

**Wolffish in Subarea 1**

Advice June 2020 for 2021 - 2023

**Recommendation for 2021 - 2023**

Atlantic wolffish: The Scientific Council advises that there should be no directed fishery.

Spotted wolffish: The Scientific Council advises that the TAC should not exceed 1158 tonnes.

**Management objectives**

No explicit management plan or management objectives have been defined by the Government of Greenland.

**Management unit**

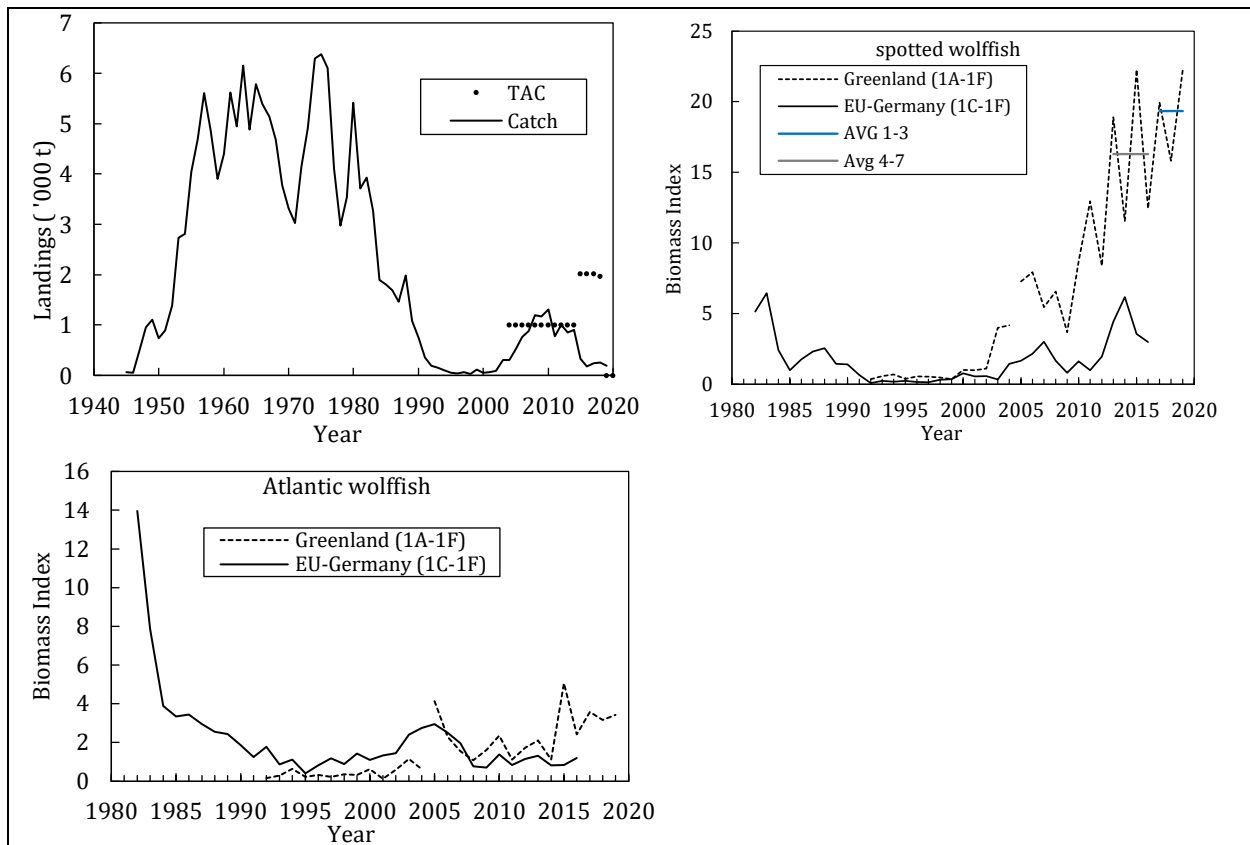
Atlantic wolffish is known to be more connected to the offshore banks in South and West Greenland and is considered a single unit.

Spotted wolffish is found in all areas, both inshore and offshore, but is known to be the dominating species in the coastal regions and the fjords in South, West and North Greenland. It is presumed to be a single stock.

**Stock status**

Atlantic wolffish: The survey biomass and abundance indices continued to increase in the Greenland Shrimp and Fish survey; however, the EU-Germany indices remain low (to 2016). As the EU-Germany survey and the Greenland shrimp and fish survey in the overlapping period were around the same level, it seems reasonable to assume that the biomass remains below the level of the 1980s.

Spotted wolffish: Survey indices suggest continued stock growth. Although the catches were below the TAC from 2015-2018, there is no indication that the decreasing catches were related to a decrease in the stock. The average biomass index in the Greenland Shrimp and Fish survey is 19% higher in the recent 3 years (2017-2019) compared to the preceding 4 year period.



**Reference points**

Could not be established.

**Assessment**

No analytical assessment was performed. The assessment is based upon a qualitative evaluation of survey indices, length composition in surveys, and fishery data. The assessment is considered data limited and with relatively high uncertainty, as surveys do not fully cover the distribution of the stock.

*Human impact*

Mainly fishery related mortality. Other mortality sources (e.g. pollution, shipping, oil-industry) are undocumented.

*Environmental impact*

Unknown

**Fishery**

Wolffish are primarily taken in a directed longline fishery or as a bycatch in longline, gillnet or trawl fisheries. Prior to 2015, TACs were set for wolffish with species combined, but since 2016 separate TACs have been set for spotted and for Atlantic wolffish. The proportions of Atlantic wolffish and spotted wolffish in the catches are unknown, but there is little doubt that spotted wolffish constitutes the majority of recent landings, since the fishery takes place in the coastal areas and the fjords, where spotted wolffish is known to be the dominating species. Furthermore, the majority of the Atlantic wolffish observed in surveys are smaller than normal commercial sizes, whereas spotted wolffish between 70 and 110 cm are plentiful.

Recent catch estimates ('000 tonnes) are as follows:

|                              | 2011 | 2012 | 2013 | 2014 | 2015  | 2016  | 2017  | 2018  | 2019 | 2020 |
|------------------------------|------|------|------|------|-------|-------|-------|-------|------|------|
| <b>Atlantic wolffish TAC</b> |      |      |      |      | 1.0   | 1.0   | 1.0   | 1.0   | 0    | 0    |
| <b>Spotted wolffish TAC</b>  |      |      |      |      | 1.025 | 1.025 | 1.025 | 1.025 | 0    | 0    |
| <b>Wolffish TAC</b>          | 1.0  | 1.0  | 1.0  | 1.0  | 2.025 | 2.025 | 2.025 | 2.025 | 0    | 0    |
| <b>STATLANT 21</b>           | 0.8  | 1.0  | 0.9  | 0.9  | 0.4   | 0.2   | 0.3   | 0.3   | 0.2  |      |
| <b>STACFIS</b>               | 0.8  | 1.0  | 0.9  | 0.9  | 0.4   | 0.2   | 0.3   | 0.3   | 0.2  |      |

**Effects of the fishery on the ecosystem**

Wolffish in the area are targeted with longlines, selecting mainly adult fish and with low environmental impact.

**Basis for Advice****Atlantic wolffish**

Survey indices were used to evaluate the stock.

**Spotted wolffish**

Survey indices were used to evaluate the stock. The ICES Harvest Control Rule (HCR) 3.2 for data limited stocks was used as a basis for giving TAC advice; the ratio of the mean of the survey index over the last three years (2017-2019) and over the preceding four years (2013-2016) is equal to 1.1877. The survey index used in this calculation was the Greenland Shrimp and Fish survey as its distribution was appropriate to the distribution of the stock. Application of this HCR starts from the previously advised catch (975 tonnes), resulting in catches of no more than  $975 \times 1.1877 = 1158$  tonnes.

**Special comments**

The ICES HCR for data limited stocks was first applied to spotted wolffish in 2017. A 1st year 'precautionary buffer' of 20% reduction was applied in 2017.

The harvest control rule is based on modifying the previous advice based on the stock trends observed in the survey. If advised catches are not taken, this can lead to increases in recommended catches as long as the stock increases. If the divergence between the observed and advised catches continues, this could lead to unsustainable advice, and therefore application of this rule may need to be reevaluated in the future.

The two species are not usually separated in the landings. Given the different status of the Atlantic and spotted wolffish stocks, SC recommends speciation of the landings for these two species.

**Sources of Information**

SCR Doc. 14/028, 20/006, 012, 040; SCS Doc. 20/12.