13.2   Oceanic Northeast Atlantic ecoregion – Fisheries overview

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Executive summary

The commercial fisheries in the Oceanic Northeast Atlantic ecoregion target few stocks. The main fisheries in the area are a multinational pelagic fishery on two pelagic beaked redfish stocks in the northwestern part of the ecoregion, and a fishery on blue whiting in the Hatton-Rockall plateau and west of the Porcupine Bank using midwater trawl. The demersal fisheries for haddock at Rockall account for only a small proportion of the total catches of haddock taken in this ecoregion. Fishing for tuna (bluefin, skipjack, bigeye, and albacore) and other large pelagic species (swordfish) by long-distance longliners occurs across much of this ecoregion. Very little deep-sea fisheries are conducted in the region.

There are currently around 20 nations with fisheries targeting the stocks in the ecoregion. Norway, Iceland, and Russia have the largest fleets and dominate the landings in the region. Total landings have varied since the mid-1970s, with a rise in the recent decade which is mainly due to increased blue whiting catches. Two beaked redfish stocks dominated the catches (by weight) until 2000. Catches of these beaked redfish stocks have decreased considerably since the peak of the fishery in the mid-1990s.

The Oceanic Northeast Atlantic ecoregion has 52 stocks for which ICES provided advice in 2021. Around 13% of the assessed stocks are fished at or below F_{MSY} target levels; around 13% of the stocks were assessed to be above MSY $B_{trigger}$. The majority of the stocks have unknown stock and fishery status.

Introduction

The Oceanic Northeast Atlantic ecoregion consists of the portion of the ICES Area (Figure 1) that is beyond national jurisdiction (ABNJ), i.e., outside the 200 nautical mile limit of the exclusive economic zones (EEZs) of the EU Member States, the Faroe Islands, Iceland, Greenland, and United Kingdom. The ecoregion is mostly deeper than 1000 m, with only a small fraction of the seabed (ca. 0.03%) shallower than 500 m.

All of the Oceanic Northeast Atlantic ecoregion lies within the FAO Major Fishing Area 27; the prefix "27" in the ICES statistical area codes is therefore omitted in the following. The overview covers ICES divisions and subdivisions 5.b.1.a, 6.b.1, 7.c.1, 7.k.1, 8.e.1, 8.d.1, 9.b.1, 10.a.1, 10.b, 12.a.1, 12.b, 12.c, and 14.b.1 (Figure 1).
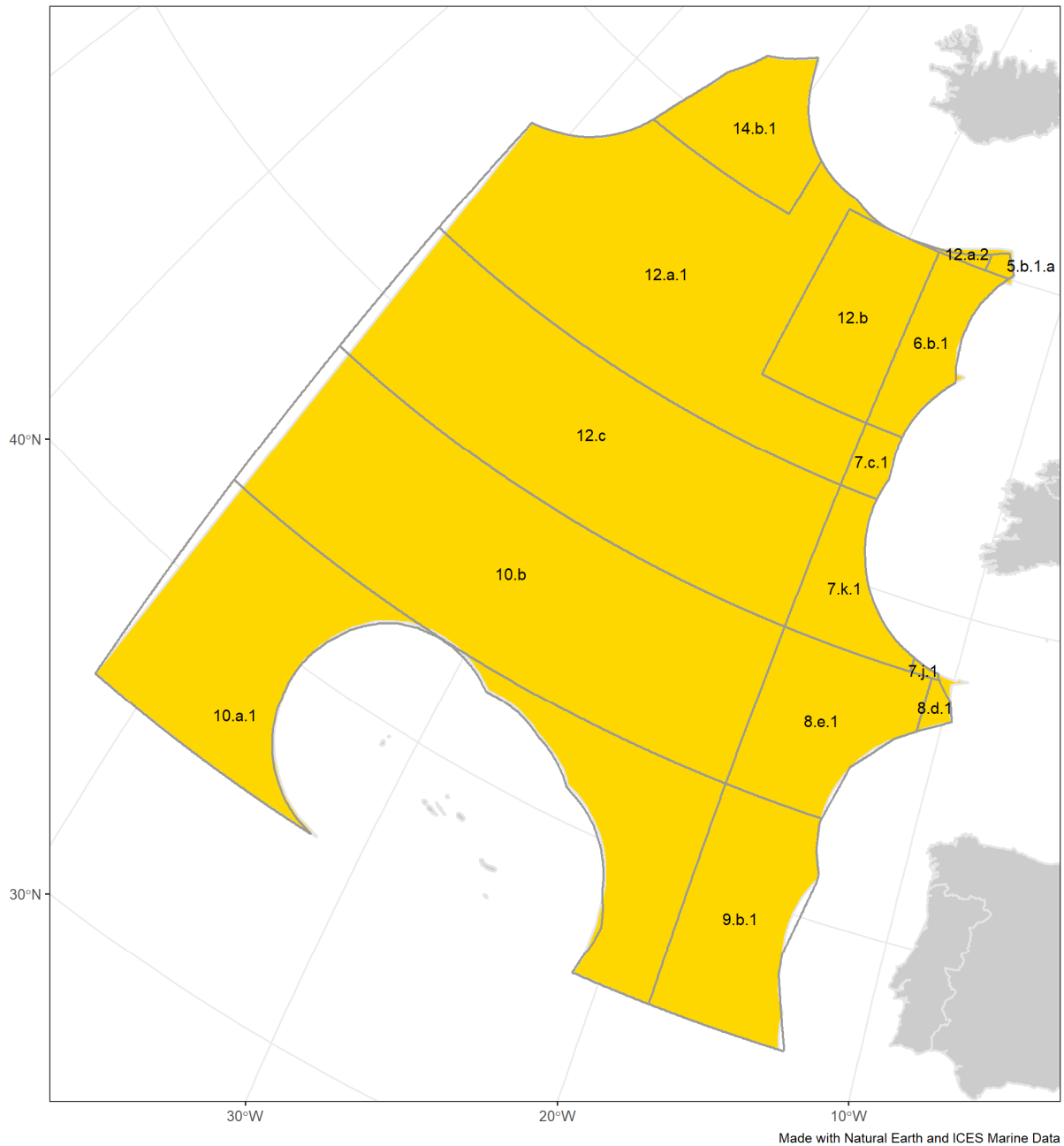
Figure 1   The Oceanic Northeast Atlantic ecoregion (highlighted in yellow) and ICES statistical areas.

Who is fishing

The main fishery in the area has been a multinational pelagic fishery, fishing on two pelagic beaked redfish stocks (shallow pelagic [reb.2127.sp] and deep pelagic [reb.2127.dp]) in the northwestern part of the ecoregion and blue whiting (whb.27.1-91214) in the Rockall-Hatton and west of the Porcupine area.

The redfish fishery commenced in the early 1980s. The number of vessels participating in the fishery decreased substantially as the stocks were depleted. The combined catch of both stocks peaked in 1996 when 180 000 tonnes were caught; this has since declined to an annual catch of about 30 000 tonnes. Catches of blue whiting have been high since the early 2000s and peaked at very high levels (over 200 000 thousand tonnes) recently.

Multispecies fisheries for deep-sea species developed in the early 1970s and peaked at 30 000 tonnes in 1975. Since then, effort has declined, and landings now amount to less than 4000 tonnes per year. The current relatively small fisheries are mainly conducted by a few trawlers and longliners, primarily from the EU and the Faroe Islands.

There are demersal fisheries for haddock (had.27.6b) at Rockall, but these account for only a small proportion of the total catches on this stock taken in this ecoregion.

The fishery within this extensive ecoregion is a multinational fishery that targets many marine stocks. Currently, about 20 countries have fisheries within the ecoregion. The greatest amounts of landings are taken by Norway, Russia, and Iceland, mainly targeting pelagic beaked redfish and blue whiting. Lesser amounts are landed by Spain, Germany, Portugal, Netherlands, Ireland, the Faroe Islands, Latvia, and Lithuania.

Norway

The Norwegian fleet fishing this ecoregion consists of about 50–60 pelagic trawlers and five to six demersal longline vessels. The highest fishing activity is in the northeastern area, close to the continental shelf edge bordering the Celtic Seas ecoregion and the shallower banks in the same area. The pelagic fleet is mainly targeting blue whiting, but also other pelagic species. Catches of beaked redfish are taken in the northwestern corner of this ecoregion. The demersal longliners mainly target ling (lin.27.3a4a6-91214) and tusk (usk.27.3a45b6a7-912b, usk.27.12ac, and usk.27.6b).

Iceland

Industrial factory vessels target pelagic beaked redfish in the northwestern part of the ecoregion. The number of vessels participating in this fishery has decreased substantially over time, from around 25 at the peak of the fishery in 1996–2002 to only four vessels in 2019. Iceland did not participate in the fishery in 2020.

In some years the Icelandic pelagic fleet (10–16 vessels > 65 m) catches part of its blue whiting quota (16–23% in 2017–2020) in the ecoregion, using pelagic trawls. The fishery occurs mainly in the northeastern part of the ecoregion, close to the continental shelf edge bordering the Celtic Seas ecoregion and the shallower banks in the same area.

Ireland

The very minor pelagic trawl fishing activity by Ireland in this ecoregion is an extension of the fisheries occurring in the Celtic Seas ecoregion. The albacore tuna fishery, in some years, extends beyond the EEZ southwest of Ireland. Similarly, the blue whiting fishery occasionally extends west of the Porcupine Bank.

Spain

The Spanish bottom-trawl fleet consists of three to six vessels larger than 50 m length and is mainly active on the western slope of the Hatton Bank (Subdivision 6.b.1 and Division 12.b). The most important species targeted are Baird's slickhead, blue ling (bli.27.nea), roundnose grenadier (rng.27.1245a8914ab, rng.27.5a10b12ac14b, and rng.27.5b6712b), and black scabbardfish (bsf.27.nea), and Greenland halibut. There is also a pelagic beaked redfish fishery in the northwestern part of the ecoregion (Subdivision 14.b.1). The size of the Spanish fleet operating in the ecoregion has decreased during recent years.

The Spanish pelagic longlining fleet (around 40 vessels) operates in the southern part of the ecoregion (Subarea 10), fishing mainly swordfish and blue shark.

Faroes

At the peak of the pelagic beaked redfish fishery in the mid-1990s (Subdivision 14.b.1), up to seven Faroese vessels participated in the fishery. In recent years one to three Faroese vessels have fished for the deep pelagic beaked redfish stock.

France

Only one French vessel (targeting blue whiting) operates in the eastern part of the ecoregion.

Russia

The Russian fleet is the largest one participating in the pelagic beaked redfish fishery in the northwestern part of the ecoregion (Subdivision 14.b.1 and Subarea 12). The fleet consists of industrial factory ships. In recent years about 15 vessels have participated in the fishery; during the peak of the fishery (second half of the 1990s and early 2000s), 35–40 vessels participated.

Portugal

Portugal took part in the pelagic beaked redfish fishery during 1994–2012 (subareas 5, 12, and 14). In 2011 and 2012 only four vessels participated in this fishery. The Portuguese pelagic longlining fleet operates in the southern part of the ecoregion (Subarea 10), targeting swordfish and blue shark.

Netherlands

The Dutch fleet has minimal activity in the ecoregion. The pelagic fleet, consisting of seven vessels that target blue whiting, mackerel (mac.27.nea), horse mackerel (hom.27.2a4a5b6a7a-ce-k8), and herring, operates on the eastern border of the ecoregion and in adjacent waters, with occasional landings originating from the Oceanic Northeast Atlantic ecoregion.

Others

In recent years Germany (one industrial factory vessel), Lithuania (one industrial factory vessel), and Latvia (one industrial factory vessel) have participated in the pelagic beaked redfish fishery in the western part of the ecoregion (Subdivision 14.b.1 and Subarea 12). Other countries, such as Japan, China and the Republic of Korea, fish for bluefin tuna in this ecoregion.
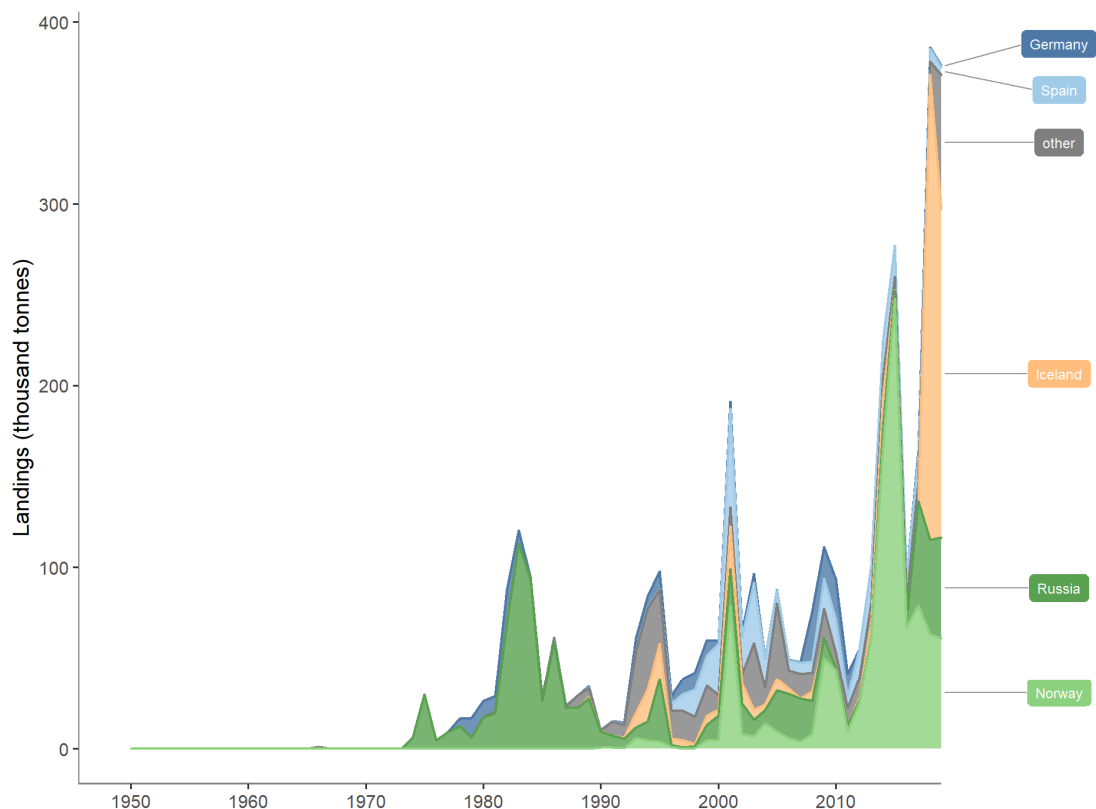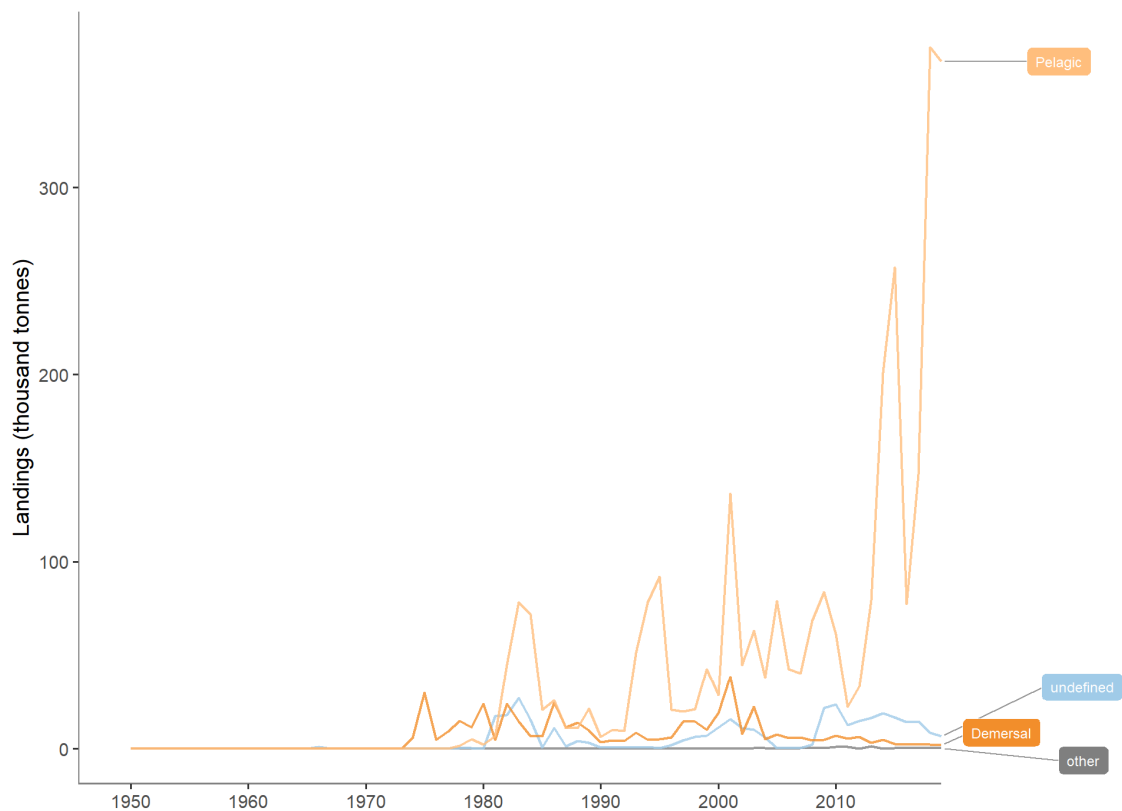
Historical Nominal Catches 1950-2010,
Official Nominal Catches 2006-2019
ICES, Copenhagen.

Figure 2   Landings (thousand tonnes) from ICES divisions and subdivisions 5.b.1.a, 6.b.1, 7.c.1, 7.k.1, 8.e.1, 8.d.1, 9.b.1, 10.a.1, 10.b, 12.a.1, 12.b, 12.c, and 14.b.1. This approximates to the majority of landings from the Oceanic Northeast Atlantic ecoregion in 1950–2019, by (current) country. The five countries with the highest landings are shown individually; the remaining countries are aggregated and displayed as "other".

Catches over time

The landings of pelagic species have fluctuated with an increasing trend, showing large spikes in the most recent years (Figure 3). This is mainly due to migration patterns and associated fishing activity on blue whiting, which constitutes the highest proportions of the catches in later years (Figure 4). The two pelagic beaked redfish constituted the majority of the pelagic catches before 2000. Catches of redfish fluctuated in the 1980s and 1990s but have since declined (Figure 4).

Demersal landings were highest in the early 2000s and have declined to a low level since then.

Historical Nominal Catches 1950-2010,
Official Nominal Catches 2006-2019
ICES, Copenhagen.

Figure 3   Landings (thousand tonnes) from ICES divisions and subdivisions 5.b.1.a, 6.b.1, 7.c.1, 7.k.1, 8.e.1, 8.d.1, 9.b.1, 10.a.1, 10.b, 12.a.1, 12.b, 12.c, and 14.b.1 in 1950–2019, by fish category. Table A1 in the Annex details the species that belong to each fish category.
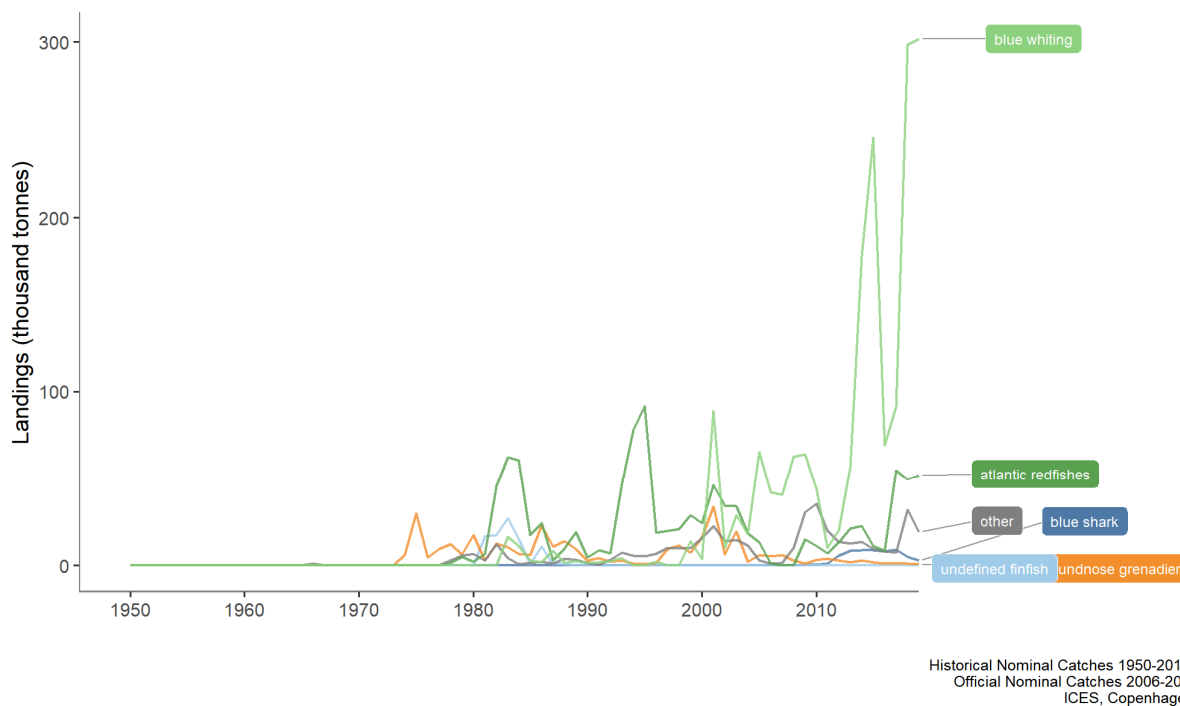
Historical Nominal Catches 1950-2010,
Official Nominal Catches 2006-2019
ICES, Copenhagen.

Figure 4   Landings (thousand tonnes) from ICES divisions and subdivisions 5.b.1.a, 6.b.1, 7.c.1, 7.k.1, 8.e.1, 8.d.1, 9.b.1, 10.a.1, 10.b, 12.a.1, 12.b, 12.c, and 14.b.1 in 1950–2019, by species. The five species with the highest cumulative landings over the entire time-series are displayed separately; the remaining species are aggregated and labelled as "other".

Discards

Discard rates in this ecoregion are generally low (below 10%). Some discarding occurs in demersal and benthic fisheries in the area (Figure 5).

Most of the pelagic catches are blue whiting, which is caught in directed fisheries and are used for reduction to fish meal and fish oil. Therefore, there are almost no discards.
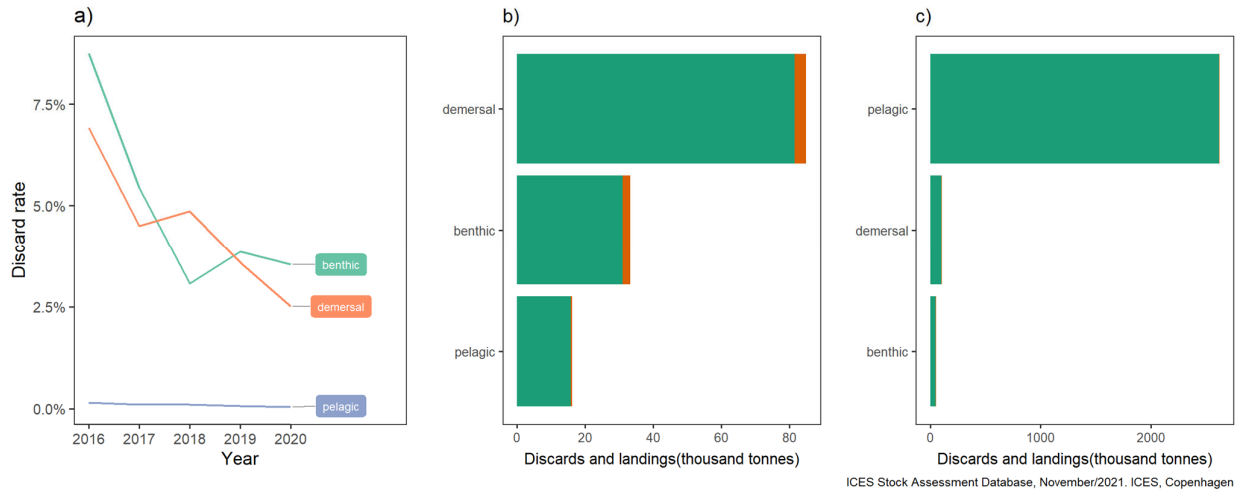
Figure 5   ICES divisions and subdivisions 5.b.1.a, 6.b.1, 7.c.1, 7.k.1, 8.e.1, 8.d.1, 9.b.1, 10.a.1, 10.b, 12.a.1, 12.b, 12.c, and 14.b.1. Left panel (a): discard rates 2015–2020 by fish category, shown as percentages (%) of the total annual catch in that category. Middle panel (b): landings (green) and discards (orange) in 2020 by fish category (in thousand tonnes), only of those stocks with recorded discards. Right panel (c): landings (green) and discards (orange) in 2020 by fish category (in thousand tonnes) of all stocks, including stocks with zero discards or without discard information.

Description of the fisheries

Pelagic trawlers account for the majority of the fishing effort in the region, mainly in the northeastern (blue whiting) and northwestern (two pelagic beaked redfish stocks) parts of the ecoregion (Figure 6).

The main demersal otter trawl fisheries in the area take place on the western part of the Rockall Bank, targeting haddock, saithe, anglerfish (anf.27.3a46), and megrim (lez.27.6b). Some longline fisheries (shown as static gears in Figure 6) target ling, blue ling, greater forkbeard (gfb.27.nea), and tusk at Rockall and around the Hatton Bank.

Furthermore, some pelagic longline and hook and line fisheries, mainly in the southern part of the ecoregion, target large pelagic fish, such as tuna, swordfish, and pelagic sharks. These fisheries are not shown in Figure 6.

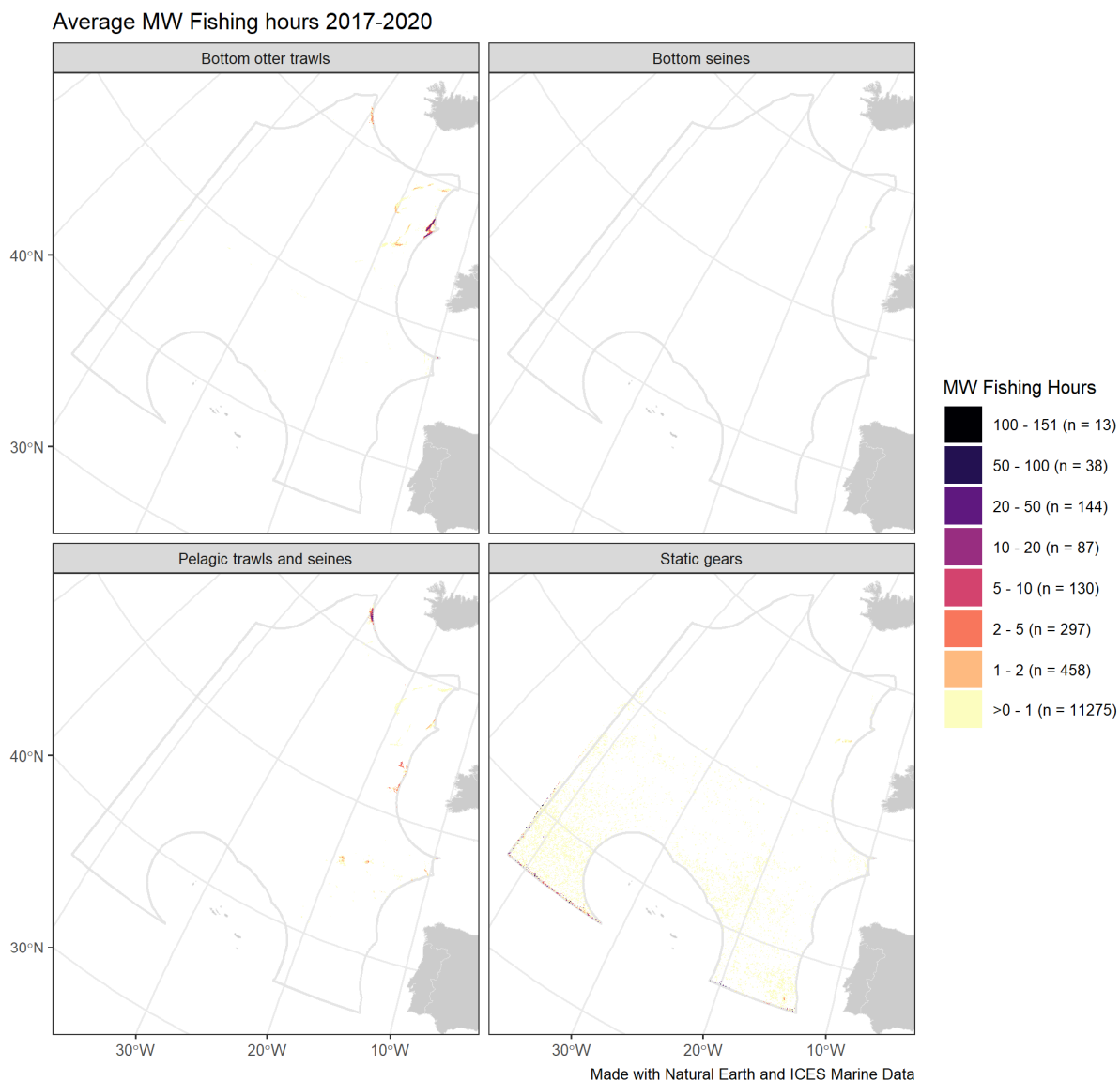Average MW Fishing hours 2017-2020

Figure 6   Spatial distribution of average annual fishing effort (MW fishing hours) in the Oceanic Northeast Atlantic ecoregion, by gear type. Fishing effort data are only shown for vessels > 12 m that have vessel monitoring systems (VMS); this biases the distributions, particularly in coastal areas.

Pelagic trawls

Blue whiting

The main fisheries target spawning and post-spawning fish west of Ireland and Scotland. The fishery extends into Faroese and international waters west of the Porcupine Bank. Most of the catch (~90%) is taken in the first half of the year. The multinational fleet targeting blue whiting mostly consists of large pelagic trawlers. Blue whiting is mainly used for fishmeal. In 2017–2019 around 10–15% (equal to about 200 000 tonnes) of the total catch of blue whiting in ICES Area was taken from this ecoregion.

Shallow pelagic beaked redfish

The multinational fishery for the shallow pelagic beaked redfish (reb.2127.sp) was started in 1982 by the former Soviet Union, with other countries joining in soon after. A total of 19 countries have taken part in this fishery since 1982, with a minimum of two countries in 1982 and a maximum of 17 in 1995. The total number of vessels from each country is not known for the entire time-series but during the years 1995–2009, their numbers ranged from 45 to 92. In 1982–1995 annual landings ranged between 60 000 tonnes and 100 000 tonnes. Since 1996 the landings have gradually decreased; in the last decade, landings have been between 100 tonnes and 6500 tonnes and are mainly caught by Russia. The fishing currently occurs in August to October on post-spawning fish and the main fishing area is in the northwestern part of Subdivision 12.a.1. Since 2007, the proportion of shallow pelagic beaked redfish caught within the ecoregion has been on average about 48% of the total catch of shallow pelagic beaked redfish in ICES Area.

Deep pelagic beaked redfish

The international pelagic fishery for the deep pelagic stock of beaked redfish (reb.2117.dp) started in 1991 in the international waters of the Irminger Sea, 200 nautical miles southwest of Iceland and extending to the Icelandic EEZ. The fishing occurs in April to July on post-spawning fish. The same fleet participates in this fishery as in the shallow pelagic fishery. The fishery peaked in 1996 at about 139 000 tonnes but has decreased considerably in recent years and is now at 20% of what it was in 1996. With the decreasing catches, the total number of vessels have also decreased substantially. In 2018, 25 industrial factory vessels from eight countries fished for deep pelagic beaked redfish, with 14 of these vessels coming from Russia. In comparison, 92 vessels from 16 countries took part in the fishery in 1996.

Longline and line fisheries

Fishing for tuna (bluefin, skipjack, bigeye, and albacore) and other large pelagic species (swordfish) by long-distance longliners occurs across much of this ecoregion, depending on target species and season. The stocks and fisheries range over a much wider area than the ecoregion. Average catches in the last ten years have been around 4500 tonnes of albacore, 3000 tonnes of skipjack and bigeye, and 2000 tonnes of swordfish and bluefin tunas. Pelagic sharks such as blue shark and short-finned mako are also fished on longline in the North Atlantic. Catches in the last decade have ranged from 4000 tonnes to 24 000 tonnes for blue shark and 1000 tonnes to 2000 tonnes for short-finned mako.

Other fisheries

Very little deep-sea fishery is conducted in the region. The main deep-sea species caught in the region are roundnose grenadier, black scabbardfish, and Baird's slickhead.

The Faroese fleet's fisheries for orange roughy (ory.27.nea) uses semi-pelagic trawls. The fishery takes place on the Fangorn Bank and the Mid-Atlantic Ridge.

Fisheries management

The North-East Atlantic Fisheries Commission (NEAFC) is the regional fisheries management organization mandated to manage most fisheries in the Oceanic Northeast Atlantic ecoregion. These fisheries are conducted both inside EEZs and in the area beyond national jurisdiction (ABNJ), where they are regulated by a mixture of national, EU, and NEAFC measures. NEAFC receives scientific advice from ICES.

The International Commission for the Conservation of Atlantic Tunas (ICCAT) is the regulatory authority for the fisheries of tuna and other large pelagic species. The North Atlantic Salmon Conservation Organization (NASCO) is the regulatory authority for the distant-water salmon fisheries, such as those off Greenland and Faroes, as these are largely confined to EEZs rather than to the ABNJ.

Status of the fishery resources

Fishing mortalities and spawning stock sizes have been evaluated against maximum sustainable yield (MSY) and precautionary approach (PA) reference points, and the status of these stocks has also been assessed relative to safe biological limits, i.e. $F < F_{pa}$ and SSB > B_{pa} (Figure 7). Around 13% of the assessed stocks are fished at or below F_{MSY} target levels. The majority of stocks have unknown stock status.
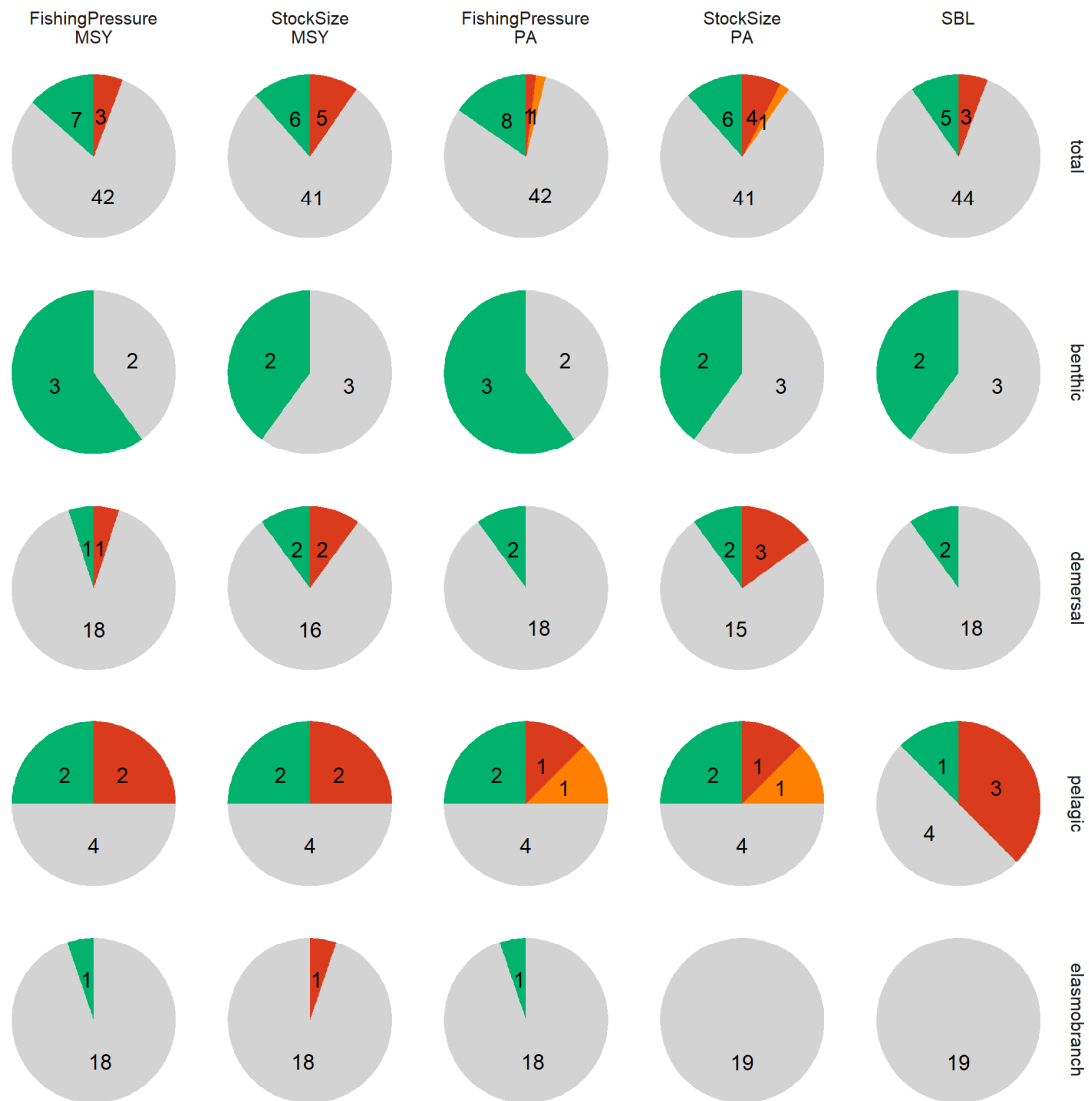
ICES Stock Assessment Database, November 2021. ICES, Copenhagen

Figure 7   Status summary of the Oceanic Northeast Atlantic stocks in 2021 relative to ICES maximum sustainable yield (MSY) and precautionary (PA) approaches (excluding European eel [ele.2737.nea], salmon, and sea trout). Grey represents reference points that could not be estimated. *For the MSY approach*: green represents a stock that is either fished below F_{MSY} or whose size is greater than MSY $B_{trigger}$; red represents a stock that is either fished above F_{MSY} or whose size is lower than MSY $B_{trigger}$. *For the PA*: green represents a stock that is fished at or below F_{pa} while its size is equal to or greater than B_{pa}; orange represents a stock that is either fished between F_{pa} and F_{lim} or whose size is between B_{lim} and B_{pa}; red represents a stock that is fished above F_{lim} or whose size is less than B_{lim}. Stocks with a fishing mortality at or below F_{pa} and a size above B_{pa} are defined as being inside safe biological limits. If this condition is not fulfilled, the stock is defined as being outside safe biological limits. For stock-specific information, see Table A1 in the Annex.

D3C1   D3C2

ICES Stock Assessment Database, November 2021. ICES, Copenhagen

Figure 8   Status summary of Oceanic Northeast Atlantic stocks in 2021 relative to the EU Marine Strategy Framework Directive (MSFD) assessment criteria of the level of pressure of fishing activity (D3C1) and reproductive capacity of the stock (D3C2). Green represents the proportion of stocks that are either fished below F_{MSY} or the stock size is greater than MSY $B_{trigger}$, for criteria D3C1 and D3C2. Red represents the proportion of stocks that are either fished above F_{MSY} or the stock size is lower than MSY $B_{trigger}$, for criteria D3C1 and D3C2. Grey represents the proportion of stocks without MSY reference points. For stock-specific information, see Table A1 in the Annex.

The Oceanic Northeast Atlantic ecoregion has 52 stocks for which ICES provided advice in 2021. These encompass the following categories: five benthic, 20 demersal, eight pelagic, and 19 elasmobranch stocks. Of these, the pelagic stocks are the best known, having the highest number of quantitative assessments with forecasts (ICES data category 1 stocks). Approximately 13% of the stocks ICES advises on are sustainably fished (i.e., D3C1 where $F < F_{MSY}$); these account for around 44% of the total landings in the ecoregion (Figure 8). Other groups, such as the elasmobranchs, have a more limited knowledge base. While these "data-limited stocks" account for the majority of stocks (79%), they only account for less than 3% of the total landings in the ecoregion (Figure 8). Around 12% of the stocks ICES advises on were assessed to be above MSY $B_{trigger}$ (D3C2); these accounted for around 93% of the total biomass caught in the ecoregion.

Clear trends show a declining fishing mortality ratio for category 1 benthic and demersal stocks since the mid-2000s (Figure 9). The mean fishing mortality is now at or below the F_{MSY} target. The SSB ratio shows an increasing trend over the same period and the mean values are now above MSY $B_{trigger}$. For pelagic stocks, the mean fishing mortality ratio showed an increasing trend to above one but has since declined towards the end of the time-series. This is strongly influenced by the deep pelagic beaked redfish stock. The mean biomass ratio for pelagic species is below one and has declined in the recent five years.
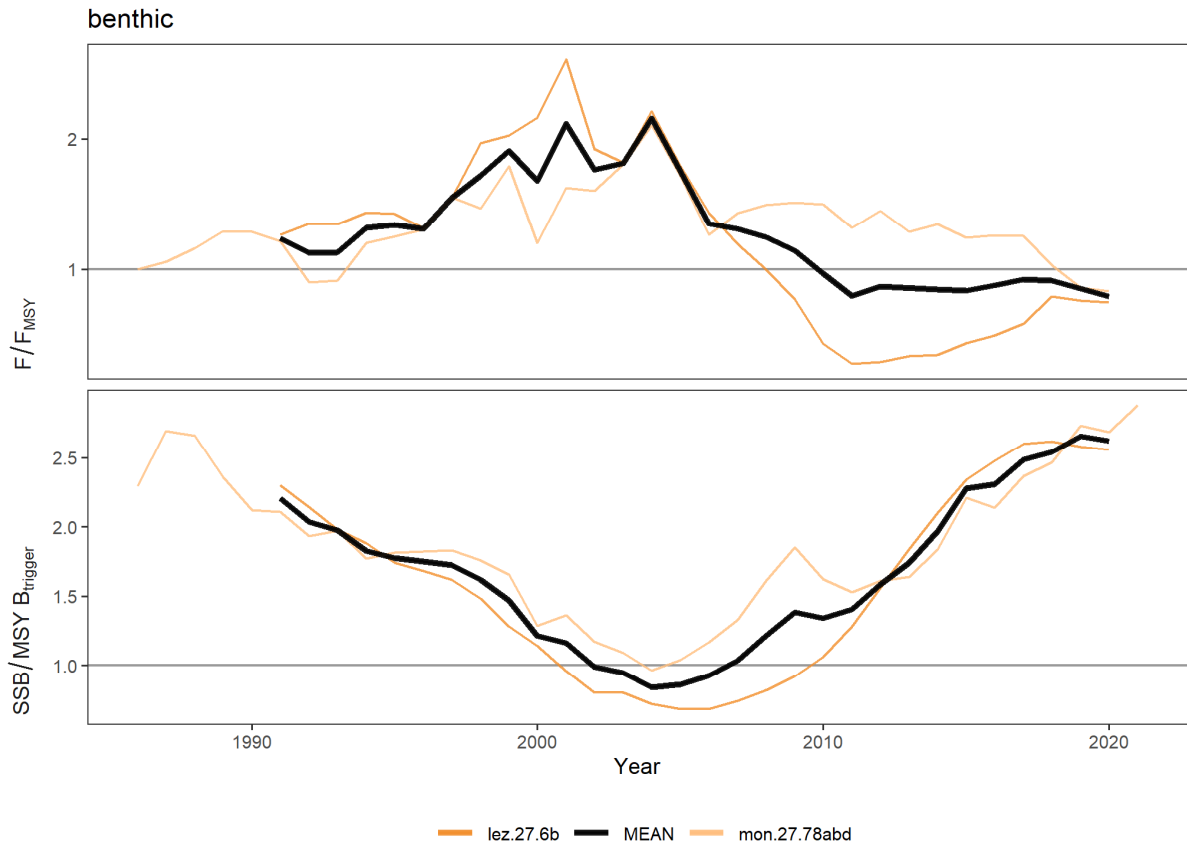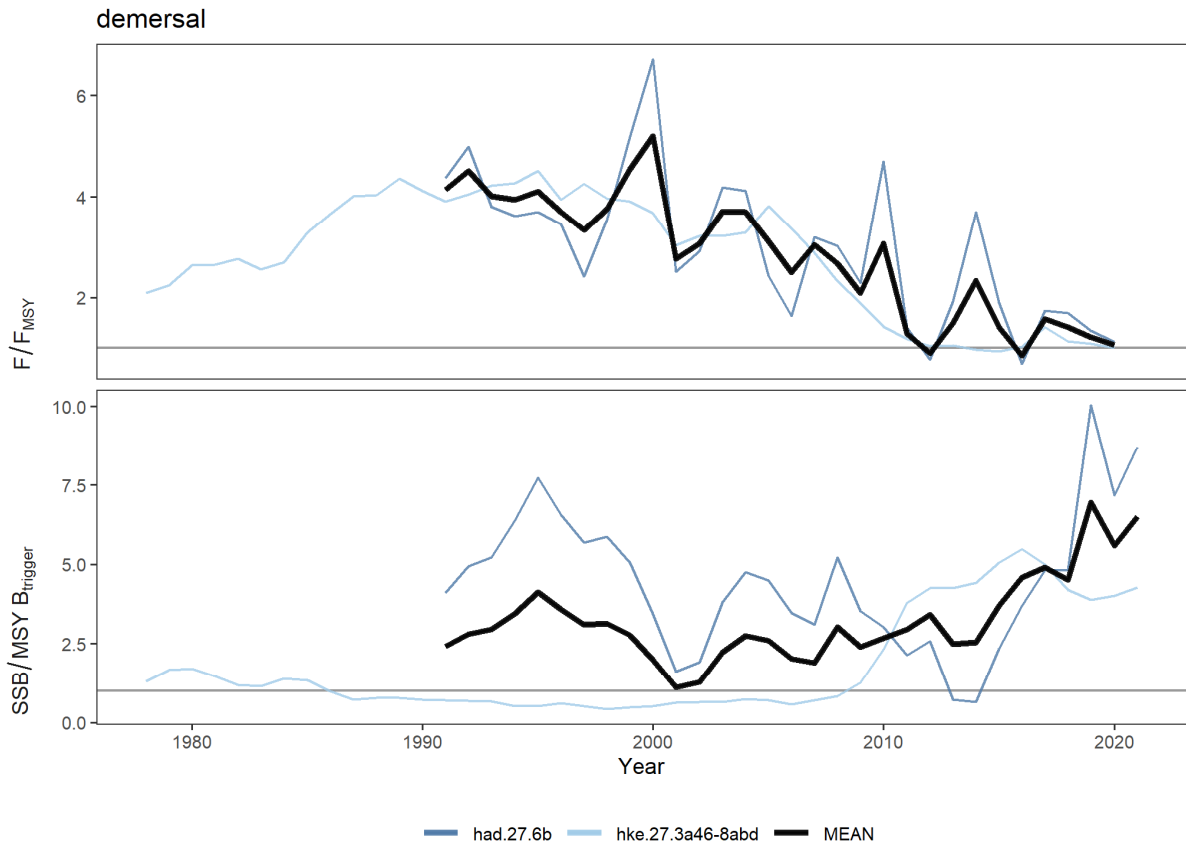
benthic

ICES Stock Assessment Database, November/2021. ICES, Copenhagen
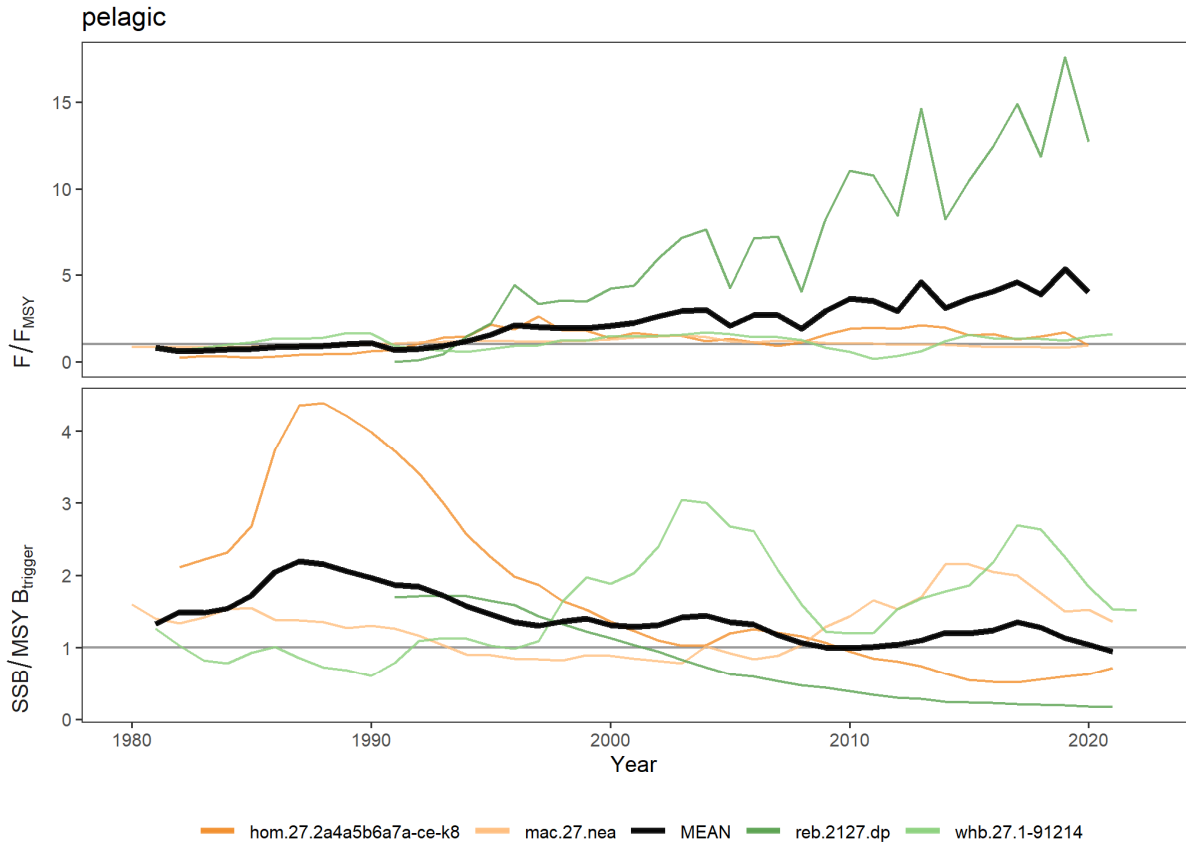
demersal

ICES Stock Assessment Database, November/2021. ICES, Copenhagen

Figure 9   Temporal trends in F/F_{MSY} and SSB/MSY $B_{trigger}$ for Oceanic Northeast Atlantic benthic, crustacean, demersal, and pelagic stocks. Only stocks with defined MSY reference points are considered. For full stock names, see Table A1 in the Annex.

The stock status relative to F_{MSY} and MSY $B_{trigger}$ is shown for all stocks and partitioned by stock groups in Figure 10. This shows that the hake stock (hke.27.3a46-8abd) SSB is almost five times higher than MSY $B_{trigger}$ and the stock is fished below F_{MSY}. Rockall haddock has an SSB well above MSY $B_{trigger}$ but F is slightly above F_{MSY}. Blue whiting and mackerel account for the highest landings. Fishing mortality for blue whiting is higher than F_{MSY}. Fishing mortality of the deep pelagic redfish remains too high and SSB is below MSY $B_{trigger}$.

All stocks

ICES Stock Assessment Database, November/2021. ICES, Copenhagen

benthic

ICES Stock Assessment Database, November/2021. ICES, Copenhagen

demersal

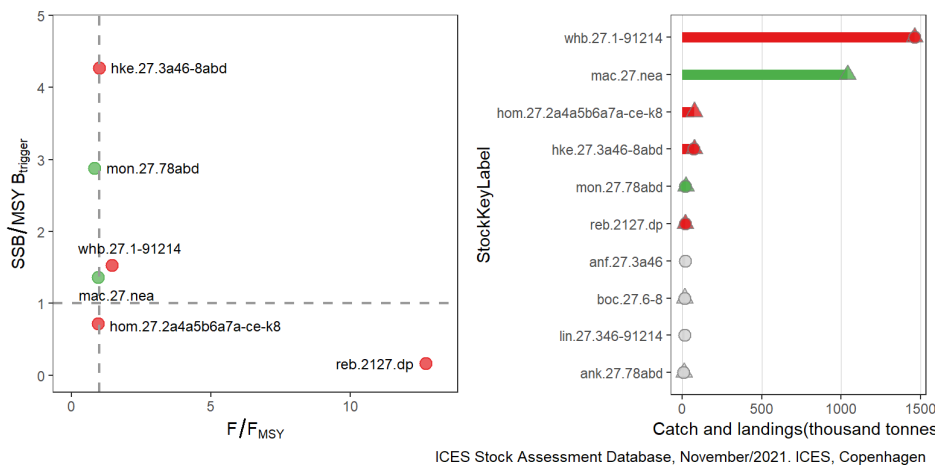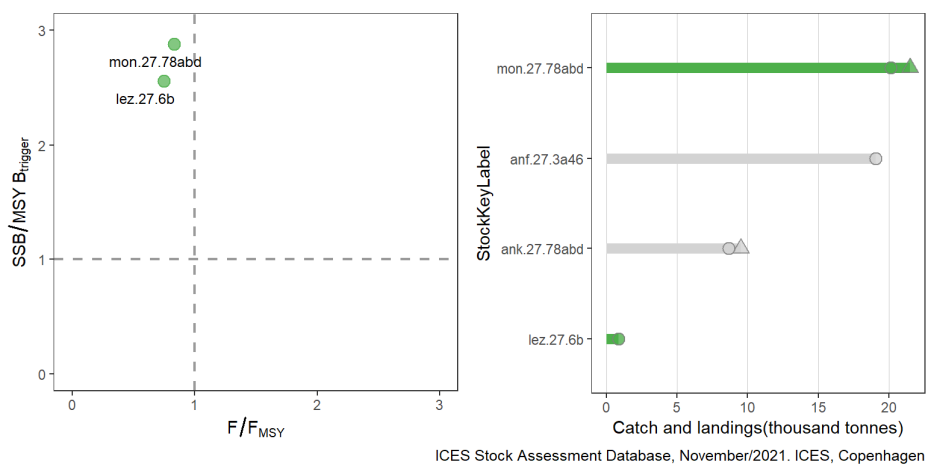ICES Stock Assessment Database, November/2021. ICES, Copenhagen

pelagic

ICES Stock Assessment Database, November/2021. ICES, Copenhagen
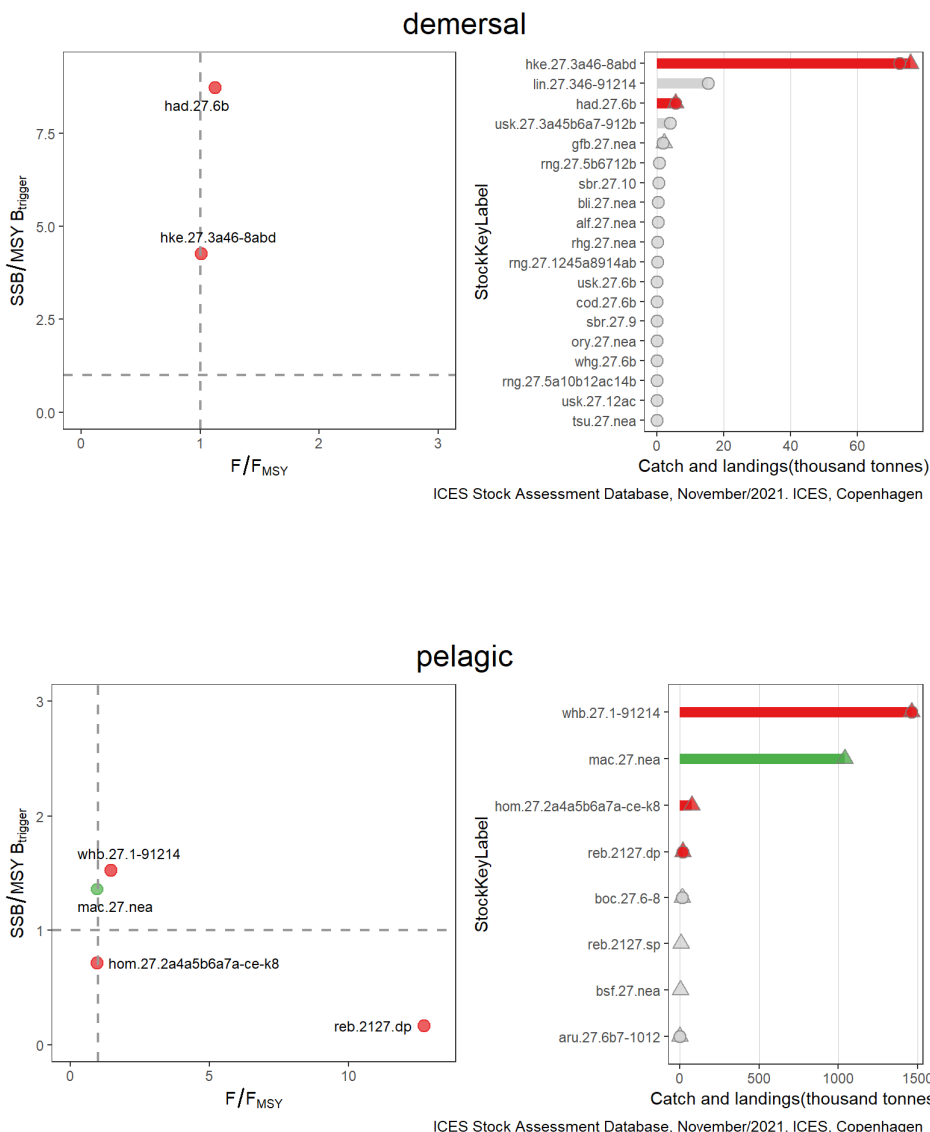
Figure 10   Status of Oceanic Northeast Atlantic stocks relative to the joint distribution of exploitation (F/F_{MSY}) and stock size (SSB/ MSY $B_{trigger}$ [left panels, by individual stocks]) and catches (triangles)/landings (circles) from these stocks in 2021 (right panels]). The left panels only include stocks for which MSY reference points have been defined (MSY where available). Stocks in green are exploited at or below F_{MSY} while their size is also at or above MSY $B_{trigger}$. Stocks in red are either exploited above F_{MSY} or their size is below MSY $B_{trigger}$ or both. Stocks in grey have unknown/undefined status in relation to reference points. "All stocks" refers to the ten stocks with highest catches and landings across fisheries guilds in 2020. For full stock names, see Table A1 in the Annex.

Mixed fisheries

The information on mixed fisheries in this ecoregion is limited. The available information relates to demersal fisheries on the Rockall bank targeting haddock and anglerfish. The main bycatch species in this fishery are ling, saithe, squid, and megrim, with smaller quantities of cod (cod.27.6b) and whiting (whg.27.6b). Anglerfish are also targeted in gillnet fishery, which has a bycatch mainly consisting of ling and ray species.

Effects of fisheries on the ecosystem

Abrasion of the seabed by mobile bottom-contacting fishing gears has been investigated to describe the extent, magnitude, and effects of fishing on benthic habitats (Figure 11). There is little activity by mobile bottom-contacting gears in much of the ecoregion; what is there is mostly located at the Hatton-Rockall plateau in the northeastern part of the ecoregion.

Cold-water coral species such as *Lophelia pertusa* have been reported from multiple sites across the ecoregion, including the Hatton and Rockall banks, Edoras Bank, Lousy Bank, and the Mid-Atlantic Ridge. Video records from three different sections along the Mid-Atlantic Ridge found some lost fishing gear in areas of coral, but no evidence of trawl-door tracks. Degraded or damaged cold-water coral reefs have been reported from existing fishing areas, and there is evidence of recent damage by bottom-trawl fisheries to cold-water corals on Rockall Bank.

The ecoregion has numerous seamounts. Some seamounts with summits at depths < 1500 m were explored for fisheries, but too few have been studied by video or photography to assess the state of the sessile benthic communities. Many seamounts are now protected by NEAFC closures and affected communities may be assumed to be recovering.

Average surface swept area ratio 2017-2020

Made with Natural Earth and ICES Marine Data

Average subsurface swept area ratio 2017-2020
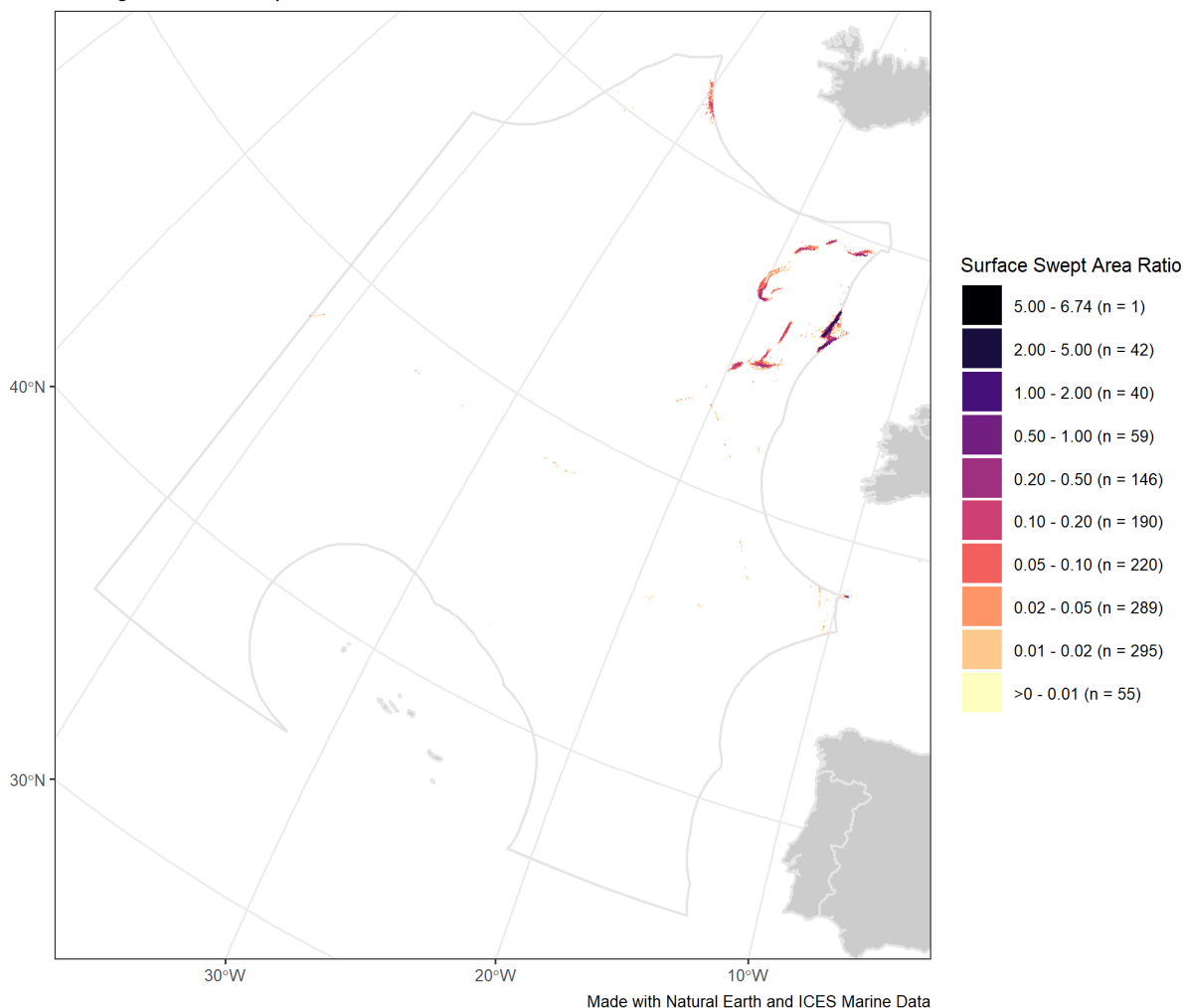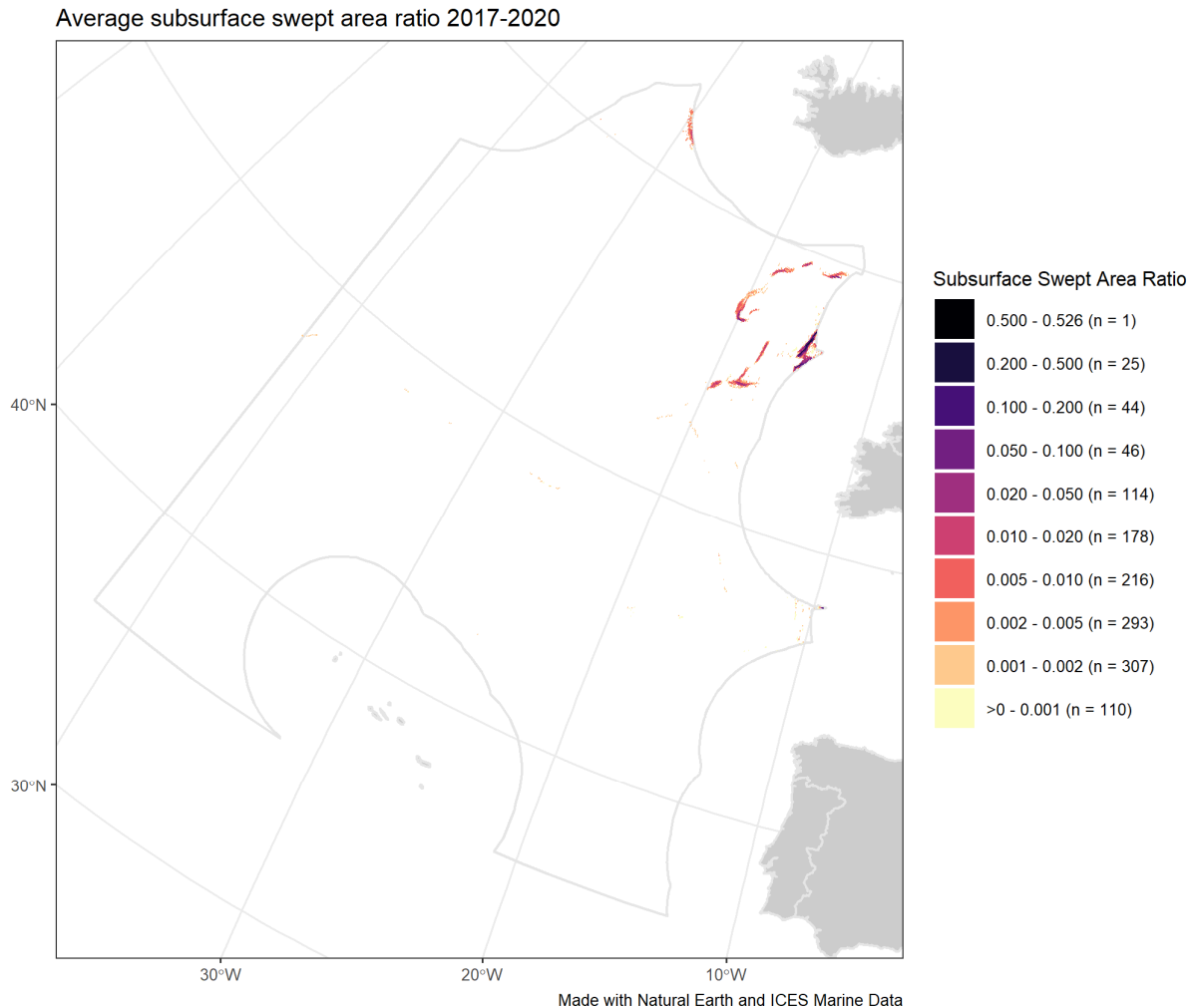
Figure 11　　Average annual surface (top) and subsurface (bottom) disturbance by mobile bottom-contacting fishing gear (bottom otter trawls, bottom seines, dredges, beam trawls) in the Oceanic Northeast Atlantic ecoregion, expressed as average swept-area ratios (SAR [note: the reported activity in the northwestern corner is most likely to be pelagic trawling)]. Surface disturbance is defined as affecting the top 2 cm of sediments and subsurface as > 2cm.

Bycatch of protected, endangered, and threatened species

ICES has previously advised zero catches in this ecoregion for stocks of rare or threatened species such as basking shark (bsk.27.nea), porbeagle (por.27.nea), angel shark, the common skate complex (rjb.27.67a-ce-k and rjb.27.89a), white skates, orange roughy, deep-water sharks (kitefin shark [sck.27.nea], leafscale gulper shark [guq.27.nea], Portuguese dogfish [cyo.27.nea]), and greater silver smelt (aru.27.6b7-1012). These stocks have been either targeted or bycaught in fisheries in the past and are now considered depleted. Information on these stocks is sparse, but they require special management attention to conserve remaining populations.

Furthermore, two additional sharks—blue shark (*Prionace glauca*) and shortfin mako (*Isurus oxyrinchus*)—are fully exploited or overfished.

Sources and references

ICES. 2021. Oceanic Northeast Atlantic Ecoregion Fisheries Overview – Data Outputs.
https://doi.org/10.17895/ices.data.9162

Recommended citation: ICES. 2021. Oceanic Northeast Atlantic ecoregion – Fisheries overview. *In* Report of the ICES Advisory Committee, 2021. ICES Advice 2021, section 13.2, https://doi.org/10.17895/ices.advice.9138.

Annex

Supporting data used in the Oceanic Northeast Atlantic Fisheries overview is archived at ICES (2021).

Table A1 Status summary of the Oceanic Northeast Atlantic stocks in 2021, in regard to ICES maximum sustainable yield (MSY) and precautionary (PA), approaches for stocks within the Celtic Seas ecoregion. Grey represents unknown reference points. *For the MSY approach*: green represents a stock that is fished below F_{MSY} or whoses size is greater than MSY $B_{trigger}$; red represents a stock status that is fished above F_{MSY} or whose size is less than MSY $B_{trigger}$. *For the PA*: green represents a stock that is fished below F_{pa} or whose size is greater than B_{pa}; yellow represents a stock that is fished between F_{pa} and F_{lim} or whose size is between B_{lim} and B_{pa}; red represents a stock that is fished above F_{lim} or whose size is less than B_{lim}. SBL = Safe Biological Limits; MSFD = EU Marine Strategy Framework Directive; D3C1 = MSFD indicator for fishing mortality; D3C2 = MSFD indicator for spawning-stock biomass; GES = good environmental status.

Stock name	Stock description	Fisheries guild	Data category	Assessment year	Advice category	SBL	GES	Reference point	Fishing pressure	Stock size	D3C1	D3C2
ank.27.78abd	Black-bellied anglerfish in Subarea 7 and divisions 8.a-b and 8.d	Benthic	3.2	2021	PA	?	?	Maximum sustainable yield	✓	?	✓	?
								Precautionary approach	✓	?	✓	?
bli.27.nea	Blue ling in Subareas 1, 2, 8, 9, and 12, and Divisions 3.a and 4.a	Demersal	5.3	2019	PA	?	✗	Maximum sustainable yield	?	✗	?	✗
								Precautionary approach	?	✗	?	✗
dgs.27.nea	Spurdog in Subareas 1-10, 12 and 14	Elasmobranch	1.2	2020	MSY/PA	?	✗	Maximum sustainable yield	✓	✗	✓	✗
								Precautionary approach	✓	?	✓	?

Stock name	Stock description	Fisheries guild	Data category	Assessment year	Advice category	SBL	GES	Reference point	Fishing pressure	Stock size	D3C1	D3C2
ele.2737.nea	European eel throughout its natural range	Demersal	3.14	2021	PA	❓	❌	Maximum sustainable yield	❓	❌	❓	❌
								Precautionary approach	❓	❌	❓	❌
had.27.6b	Haddock in Division 6.b	Demersal	1	2021	MSY	✅	❌	Maximum sustainable yield	❌	✅	❌	✅
								Precautionary approach	✅	✅	✅	✅
hke.27.3a46-8abd	Hake in subareas 4, 6, and 7, and divisions 3.a, 8.a-b, and 8.d, Northern stock	Demersal	1	2021	MSY	✅	✅	Maximum sustainable yield	✅	✅	✅	✅
								Precautionary approach	✅	✅	✅	✅
hom.27.2a4a5b6a7a-ce-k8	Horse mackerel in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a-c,e-k	Pelagic	1	2021	MSY	❌	❌	Maximum sustainable yield	✅	❌	✅	❌
								Precautionary approach	✅	🟡	✅	🟡
lez.27.6b	Megrim in Division 6.b	Benthic	2.11	2021	MSY	✅	✅	Maximum sustainable yield	✅	✅	✅	✅
								Precautionary approach	✅	✅	✅	✅

Stock name	Stock description	Fisheries guild	Data category	Assessment year	Advice category	SBL	GES	Reference point	Fishing pressure	Stock size	D3C1	D3C2
mac.27.nea	Mackerel in subareas 1-8 and 14 and division 9.a	Pelagic	1	2021	MSY	✓	✓	Maximum sustainable yield	✓	✓	✓	✓
								Precautionary approach	✓	✓	✓	✓
mon.27.78abd	White anglerfish in Subarea 7 and divisions 8.a-b and 8.d	Benthic	1	2021	MSY	✓	✓	Maximum sustainable yield	✓	✓	✓	✓
								Precautionary approach	✓	✓	✓	✓
ory.27.nea	Orange roughy in subareas 1-10, 12 and 14	Demersal	6.3	2020	PA	?	?	Maximum sustainable yield	?	?	?	?
								Precautionary approach	?	✗	?	✗
reb.2127.dp	Beaked redfish in ICES subareas 5, 12, and 14 and NAFO subareas 1 and 2	Pelagic	2.13	2021	MSY	✗	✗	Maximum sustainable yield	✗	✗	✗	✗
								Precautionary approach	✗	✗	✗	✗
whb.27.1-91214	Blue whiting in subareas 1-9, 12, and 14	Pelagic	1	2021	MP	✗	✗	Maximum sustainable yield	✗	✓	✗	✓
								Precautionary approach	O	✓	O	✓

Table A2   List of stocks in the Oceanic North Atlantic ecoregion in 2021 that do not have a full set of reference points.

Stock name	Stock description	Latin name	Fisheries guild	Data category	Assessment year	Advice category
alf.27.nea	Alfonsinos in subareas 1-10, 12 and 14	*Beryx*	Demersal	5.2	2020	PA
anf.27.3a46	Anglerfish in Subareas 4 and 6, and Division 3.a	*Lophius budegassa, Lophius piscatorius*	Benthic	3.2	2021	PA
aru.27.6b7-1012	Greater silver smelt in subareas 7-10 and 12, and Division 6.b	*Argentina silus*	Pelagic	3.2	2021	PA
boc.27.6-8	Boarfish in subareas 6-8	*Capros aper*	Pelagic	3.2	2021	PA
bsf.27.nea	Black scabbardfish in subareas 1, 2, 4-8, 10, and 14, and divisions 3.a, 9.a, and 12.b	*Aphanopus carbo*	Pelagic	3.2	2020	PA
bsk.27.nea	Basking shark in Subareas 1-10, 12 and 14	*Cetorhinus maximus*	Elasmobranch	6.3	2019	PA
cod.27.6b	Cod in Division 6.b	*Gadus morhua*	Demersal	6.2	2020	PA
cyo.27.nea	Portuguese dogfish in subareas 1-10, 12 and 14	*Centrophorus squamosus, Centroscymnus coelolepis*	Elasmobranch	6.3	2019	PA
gag.27.nea	Tope in subareas 1-10, 12 and 14	*Galeorhinus galeus*	Elasmobranch	5.2	2021	PA

Stock name	Stock description	Latin name	Fisheries guild	Data category	Assessment year	Advice category
gfb.27.nea	Greater forkbeard in subareas 1-10, 12 and 14	*Phycis blennoides*	Demersal	3.2	2020	PA
guq.27.nea	Leafscale gulper shark in subareas 1-10, 12 and 14	*Centrophorus squamosus*	Elasmobranch	6.3	2019	PA
ldb.27.7b-k8abd	Four-spot megrim in divisions 7.b-k, 8.a-b, and 8.d	*Lepidorhombus boscii*	Benthic	5.2	2021	PA
lin.27.346-91214	Ling in subareas 3,4, 6–9, 12, and 14	*Molva molva*	Demersal	3.2	2021	PA
por.27.nea	Porbeagle in subareas 1-10, 12 and 14	*Lamna nasus*	Elasmobranch	6.3	2019	PA
raj.27.67a-ce-h	Other rays and skates in Subarea 6 and divisions 7.a-c and 7.e-h	*Rajidae*	Elasmobranch	6.9	2020	No advice
raj.27.89a	Other rays and skates in Subarea 8 and Division 9.a	*Rajidae*	Elasmobranch	5.9	2020	No advice
reb.2127.sp	Beaked redfish in ICES subareas 5, 12, and 14 and NAFO subareas 1 and 2	*Sebastes mentella*	Pelagic	3	2021	PA
rhg.27.nea	Roughhead grenadier in subareas 5-8, 10, 12 and 14	*Macrourus berglax*	Demersal	6.3	2020	PA

Stock name	Stock description	Latin name	Fisheries guild	Data category	Assessment year	Advice category
rjb.27.67a-ce–k	Common skate complex and flapper skate in Subarea 6 and divisions 7.a–c and 7.e–k	*Dipturus batis*	Elasmobranch	6.3	2020	PA
rjb.27.89a	Common skate complex and flapper skate in Subarea 8 and Division 9.a	*Dipturus batis*	Elasmobranch	6.3	2020	PA/Stock status only
rjc.27.6	Thornback ray in Subarea 6	*Raja clavata*	Elasmobranch	3.2	2020	PA
rjc.27.8	Thornback ray in Subarea 8	*Raja clavata*	Elasmobranch	3.2	2020	PA
rjf.27.67	Shagreen ray in subareas 6-7	*Leucoraja fullonica*	Elasmobranch	5.2	2020	PA
rji.27.67	Sandy ray in subareas 6-7	*Leucoraja circularis*	Elasmobranch	5.2	2020	PA
rjm.27.67bj	Spotted ray in Subarea 6 and divisions 7.b and 7.j	*Raja montagui*	Elasmobranch	3.2	2020	PA
rng.27.1245a8914ab	Roundnose grenadier in subareas 1, 2, 4, 8, and 9, Division 14.a, and in subdivisions 14.b.2 and 5.a.2	*Coryphaenoides rupestris*	Demersal	6.2	2019	PA
rng.27.5a10b12ac14b	Roundnose grenadier in Divisions 10.b and 12.c, and Subdivisions 12.a.1, 14.b.1, and 5.a.1	*Coryphaenoides rupestris*	Demersal	5.2	2019	PA

Stock name	Stock description	Latin name	Fisheries guild	Data category	Assessment year	Advice category
rng.27.5b6712b	Roundnose grenadier in subareas 6-7 and divisions 5.b and 12.b	*Coryphaenoides rupestris*	Demersal	5.2	2020	PA
sbr.27.10	Blackspot seabream in Subarea 10	*Pagellus bogaraveo*	Demersal	3.2	2021	PA
sbr.27.9	Blackspot seabream in Subarea 9	*Pagellus bogaraveo*	Demersal	3.2	2020	PA
sck.27.nea	Kitefin shark in subareas 1-10, 12 and 14	*Dalatias licha*	Elasmobranch	6.3	2019	PA
sdv.27.nea	Smooth-hound in subareas 1-10, 12 and 14	*Mustelus asterias*	Elasmobranch	3.2	2021	PA
sho.27.67	Black-mouth dogfish in subareas 6 and 7	*Galeus melastomus*	Elasmobranch	3.9	2021	PA
syt.27.67	Greater-spotted dogfish in subareas 6 and 7	*Scyliorhinus stellaris*	Elasmobranch	3.9	2021	No advice
tsu.27.nea	Roughsnout grenadier in subareas 1-2, 4-8, 10, 12, 14 and Division 3a	*Trachyrincus scabrus*	Demersal	6.3	2020	PA
usk.27.12ac	Tusk in Subarea 12, excluding Division 12.b	*Brosme brosme*	Demersal	6.3	2019	PA

Stock name	Stock description	Latin name	Fisheries guild	Data category	Assessment year	Advice category
usk.27.3a45b6a7-912b	Tusk in subareas 4 and 7-9 and divisions 3.a, 5.b, 6.a, and 12.b	*Brosme brosme*	Demersal	3.2	2021	PA
usk.27.6b	Tusk in Division 6.b	*Brosme brosme*	Demersal	5.2	2020	PA
whg.27.6b	Whiting in Division 6.b	*Merlangius merlangus*	Demersal	6.2	2021	PA

Table A3   Scientific names of species.

Common name	Scientific name
Albacore tuna	*Thunnus alalunga*
Angel shark	*Squatina squatina*
Alfonsinos	*Beryx* spp.
Anglerfish	*Lophius* spp.
Baird's slickhead	*Alepocephalus bairdii*
Basking shark	*Cetorhinus maximus*
Birdbeak dogfish	*Deania calcea*
Black-bellied anglerfish	*Lophius budegassa*
Black-mouth dogfish	*Galeus melastomus*
Black scabbardfish	*Aphanopus carbo*
Blackspot sea bream	*Pagellus bogaraveo*
Blonde ray	*Raja brachyuran*
Blue ling	*Molva dypterygia*
Blue whiting	*Micromesistius poutassou*
Boarfish	*Capros aper*
Brown crab	*Cancer pagurus*
Clam	*Spisula*
Cockle	*Cerastoderma edule*
Cod	*Gadus morhua*
Common dolphin (Long-finned)	*Delphis delphinus*
Common skate	*Dipturus batis*-complex (includes flapper skate *Dipturus cf. flossada*) and blue skate *Dipturus cf. intermedia*
Cuckoo ray	*Leucoraja naevus*
Cuttlefish	*Sepia officinalis*
European eel	*Anguilla anguilla*
Four-spot megrim	*Lepidorhombus boscii*
Great lanternshark	*Etmopterus princeps*
Greater forkbeard	*Phycis blennoides*
Greenland halibut	*Reinhardtius hippoglossoides*
Greater silver smelt	*Argentina silus*
Greater-spotted dogfish	*Scyliorhinus stellaris*
Haddock	*Melanogrammus aeglefinus*
Harbour porpoise	*Phocoena phocoena*
Herring	*Clupea harengus*
Hake	*Merluccius merluccius*
Horse mackerel	*Trachurus trachurus*
Kitefin shark	*Dalatias licha*
Leafscale gulper shark	*Centrophorus squamosus*
Lesser-spotted dogfish	*Scyliorhinus canicula*
Ling	*Molva molva*
Lobster	*Homarus gammarus*
Mackerel	*Scomber scombrus*
Megrim	*Lepidorhombus whiffiagonis*
Megrims	*Lepidorhombus* spp.
Norway lobster	*Nephrops norvegicus*
Norway pout	*Trisopterus esmarkii*
Norwegian skate	*Dipturus nidarosiensis*
Orange roughy	*Hoplostethus atlanticus*
Oyster	*Ostrea edulis*
Plaice	*Pleuronectes platessa*
Pollack	*Pollachius pollachius*
Porbeagle	*Lamna nasus*
Portuguese dogfish	*Centroscymnus coelolepis*
Queen scallop	*Chlamys opercularis*
Rays and skates	*Rajidae*
Razor clam	*Ensis magnus*

Common name	Scientific name
Red gurnard	*Chelidonichthys cuculus*
Roughhead grenadier	*Macrourus berglax*
Roughsnout grenadier	*Trachyrincus scabrous*
Roundnose grenadier	*Coryphaenoides rupestris*
Saithe	*Pollachius virens*
Salmon	*Salmo salar*
Sandy ray	*Leucoraja circularis*
Sardine	*Sardina pilchardus*
Sea bass	*Dicentrarchus labrax*
Sea trout	*Salmo trutta*
Shagreen ray	*Leucoraja fullonica*
Small-eyed ray	*Raja microocellata*
Smooth-hound	*Mustelus* spp.
Smooth lanternshark	*Etmopterus pusillus*
Sole	*Solea solea*
Spotted ray	*Raja montagui*
Sprat	*Sprattus sprattus*
Spurdog (Piked dogfish)	*Squalus acanthias*
Starry ray	*Amblyraja radiate*
Striped red mullet	*Mullus surmuletus*
Thornback ray	*Raja clavata*
Thorny skate	*Amblyraja radiate*
Thresher sharks	*Alopias* spp.
Tope	*Galeorhinus galeus*
Tusk	*Brosme brosme*
Undulate ray	*Raja undulata*
White anglerfish	*Lophius piscatorius*
White skate	*Rostroraja alba*
Whelk	*Buccinum undatum*
Whiting	*Merlangius merlangus*