

Status Assessment 2021 - White skate

The most recent ICES advice (ICES 2019a) concerning white skate described the stock development over time as follows: “This species has disappeared from most areas of former habitat in the Northeast Atlantic. There are very few recent, authenticated records of white skate in this area; these isolated records are from the English Channel, western Irish waters, and Portuguese waters. According to historical literature it appears to have occurred more frequently in previous decades. ICES therefore considers this stock to be depleted.” No improvement in the status of this stock has been observed since the last OSPAR assessment (OSPAR 2010).



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Assessment of status		Distribution	Population size	Demographics, e.g. productivity	Previous OSPAR status assessment	Status
Region	I					NA
	II*	?	?	?	•	Poor
	III	?	?	?	•	Poor
	IV	?	?	?	•	Poor
	V					NA

Assessment of key pressures		Excessive mortality	Habitat damage	Prey availability	Threat or impact
Region	I				NA
	II*	↔ ²	?	?	↔ ²
	III	↔ ²	?	?	↔ ²
	IV	↔ ²	?	?	↔ ²
	V				NA

*The species is considered extirpated from the North Sea but is still present in the Channel (ICES 2019b)

⊕ Table Legend

⊕ Method of Assessment

Confidence

Medium

Background Information

The white skate was included on the OSPAR List of Threatened and/or Declining Species and Habitats in 2006. The original evaluation against the Texel-Faial criteria listed the species' rarity, sensitivity and decline as reasons for its listing. The last status assessment of this species was carried out in 2010 (OSPAR 2010). This data-limited species is considered to be threatened in European waters and throughout the ICES area that covers its distribution. ICES provides advice on its stocks at the species level (ICES 2019a).

Geographical Range and Distribution

The white skate is predominantly distributed in the eastern North Atlantic from the Celtic Sea to southern Africa and in the Mediterranean Sea (Stehmann and Bürkel 1984). As such, the species' distribution includes OSPAR Regions III and IV, and the English Channel part of Region II. The stock structure within its overall distribution is unknown.

Population/Abundance

The white skate has disappeared from most areas of its former habitat in the Northeast Atlantic. There are very few recent, authenticated records of white skate in this region; these isolated records are from the English Channel, western Irish waters and Portuguese waters. According to historical literature, white skates appear to have occurred more frequently in previous decades. ICES therefore considers this stock to be depleted (ICES 2019a). ICES advises that, when the precautionary approach is applied, there should be zero catches in each of the years 2020–2023.



Figure 1: Geographic distribution of the white skate in the Northeast Atlantic and adjacent seas. Note: The distribution of white skate may also extend further north than indicated here and also through the English Channel. Source: IUCN <https://www.iucnredlist.org/species/61408/12473706>.

Condition

The white skate is a large bodied, slow growing and late maturing species that grows up to 200 cm in length (Bauchot 1987, Kadri et al. 2014). Kadri et al. (2014) reports its age at maturity as 20 - 23 years, with longevity estimated at 51 and 76 years for males and females, respectively. The embryos may take about 15 months to develop (Stehmann and Burkel 1984) while females produce between 55 and 156 ova per year (Serena 2005), with 1-2 egg capsules reported to be contained in each female's oviducts at a time (Kadri et al. 2014).

Threats and Impacts

The size and life history characteristics of this large demersal skate species render it particularly vulnerable to capture by fishing gears, which in combination with its population demography allow little capacity for it to withstand exploitation. White skates are likely to be caught as bycatch in multi-species trawl fisheries which operate along much of Europe's continental shelf and upper slope, coinciding with this species habitat (Dulvy et al. 2006). The species is particularly vulnerable to being bycaught in comparatively shallow static net fisheries for crustaceans in one of its last refuges: Tralee Bay in southwest Ireland (Clarke et al. 2016).

While it is prohibited to retain this species if caught, white skates may not be reliably identified in catches at sea and discard survival is also unknown. While habitat degradation and prey availability may also have an effect on populations, such impacts are considered minor in comparison to that caused by fishing mortality.

Measures that address key pressures from human activities or conserve the species/habitat

Since 2010, the white skate has been listed as a prohibited species for EU waters in ICES subareas 6–10. There is an EU requirement that all discards of white skate in these subareas must be recorded by commercial fishing vessels (EU 2015). ICES previously advised that white skates be retained on the prohibited species list. Full species protection (to minimise potential mortality from recreational fisheries) does not apply across all of its OSPAR range, however.

The white skate is listed as 'Critically Endangered' on the IUCN Red List (Gibson et al. 2008, Nieto et al. 2015) and it is further protected in the UK by its Wildlife and Countryside Act.

Conclusion (including management considerations)

The most recent ICES advice (ICES 2019a) concerning white skate described the stock development over time as follows: "This species has disappeared from most areas of former habitat in the Northeast Atlantic. There are very few recent, authenticated records of white skate in this area; these isolated records are from the English Channel, western Irish waters, and Portuguese waters. According to historical literature it appears to have occurred more frequently in previous decades. ICES therefore considers this stock to be depleted." No improvement in the status of this stock has been observed since the last OSPAR assessment (OSPAR 2010).

Knowledge Gaps

Given the depleted nature of the stock throughout its distributional range, many fishers and sea-going research staff or fisheries observers are unfamiliar with this species. Moreover, white skate may be misidentified or confused with other skate species encountered at sea, such as large *Dipturus* species (e.g. *D. batis*, *D. intermedius* and *D. oxyrinchus*) and potentially the shagreen ray *Leucoraja fullonica*. Improved identification and educational material should be developed and circulated to fishers, in order to aid in data collection and to highlight the need to release prohibited species once they are landed aboard.

Method used

The assessment is based on ICES stock assessments, peer reviewed literature, and expert opinion.

References

Sheet reference:

BDC2021/White skate



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