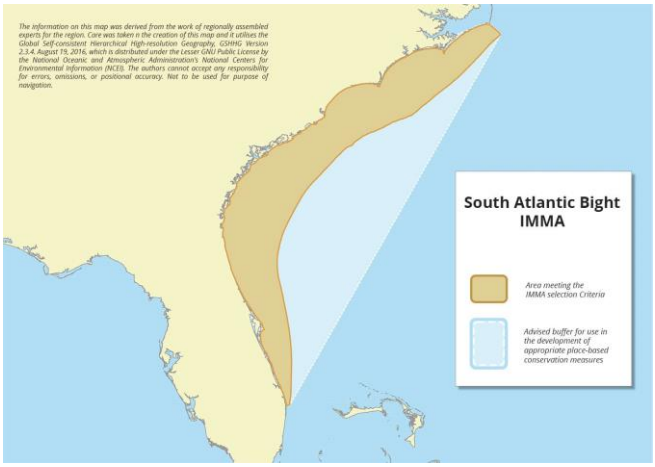

Area Size

104,848 km²

Qualifying Species and Criteria

North Atlantic Right Whale – *Eubalaena glacialis*

Criterion A; B (2); C (1)

Common Bottlenose Dolphin - *Tursiops truncatus*

Criterion B (2)

Other Marine Mammal Species Documented

Megaptera novaeangliae, Stenella frontalis

Summary

The South Atlantic Bight is located along the southeast coast of the United States. It covers the upper continental shelf from Cape Lookout, North Carolina to the eastern tip of Florida. The area spans the shoreline to the 150 m isobath, beyond which the Gulf Stream flows. It includes the Gray's Reef National Marine Sanctuary, and importantly, also includes the Southeastern U.S. Calving Area Critical Habitat for North Atlantic right whales (*Eubalaena glacialis*), which encompasses the only known calving ground of this critically endangered species. North Atlantic right whales reliably aggregate here every year to give birth and socialize, with peak presence

South Atlantic Bight IMMA

Summary, continued.

occurring from December through March. Small numbers of humpback whales (*Megaptera novaeangliae*) have also been observed overwintering during the same months since 2008, and large numbers of common bottlenose dolphins (*Tursiops truncatus*) and Atlantic spotted dolphins (*Stenella frontalis*) are found here throughout the year.

Description:

The South Atlantic Bight (SAB) is located along the southeast coast of the United States. It spans the upper continental shelf from Cape Lookout, North Carolina, south to the eastern tip of Florida, extending from shore to the upper shelf break that occurs above the Blake Plateau. The SAB is strongly influenced by the Gulf Stream, a strong, warm, saline, subtropical, western boundary current that flows just to the east, beyond the upper shelf break (Seim et al., 2022). SAB waters are shallow (0-150 m) and warm, and the coastline is permeated with rivers and tidal inlets, which in spring can produce significant freshwater discharge, generating near-shore frontal zones (Blanton et al., 2003). In the westernmost waters of the Bight, off Georgia and northern Florida, waters are calm in winter, particularly in December at the beginning of the North Atlantic right whale calving season (Good, 2008). In an analysis of North Atlantic right whale calving habitat, sea surface roughness was found to be positively correlated with the distribution of mother/calf pairs (Good, 2008).

Criterion A: Species or Population Vulnerability

The North Atlantic right whale (*Eubalaena glacialis*) is listed on the IUCN Red List as Critically Endangered (Cook, 2020), with a median population estimate of 356 (+7/-10) individuals remaining in the population in 2022 (Linden, 2023; Pettis & Hamilton, 2024).

Criterion B: Distribution and Abundance Sub-criterion B2: Aggregations

In the post-whaling era, the North Atlantic right whale population peaked around 2011 and has declined since that time (Pace et al., 2017; Pettis & Hamilton, 2024). Before that 2011 peak, a substantial fraction of the population migrated to the calving ground every winter, including both adult and juvenile right whales of both sexes. This aggregation likely peaked in the winter of 2009/2010, during which the total population was estimated at 482 (Pettis & Hamilton, 2024) and 220 individuals were observed at the calving ground, south of Cape Fear, North Carolina (Krzystan et al., 2018). During that year, 39 calves were recorded (Pettis & Hamilton, 2024), but observations suggested even larger numbers of other demographic groups were present, including both non-calf juveniles and adult males (Krzystan et al., 2018). Thus, when the right whale population was growing, this calving ground represented an aggregation area not just for pregnant females and their calves, but for all segments of the population. For the period 1992–2001, Parks et al. (2007) documented 191 "surface active groups" in the area, during which right whales were probably engaged in mating, mating practice, play, or maintenance of social bonds. Since the population entered decline, the numbers of whale migrating to the calving ground has decreased (Gowan et al., 2019).

The IMMA also hosts aggregations of coastal bottlenose dolphins (*Tursiops truncatus*). These include the following stocks recognised by NOAA Fisheries: the western North Atlantic northern Florida coastal stock, the western North Atlantic central Florida coastal stock, and the western North Atlantic northern South Carolina/Georgia coastal stock (NOAA Fisheries). The best available abundance estimate for the Northern Florida Coastal Stock of common bottlenose dolphins in the western North Atlantic is 877 (CV=0.49), 1,218 (CV=0.35) for the central Florida coastal stock, and 6,027 (CV=0.34) for the South Carolina/Georgia Coastal Stock (Garrison et al., 2017). Estimates were inferred from aerial surveys conducted from New Jersey to Florida during the summer of 2016. While common bottlenose dolphins do exhibit significant site fidelity, it is unlikely this stock contains multiple demographically independent populations because the habitat used by the stock is relatively homogeneous, it does not cross any known biogeographic breaks nor cover multiple marine ecoregions (Spalding et al., 2007).

Criterion C: Key Life Cycle Activities Sub-criterion C1: Reproductive Areas

The South Atlantic Bight IMMA contains the only known major calving ground for the North Atlantic right whale. It has been regularly monitored by aerial surveys since the 1990s and new calves have been observed every year except 2018 (Pettis & Hamilton, 2024). Peak presence of mother/calf pairs occurs from December through March (Gowan et al., 2014; Krzystan et al., 2018; Gowan et al., 2019; Roberts et al., 2024). From 2009-2023, annual calf counts ranged from a low of 0 calves observed in 2018 to a high of 39 in 2009 (Pettis & Hamilton, 2024). The low in 2018 followed an Unusual Mortality Event in 2017, in which 17 whales were documented to have died, with an estimate of over 40 actual deaths (Kenney, 2018; Linden, 2023). Calving has since rebounded to a post-2018 peak of 18 documented calves in 2021 (Pettis &

Hamilton, 2024). On the calving grounds, right whales are most likely to be sighted between northern Florida and Georgia, in cooler (12-16˚C) waters and intermediate (10-25 m) depths relatively close (<25 km) to shore (Gowan et al., 2014), but birth has been observed as far as 63 km from shore (Foley et al., 2011).

Supporting Information

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