

WORKING GROUP ON THE BIOLOGY AND ASSESSMENT OF DEEP-SEA FISHERIES RESOURCES (WGDEEP)

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i Executive summary

The ICES working group on biology and assessment of deep-sea fisheries resources (WGDEEP) provides scientific advice on 30 assessment units including stocks of deep-water species and those on shelf areas. Advice is provided in time intervals of 1 to 5 years for different stocks, with 1- and 2-years intervals as the most common.

First draft of advice was prepared for 17 stocks this year. Available time-series for international landings and discards, fishing effort, survey indices and biological information were updated for all stocks and are presented in Sections 4–16 of the report.

A request from the UK and EU about the allocation of advice to different management units for roundnose grenadiers was addressed. A response from the meeting was prepared to be provided to ACOM.

Exploratory assessments were presented to the meeting for tusk and ling in subareas 1 and 2 using length-based spawning potential ratio (LBSPR), and for black spot seabream in area 10 applying both surplus production models (SPiCT and JABBA) and length-based analysis (LBSPR and LBI indicators). In addition, an exploratory data-limited assessment on a stock where recreational fisheries are apparent was presented (Atlantic halibut in Norway).

Main conclusions regarding each stock with advice in 2023:

For Atlantic wolffish in Division 5.a (Iceland grounds) spawning stock biomass has been going up since 1995 but recruitment decreased until 2010. Since 2010, recruitment has remained stable and has increased slightly in recent years. Spawning stock biomass and fishing pressure are at sustainable levels. The advice for 2023/24 is slightly higher than for 2022/23 due to higher biomass and lower fishing pressure.

Blackspot seabream in subarea 10. ICES rfb rule was applied for the first time. Surveys were not conducted in 2020 and 2022. The 2024/25 advice is lower than the last advice because the survey index shows a decrease in the abundance in the most recent available years..

The recruitment of blue ling in division 5.a and subarea 14 has been low since 2010. Biomass indices have decreased slightly in recent years. As the generic simulations on the rfb-rules were based on biennial catch advice, the last years advice (2022/2023) is rolled over to this year's advice (2023/2024).

The advice for bli.27.nea is a zero catch advice given for the years 2024-2027. The landings have declined over years and are now at total of 636 tons. The reported discards of blue ling are minor and represent only 0.2% of total catch. The stock is regarded as depleted.

Greater silver smelt in areas 1, 2, 3a and 4. According to the recommendations from WKLIFE X, the rfb rule was applied for a trend-based advice. The direct fisheries in Subarea 2 have decreased in later years. The bycatch in Subarea 4 increased substantially in the years 2018-2020, while for the two latest years these catches have decreased again.

For greater silver smelt in division 5.a and subarea 14, the spawning stock biomass has reached a historical high and fishing mortality remains relatively low. Recruitment estimates are low in the past two years but were relatively high prior to these. Spawning stock biomass and fishing pressure are at sustainable levels. Advice for 2023/24 increased slightly from 2022/23.

For greater silver smelt in 5b and 6a fishing mortality and the spawning stock biomass are at sustainable levels. The recruitment is very constant. Upon applying the MSY approach, the catch advice increased slightly compared to last year's advice.

Greater silver smelt in 6b, 7, 8, 9, 10 and 12 has not been benchmarked. The rfb rule was applied for the trend-based advice. Fisheries in this area are very minor, and there are no directed fisheries. Mean discard rate for the years 2015 to 2022 is 80%. It is important to monitor and follow if new fisheries emerge, as catches have been considerable in the past.

Ling in subareas 1 and 2. The biomass index for ling based on the targeted fishery by the Norwegian longliners. The index increased steadily from 2001 and peaked in 2017. Since then, the index has declined. The rfb-rule was applied for the first time this year. The advice was reduced by 17.7% compared to the 2022-2023 advice.

For ling in Division 5.a, the spawning stock biomass and the fishing mortality are at sustainable levels. Recruitment of age 2 decreased from high levels in 2008 in and have remained stable for the past five years. The advice for 2023/2024 is higher than the advice in 2022/2023 because of the upward revision in biomass levels compared to last year's assessment.

For ling in Division 5b the spawning stock biomass is decreasing and is now reaching an unsustainable level and the fishing mortality is high. Catches are still at high level. Recruitment has decreased since 2014 and has been at a low level since 2019 so there are high probabilities that SSB in 2025 will be below sustainable levels.

Ling in subareas 3, 4, 6 - 9, 12, and 14. The rfb rule was applied for the first time. The CPUE index value for year 2021 was not used because the Norwegian longline reference fleet could not fish its regular fishing grounds. About 75% of the landings come from subareas 4 and 6 but there is un-certainty as to whether ling in all subareas comprise more than one stock, and management should be aware of different trends in stock development among them.

Advice for Roundnose grenadier in subareas 1, 2, 4, 8, and 9, Division 14.a, and in subdivisions 14.b.2 and 5.a.2 was last provided in 2019. Advice is based on limited landings only data. This stock is mostly exploited as bycatch from other fisheries and trends in landings are considered to reflect changes in activity in other fisheries rather than in stock abundance. The available information is insufficient to evaluate the status of this stock.

For roundnose grenadier in Divisions 10.b and 12.c, and Subdivisions 12.a.1, 14.b.1, and 5.a.1 the information on landings have been variable and at a considerably lower level down to insignificant. The landing reduction is associated with the change in fishing behavior generated by the implementation of Regulation (EU) 2016/2336 which severely restricted existing NEAFC bottom-fishing areas.

Tusk in subareas 1 and 2. The biomass index for tusk based on Norwegian longliners increased steadily from 2004 to 2017 then decreased until 2022. The landings have been relatively stable since 2006. The rfb-rule was applied for the first time this year. The advice was at the same level as the previous advice.

Tusk in subareas 4 and 7-9, and in divisions 3.a, 5.b, 6.a, and 12.b. The landings of tusk have decreased since 2000. The biomass index (2000-2022) based on Norwegian longliners increased from 2003 to 2012, since then it has been relatively stable. The rfb-rule was applied for the first time this year. The advice was reduced by 11.5% compared to the 2022-2023 advice.

For tusk in Division 5.a and Subarea 14, the total stock biomass has increased since 2020 and the spawning stock biomass is slightly above Blim. Fishing mortality has declined and recruitment of age 1 shows an increase for the past decade.

ii Expert group information

Expert group name	Working Group on the Biology and Assessment of Deep-sea Fisheries Resources (WGDEEP)
Expert group cycle	Annual
Year cycle started	2022
Reporting year in cycle	1/1
Chairs	Elvar H. Hallfredsson, Norway
	Juan Gil Herrera, Spain
Meeting venue and dates	3–9 May 2023, Lisbon, Portugal (23 participants)