MarinTrust Standard V2

By-product Fishery Assessment Report Template

MarinTrust Programme
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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Cod, *Gadus morhua*
	Geographical area:	FAO27 Northeast Atlantic
	Country of origin of the product:	Denmark
	Stock:	ICES subdivisions 22-24 (western Baltic Sea)
Date	13/09/2021	
Report Code	BP154	
Assessor	Virginia Polonio	
Country of origin of the product - PASS	NA	
Country of origin of the product - FAIL	Denmark	

Application details and summary of the assessment outcome			
Name: Triple Nine			
Address:			
Country: Denmark		Zip:	
Tel. No.:		Fax. No.:	
Email address:		Applicant Code:	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Certification Trust	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Virginia Polonio	Vito Romito	0.5	Initial
Assessment Period	To August 2021		

Scope Details	
Main Species	Cod, *Gadus morhua*
Stock	ICES subdivisions 22-24 (western Baltic Sea)
Fishery Location	FAO 27 Northeast Atlantic
Management Authority (Country/ State)	European Commission (EC), Ministry of Environment and Food of Denmark (MFVM)
Gear Type(s)	Active and passive gears
Outcome of Assessment	
Peer Review Evaluation	The Peer Reviewer agrees with the assessor.
Recommendation	**NOT APPROVED**

Table 2. Assessment Determination

Assessment Determination
Cod, *Gadus morhua* is not categorised as Endangered or Critically Endangered on the IUCN Red list nor is listed in Appendix 1 of CITES. The EU multiannual plan (MAP) in place for stocks in the Baltic Sea includes cod (EU, 2016, 2019). The advice, based on FMSY ranges, is considered precautionary. The EU Baltic multiannual plan could not be used because this plan does not provide guidance on catch scenarios for the present state of the stock. Therefore, the MSY approach was used as basis for the advice. Therefore, there is a management plan for this stock, and it has been assessed under category C. Fisheries removals have been considered in the stock assessment and it PASSES clause C1.1. The stock has been below MSY since 2016. This stock was interbenchmarked in 2021, and this has changed the perception of the stock, which is now estimated to be below Blim. This, in combination with a very low recruitment since 2018, results in a large reduction in advised catch. Consequently, the stock has been below Blim and removals are not considered negligible. Therefore, it FAILS clause C1.2 As per guidance, the stock has been assessed under category D. The stock has not passed the PSA and it has been evaluated in table D4. Clause D4.1 it passed as MSY approach is applied, catches should be no more than 698 tonnes in 2022. However, in the last stock assessment, due to the higher probability to be below Blim in the future years the stock FAILS D4.2 as there is no evidence that the fishery has no negative impact on the stock. Cod (*Gadus morhua*) is **NOT** recommended for **APPROVAL** for the production of fishmeal and fish oil under the current MarinTrust RS v 2.0 by-product standard.
Fishery Assessment Peer Review Comments
The Peer Reviewer agrees with the assessor that this stock is not to be approved for the production of fishmeal and fish oil under the current MarinTrust RS v 2.0 by-product standard.
Notes for On-site Auditor

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	*Gadus morhua*	ICES subdivisions 22-24 (western Baltic Sea)	European Commission (EC), Ministry of Environment and Food of Denmark (MFVM)	C, D	VU Globally LC Europe	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php

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.

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 (*Gadus morhua*)	
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.	No
	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.

The input data used in the last stock assessment are as follows: Commercial catches (landings, age distributions from catch sampling) and recreational catch (Germany, Sweden, and Denmark). Annual stock separation key (from commercial catches) to split catches in Subdivision 24 into eastern and western Baltic cod, derived from otolith shape analyses combined with genetics (this key is available for 20 of the 35 years in the present time-series). The allocation of catches to stock for the remaining years was performed by interpolation. Three survey indices (FEJUCS, N2828, age 0), BITS-Q1 (G2916, ages 1–4+), and BITS-Q4 (G8863; ages 0–4+); constant maturity data as an average from BITS-Q1 (G2916) surveys for the whole time period. Natural mortalities estimated from life-history parameters, constant for the whole time period. Discards and bycatch Included in the assessment since 1994, data series from the main fleet (Figure 1 below represents the catches trends from 1986 to 2021).

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.

Fishing pressure on the stock is above FMSY and between Fpa and Flim; spawning-stock size is below MSY Btrigger, Bpa, and Blim.

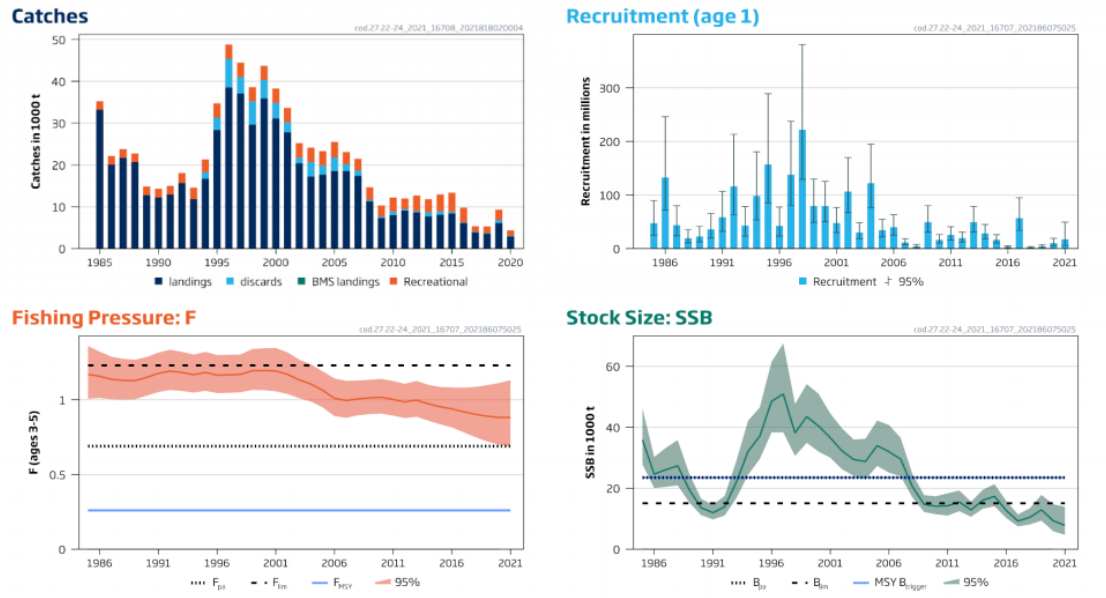

Figure 1. Cod in subdivisions 22–24, western Baltic stock. Summary of the stock assessment. BMS landings (fish below the minimum conservation reference size [MCRS]) have been included since 2017. Source: ICES 2021

This stock was interbenchmarked in 2021, and this has changed the perception of the stock, which is now estimated to be below Blim.

Removals in 2019 were estimated at 8,993t and 3,534t in 2020, therefore removals cannot be considered negligible and the stock FAILS the clause C1.2.

As per guidance, the stock has been assessed under category D.

References

Recommended citation: ICES. 2021. Cod (Gadus morhua) in subdivisions 22-24, western Baltic stock (western Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, cod.27.22-24, https://doi.org/10.17895/ices.advice.7744

Sobel, J. 1996. Gadus morhua. The IUCN Red List of Threatened Species 1996:

e.T8784A12931575. https://dx.doi.org/10.2305/IUCN.UK.1996.RLTS.T8784A12931575.en.

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 make up less than 5% of landings and 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 (*Gadus morhua*)	
	Productivity Attribute	**Value**	**Score**
	Average age at maturity (years)	3.6	2
	Average maximum age (years)	16.9	2
	Fecundity (eggs/spawning)	1,610,435 [285,000-9,100,000]	1
	Average maximum size (cm)	200	3
	Average size at maturity (cm)	55	2
	Reproductive strategy	Non-guarders: open water/substratum egg scatterers	1
	Mean trophic level	4.1	3
		Average Productivity Score	**2**
	Susceptibility Attribute	**Value**	**Score**
	Overlap of adult species range with fishery	>50 % of stocks occurs in the area fished	3
	Distribution	Not scored	Not scored
	Habitat	Benthopelagic	3
	Depth range	0-600 (150-200)	2
	Selectivity	Species > 2 times mesh size	3
	Post-capture mortality	Most dead	3
		Average Susceptibility Score	**2.8**
		PSA Risk Rating (From Table D3)	**D4**
		Compliance rating	**Go to table D4**

References

https://www.fishbase.se/Summary/SpeciesSummary.php?ID=69&AT=cod

Standard clauses 1.3.2.2

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

Note: Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

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	Cod, *Gadus morhua*	
	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.	Yes
	D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.	No
		Outcome:	**FAILS**

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.

This stock was interbenchmarked in 2021, and this has changed the perception of the stock, which is now estimated to be below Blim. This, in combination with a very low recruitment since 2018, results in a large reduction in advised catch. ICES advises that when the MSY approach is applied, catches should be no more than 698 tonnes in 2022. This applies to commercial and recreational catches. It **PASSES** D4.1

D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.

Because the SSB has been below Blim since 2016, ICES has provided the probability of SSB being below Blim in 2023. Below Blim a stock is considered to have reduced reproductive capacity. Given the advised catch of 698 tonnes, the probability of SSB being below Blim in 2023 is 47%. In comparison, the scenario with zero catches in 2022 has a 42% probability of SSB being below Blim in 2023. With that in mind and the information provided above in figure 1. There is no substantial evidence that the fishery has no significant negative impact on the species, and it FAILS D4.2

References

ICES. 2021. Cod (*Gadus morhua*) in subdivisions 22-24, western Baltic stock (western Baltic Sea). In Report of the ICES Advisory Committee, 2021.
ICES Advice 2021, cod.27.22-24, https://doi.org/10.17895/ices.advice.7744

Links	
MARINTRUST Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01