Natural capital

# Marine fish stocks

| Indicator | EU indicator past trend | Selected objective to be met by 2020 | Indicative outlook of the EU meeting the selected objective by 2020 |
|---|---|---|---|
| Status of marine fish stocks |  | Ensure healthy fish stocks — Common Fisheries Policy and Marine Strategy Framework Directive |  |
| The EU is improving the state of its commercial fish species in only North-east Atlantic and Baltic waters. As the 2020 objective of healthy commercial fish populations applies to all marine waters, it is unlikely to be met | | | |

The Seventh Environment Action Programme (7th EAP), in line with the Marine Strategy Framework Directive (MSFD), requires the EU to meet its 2020 objective of achieving good environmental status (GES) of the marine environment, which means that the different uses made of Europe's seas are conducted at a sustainable level. Fishing is one of the main pressures affecting GES, in particular the state of commercial fish species. Historically, fishing beyond sustainable levels has made it difficult to reach the objective of healthy fish populations. Currently, around 58 % of fish stocks in Europe's seas are not in GES. The situation has started to improve, albeit with strong regional differences. In the North-East Atlantic Ocean and the Baltic Sea, clear signs of the recovery of fish stocks have been visible since the early 2000s. In the Mediterranean and Black Seas, the situation remains critical given the prevalence of overfishing and a significant lack of knowledge on the status of fish stocks. Given this context, the 2020 objective of healthy fish populations is unlikely to be met for all of Europe´s seas, and further collective action is required.

For further information on the scoreboard methodology please see Box I.1 in the EEA Environmental indicator report 2016

# Setting the Scene

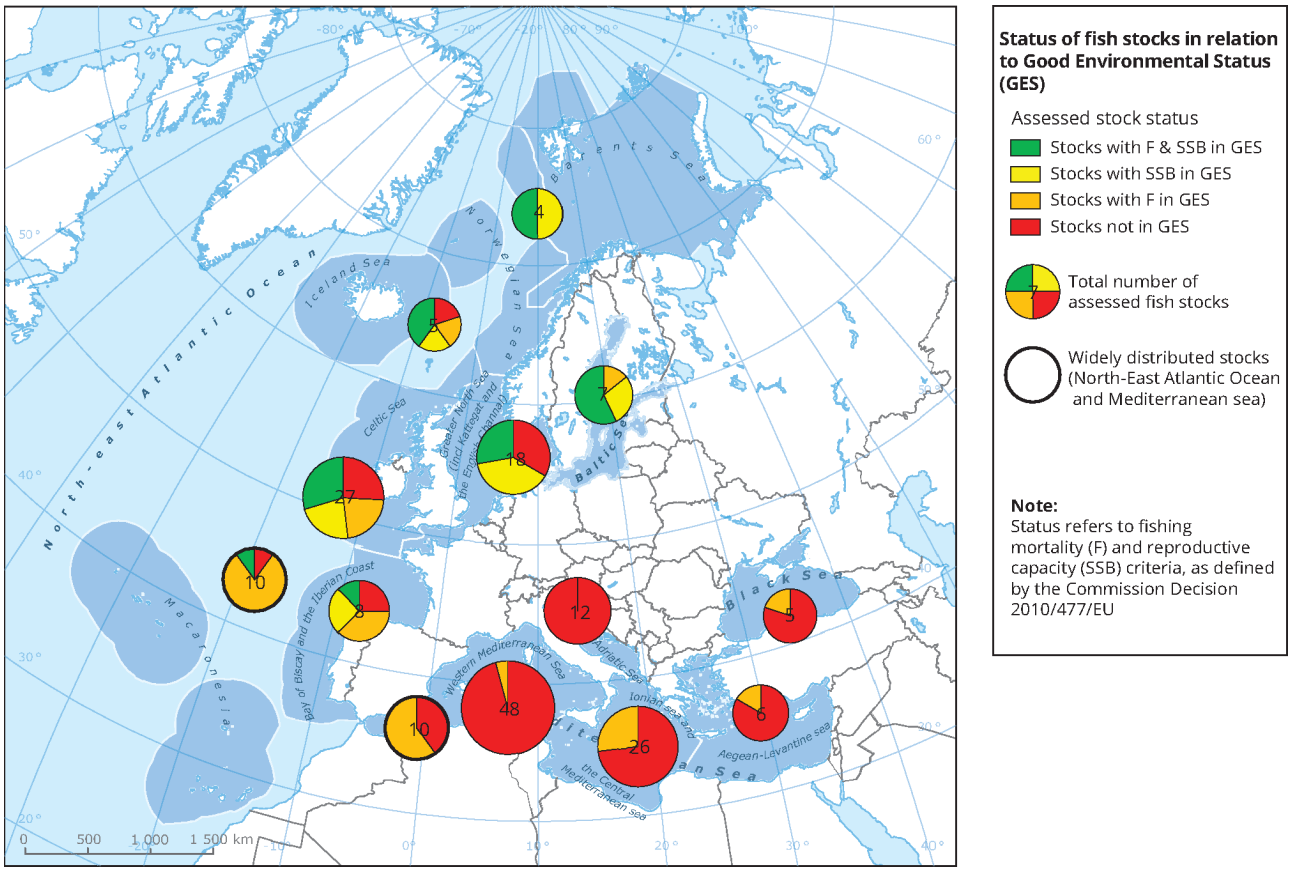
The 7th EAP stipulates that the EU shall ensure that by 2020 the impact of pressures on all marine waters is reduced to achieve or maintain GES, as required by the MSFD (EU, 2013a). Fishing is one of the main pressures affecting the marine environment, in particular the state of commercial fish species. Ensuring healthy fish populations is essential for well-functioning ecosystems, but also to sustain fishing as a source of healthy food in the long term.

# Policy targets and progress

Safeguarding healthy commercial fish populations is one of the 11 descriptors of the MSFD (EU, 2008) for achieving GES. This objective is closely related to the objectives of the new Common Fisheries Policy (CFP) (EU, 2013b), in particular the objective of ensuring the maximum sustainable yield (MSY) for all stocks by 2015 where possible, and at the latest by 2020.

Currently, around 58 % of the assessed fish stocks in Europe's seas are not in GES, whereas only 12 % of fish stocks are in GES when assessing both the level of fishing mortality and reproductive capacity (EEA, 2015a). In addition, there are strong regional differences, as shown in Figure 1. The status of fish stocks is especially critical in the Mediterranean and Black Seas.

## Figure 1. Status of fish stocks in regional seas around Europe

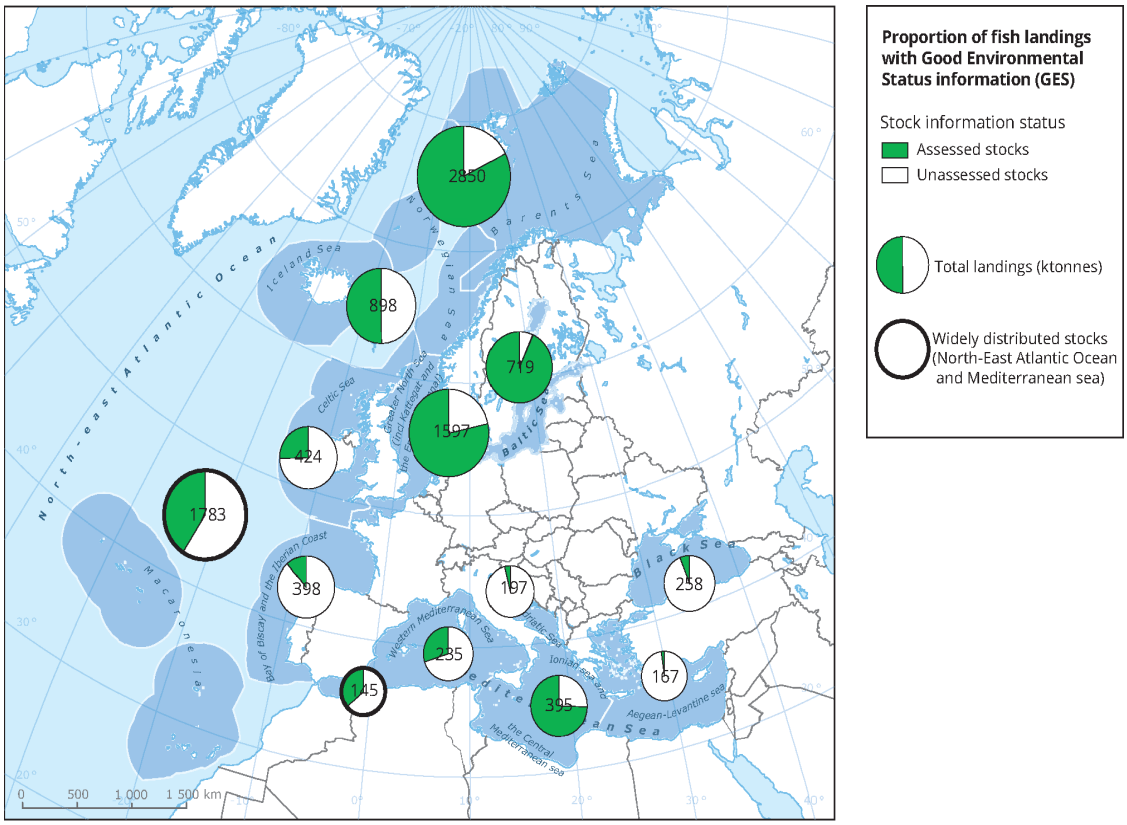



**Note:**
This figure shows the proportion of assessed stocks per regional sea that are in good environmental status (GES). The numbers on the charts indicate the number of fish stocks. Status refers to fishing mortality (F) and reproductive capacity (SSB) criteria, as defined by the Commission Decision 2010/477/EU, which sets criteria and methodological standards on GES of marine waters. The GES criterion on healthy age- and size-distribution cannot be assessed at present. Stocks in the Northeast Atlantic and Baltic waters were assessed based on advice from the International Council for the Exploration of the Sea (ICES) for 2013. Stocks in the Mediterranean and Black seas, and widely distributed stocks, were most recently assessed by the General Fisheries Commission for the Mediterranean (GFCM) and the International Commission for the Conservation of Atlantic Tunas (ICCAT) respectively, which varied between 2008 and 2012.

**Source:** Black Sea stock assessment , Mediterranean stock assessments , North-East Atlantic Ocean and Baltic sea stock assessments
Provided by Scientific, Technical and Economic Committee for Fisheries (STECF)

Moreover, a lack of information on the status of stocks was observed for a large (40 %) proportion of fish stocks (EEA, 2015a). Figure 2 shows that there are also strong regional differences in terms of availability of information. An assessment of status is not possible for 68 % of the total landings from the Mediterranean and Black Seas, compared with 35 % of those from the North-East Atlantic Ocean and Baltic Sea (EEA, 2015b).

## Figure 2. Proportion of fish landings with Good Environmental Status information




**Note:**
This figure shows the proportion of commercial fish landings per regional sea with GES assessment information, as defined by Commission Decision 2010/477/EU, which sets criteria and methodological standards on the GES of marine waters. GES assessment information relates to fishing mortality (F) and reproductive capacity (SSB) criteria, since the criterion on healthy age- and size-distribution cannot be assessed at present. Landings data for all fish stocks are from 2010, given the availability of data for the Mediterranean and Black Seas.

**Source:** Black Sea stock assessment , Mediterranean stock assessments , North-East Atlantic Ocean and Baltic sea stock assessments
Provided by Scientific, Technical and Economic Committee for Fisheries (STECF) .

It is clear that the overall use of fish stocks in Europe currently remains beyond the limit for long-term environmental sustainability. Historical trends in fish landings show that total landings in Europe's seas reached a peak in the mid-1970s, but have been mostly declining ever since (Pastoors and Poulsen, 2008; Gascuel et al., 2014). The observed consistent decrease in landings suggests that the overall levels of exploitation remain too high for ensuringhealthy populations of commercial fish.

Important signs of improvement are being observed in the North-East Atlantic Ocean and Baltic Sea. Since the early 2000s, better management of fish stocks has contributed to a clear decrease in fishing pressure in these two regional seas (EEA, 2015b; EC, 2015). Between 2002 and 2015, the number of stocks exploited at sustainable levels (i.e. fishing at or below MSY)

increased from 2 to 26 (EC, 2015). Signs of recovery in the reproductive capacity of several fish stocks have started to appear (EEA, 2015a). If these efforts continue, meeting the 2020 objective for healthy fish stocks in the North-East Atlantic Ocean and Baltic Sea could be possible. In contrast, there is little likelihood that the 2020 policy objective will be met in the Mediterranean and Black Seas (EC, 2015). Given this, despite the EU's commitment to ensuring better governance for sustainable fisheries in the Mediterranean region, the 2020 objective of healthy commercial fish populations is unlikely to be met for all marine waters and further collective action is required.

## Outlook beyond 2020

Fishing management measures, when effectively implemented, can have a positive effect on the state of fish stocks, as can be seen in the North-East Atlantic Ocean and Baltic Sea. However, ensuring healthy fish populations does not depend solely on fishing at environmentally sustainable levels, although it is a necessary condition. Healthy fish populations depend on healthy marine ecosystems but, today, our use of Europe's seas and their natural capital is not sustainable (EEA, 2015b). Europe's marine ecosystems continue to display symptoms of degradation and loss of resilience, which will be exacerbated by the effects of climate change. These systemic changes are still complex and to a large extent poorly understood, but they are closely linked to the loss of biodiversity. Without an integrated approach to the management and protection of Europe's seas — which would make ecosystem-based management a reality, as required by both the MSFD and the CFP — the outlook beyond 2020 for productive seas and healthy fish populations calls for concern.

## About the indicator

The indicator assesses the status of fish stocks in Europe's regional seas, which represent the populations of commercial fish and shellfish species, in relation to their GES. The indicator also provides an overview of the availability of information to provide a GES analysis. The indicator follows the GES methodological standards as currently defined by Commission Decision 2010/477/EU (EC, 2010). It measures GES by assessing two criteria — the level of fishing mortality (i.e. fishing pressure) and the reproductive capacity of fish stocks (i.e. spawning stock biomass) — against their sustainable reference levels (i.e. MSY or a proxy). The third GES criterion on healthy age and size distribution cannot be assessed at present. The indicator reflects the current level of implementation of the MSFD and data availability for an assessment at the EU level.

# Footnotes and references

EU, 2008, Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19).

EC, 2010, Commission Decision of 1 September 2010 on criteria and methodological standards on good environmental status of marine waters, 2010/477/EU (OJ L 232, 2.9.2010, p.14).

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EU, 2013b, Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (OJ L 354/22, 28.12.2013, p. 22–61).

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