Are we approaching MSY in 2020? Focus on commercial fish stocks important to Belgian fisheries

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The European Common Fisheries Policy (CFP; EU regulation No 1380/2013; 2015/812) states that a Maximum Sustainable Yield (MSY) should be ensured for all commercial fish stocks by 2020. We investigated the status and progress in 2017 for the most important stocks to the Belgian commercial fishing fleet, using the information provided by ICES.

The Belgian commercial fishing fleet, consisting of 68 vessels, is active on five different fishing grounds (North Sea, English Channel and Western waters, *i.e.* Irish Sea, Celtic Sea, Bay of Biscay). Using mostly beam trawls, the fleet focusses on demersal fish species. In 2016, the most important fish stocks in terms of **catch** were North Sea plaice, sole, turbot, brill, cod and Norway lobster, English Channel plaice and sole and Western waters anglerfish, rays and sole. Sole in the Bay of Biscay should be added to this list, when identifying important stocks in terms of **value**. Although fishing this stock is only allowed in summer, the resulting catches account for a substantial value. When ranking the stocks based on the share of Belgium in the Total Allowable Catch (TAC), *i.e.* **quota**, the most important stocks are North Sea turbot, brill and rays, English Channel plaice, sole and rays, Western waters plaice, sole, rays and anglerfish. The stock status was evaluated using the MSY reference points (for data rich ICES category 1 stocks) or MSY proxies (for data poor ICES category 3 stocks) when available. For stocks with only catch statistics (data poor ICES category 5), an MSY evaluation is not possible. These stocks were excluded from the analysis.

For seven of the stocks listed above, the fishing mortality rate (F) is not more than F_{MSY} (the upper bound of the sustainable level), and the spawning stock biomass (SSB) is maintained above MSY $B_{trigger}$ (the lower bound of the sustainable level). Consequently, North Sea plaice, turbot and brill, Eastern and Western English Channel plaice and Western waters sole (ICES area 27.7h-k) and plaice (ICES area 27.7fg) currently comply with the MSY objective of the CFP. Additionally, four stocks (North Sea cod and sole and Western waters sole (ICES area 27.7fg and 27.8ab)) have a SSB that is above MSY $B_{trigger}$, but a F is that is still too high. For sole in the Eastern English Channel and in the Irish Sea, the F is below F_{MSY}, but the SSB is still too low. The stock status of Norway lobster, anglerfish and rays is either unknown due to the lack of information or complex due to the stock delineation. Overall, most fish stocks important to the Belgian fleet are at or moving towards sustainable exploitation. However, stock status can vary from year to year, affected by various factors. The North Sea cod stock for example is characterised by a slow recovery since the historical low biomass in 2006. Reasons are socio-economically driven management measures causing F to remain above F_{MSY}. Also climate and biological aspects play a role, e.g. increasing predation pressure, cannibalism, lower survival of eggs and larvae and food availability. Therefore, continued action should be taken to obtain and maintain sustainably fished stocks by 2020.

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