details | | | |
| Name of Certification Body: | | Global Trust Certification Ltd. / NSF | |
| Assessor | Peer Reviewer | Assessment Days | Initial/Surveillance/Re-approval |
| Sam Peacock | Matthew Jew | 0.2 | Surveillance 1 |
| Assessment Period | May 2024 – May 2025 | | |

| Scope Details | |
|---------------------------------------|--|
| Main Species | Cod (<i>Gadus morhua</i>) |
| Stock | Cod in subdivisions 22-24 (Western Baltic Stock) |
| Fishery Location | FAO 27 northeast Atlantic Ocean |
| Management Authority (Country/ State) | EU and Denmark |
| Gear Type(s) | Trawl, gillnet, Danish seine |
| 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 IUCN’s Red List, or if it appears in the CITES appendices, it cannot be approved for use as Marin trust raw material. Cod (<i>Gadus morhua</i>) does not appear as Endangered or Critically Endangered on IUCN’s Red List, and does not appear in CITES appendices; therefore, <i>Gadus morhua</i> is eligible for approval for use as Marin trust by-product raw material.</p> <p>The EU multiannual plan for stocks in the Baltic Sea includes cod; however it can only be applied where information on fishing mortality is available and therefore it is not used as a basis for this stock. The stock is managed relative to reference points and was initially assessed under Category C.</p> <p>Cod in the Western Baltic is subject to annual stock assessment by ICES. The most recent stock assessment incorporated catch, discard and bycatch data, therefore C1.1 is met. Stock biomass was estimated to be substantially lower than the limit reference point level, and C1.2 is not met. The stock was subsequently assessed under Category D.</p> <p>In Category D, cod was awarded a Productivity score of 1.71 and a Susceptibility score of 2.5, leading to a Pass rating on Table D3.</p> <p>Therefore, Cod (<i>Gadus morhua</i>) in ICES subdivisions 22-24 is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products.</p> |
| Fishery Assessment Peer Review Comments |
| <p>The assessor correctly classified cod (<i>Gadus morhua</i>) in ICES subdivisions 22-24 as Category C, the stock is subject to a specific management regime.</p> <p>Fishery removals are considered in the stock assessment process. The most recent stock assessment shows that the stock is below B_{MSY}, B_{pa}, and B_{lim}. Therefore, the stock is considered to have biomass below the limit reference point (or proxy). It fails Category C and was assessed under category D.</p> <p>The assessor correctly assigned attribute scores under the PSA and correctly calculated the average scores for Productivity and Susceptibility, respectively. The stock passes per Table D3.</p> <p>Cod (<i>Gadus morhua</i>) in ICES subdivisions 22-24 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 an 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 ¹ | CITES Appendix 1 ² |
|-------------|---------------------|--|------------|-------------------|-------------------------------------|-------------------------------|
| Cod | <i>Gadus morhua</i> | Cod in subdivisions 22-24 (Western Baltic Stock) | Yes | Fails C, Passes D | Vulnerable ³ | No |

¹ <https://www.iucnredlist.org/>

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

³ <https://www.iucnredlist.org/species/8784/12931575>

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 | | Cod (<i>Gadus morhua</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.

Cod in ICES subareas 22-24 is subjected to annual stock assessment by the ICES Baltic Fisheries Assessment Working Group (WGBFAS). The most recent assessment was conducted in 2023, determining relative SSB trends from an age-based analytical assessment model. The stock assessment incorporated commercial and recreational catches, three survey indices, discard and bycatch data.

The 2023 catch advice states that “ICES advises that when the precautionary approach is applied, catches should be no more than 24 tonnes in each of the years 2024 and 2025. This applies to the sum of the commercial and recreational catches” (ICES 2023).

Catches are presented in the figure below:

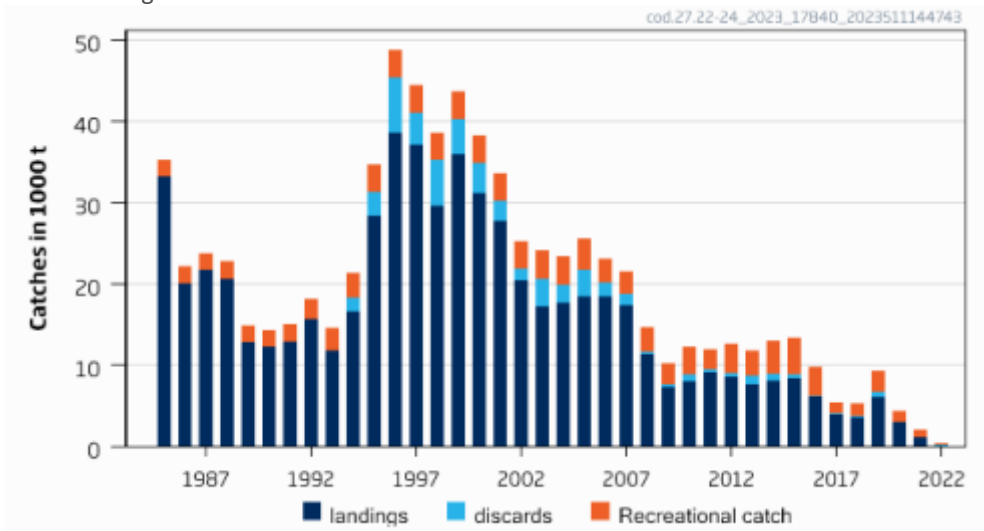


Figure 1. Cod in ICES subareas 22-24, catches and discards (ICES 2023)

Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and therefore the stock PASSES clause C1.1.

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.

The regular ICES catch advice provides an indication of the status of the stock relative to established reference points. Biomass reference points have been set relative to the average of the time series 1985-2023. The target reference points $MSY B_{trigger}$ and $I_{trigger}$ are 1.03 times the average. The limit reference point B_{lim} is 0.66 times the average.

The 2023 ICES catch advice states that “Spawning-stock size is below $MSY B_{trigger}$, B_{pa} , and B_{lim} . No reference points for fishing pressure have been defined for this stock” (ICES 2023). See figure 2, below.

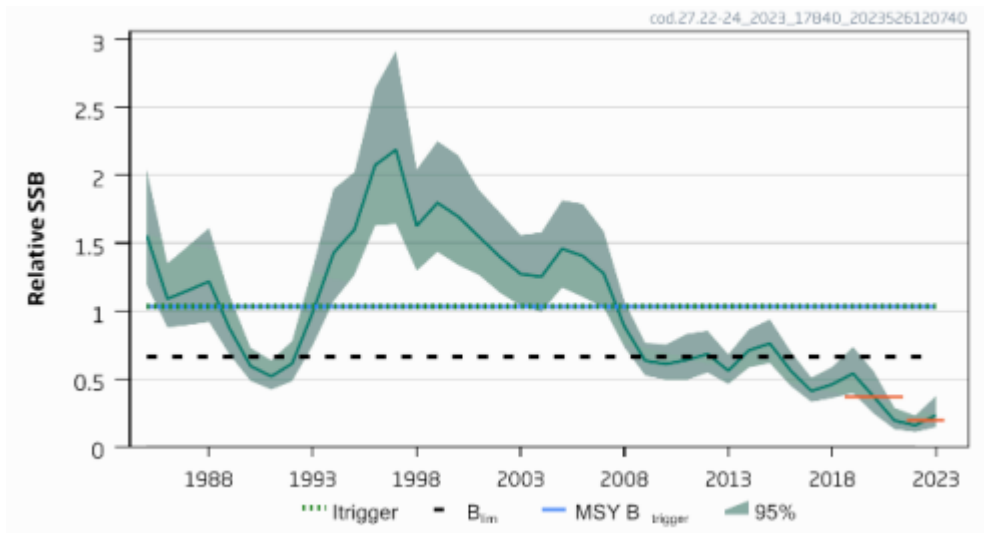


Figure 2. Cod in ICES subareas 22-24, relative SSB over time (ICES 2023).

Therefore, the species is considered, in its most recent stock assessment, to have a biomass below the limit reference point (or proxy) and it FAILS clause C1.2. As per MT guidance, the stock will be assessed under Category D hereinafter.

References

ICES (2023). Cod (*Gadus morhua*) in subdivisions 22–24, western Baltic stock (western Baltic Sea). In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, cod.27.22–24. <https://doi.org/10.17895/ices.advice.21820494>

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.

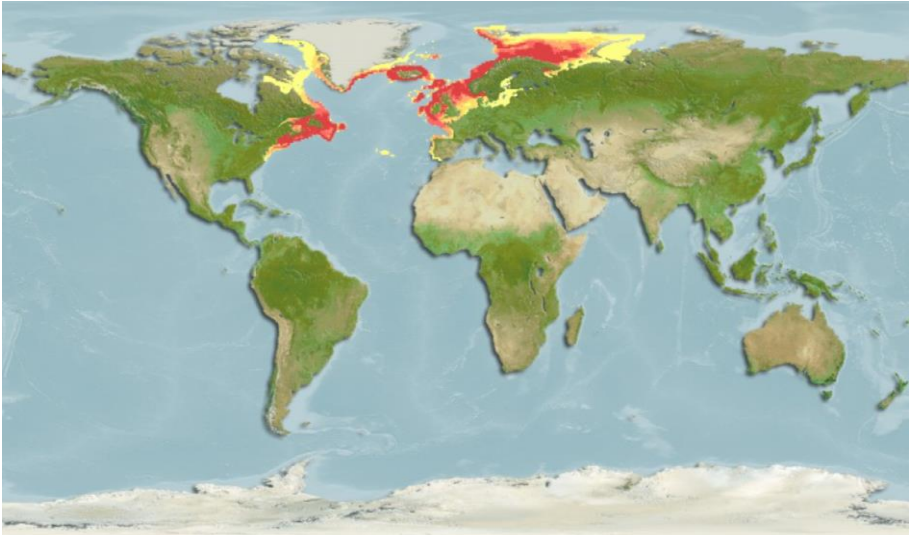
| | | | |
|--|---|----------------------------------|--------------|
| D1 | Species Name | Cod (<i>Gadus morhua</i>) | |
| | Productivity Attribute | Value | Score |
| | Average age at maturity (years) | 3.6 years | 1 |
| | Average maximum age (years) | 16.9 years | 2 |
| | Fecundity (eggs/spawning) | 1,610,435 | 1 |
| | Average maximum size (cm) | 200cm | 2 |
| | Average size at maturity (cm) | 55cm | 2 |
| | Reproductive strategy | Broadcast spawner | 1 |
| | Mean trophic level | 4.1 | 3 |
| | Average Productivity Score | | 1.71 |
| | Susceptibility Attribute | Value | Score |
| | Availability (area overlap) | <10% | 1 |
| | Encounterability (the position of the stock/species within the water column relative to the fishing gear) | Targeted | 3 |
| | Selectivity of gear type | Targeted | 3 |
| | Post-capture mortality | Retained | 3 |
| | Average Susceptibility Score | | 2.5 |
| | PSA Risk Rating (From Table D3) | | PASS |
| | Compliance rating | | PASS |
| | Further justification for susceptibility scoring (where relevant) | | |
| | <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i> | | |
| |  | | |
| Native distribution of <i>Gadus morhua</i> . From FishBase (https://www.fishbase.se/summary/gadus-morhua.html) | | | |
| References | | | |
| Fishbase, Atlantic cod: https://www.fishbase.se/summary/gadus-morhua.html | | | |
| <i>Standard clauses 1.3.2.2</i> | | | |

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. |

| D3 | | Average Susceptibility Score | | |
|----------------------------|-------------|------------------------------|-------------|----------|
| | | 1 - 1.75 | 1.76 - 2.24 | 2.25 - 3 |
| Average Productivity Score | 1 - 1.75 | PASS | PASS | PASS |
| | 1.76 - 2.24 | PASS | PASS | TABLE D4 |
| | 2.25 - 3 | 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 | | | |
| 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. | | | |
| References | | | |
| Links | | | |
| MarinTrust Standard clause | | 1.3.2.2, 4.1.4 | |
| FAO CCRF | | 7.5.1 | |
| GSSI | | D.5.01 | |