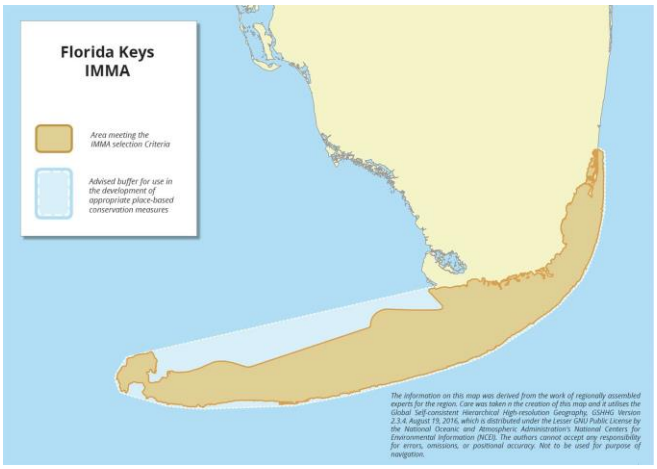

Area Size

10,622 km²

Qualifying Species and Criteria

Florida Manatee – *Trichechus manatus latirostris*

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

Common Bottlenose dolphin – *Tursiops truncatus*

Criterion B (1)

Summary

The Florida Keys IMMA encompasses the coastal waters surrounding the islands at the Southern tip of Florida, from the waters surrounding Key West at its Southwestern edge to the Biscayne Bay at its northeastern boundary. These shallow coastal areas are estuarine systems include extensive seagrass meadows, mangrove islands and shorelines, mud- and sand flat areas, and are strongly influenced by tidal movements as well as freshwater inputs from the Everglades watershed into Florida Bay and the southern portion of Biscayne Bay. The IMMA hosts several resident populations of common bottlenose dolphins (*Tursiops truncatus*), as well as aggregations of Florida manatees (*Trichechus manatus latirostris)* that occur all year round.

Florida Keys IMMA

Description:

Habitats in Florida Bay and Biscayne Bay, including the northern portion of the Florida Keys include extensive seagrass meadows, mangrove islands and shorelines, mud- and sandflat areas, and are strongly influenced by tidal movements. Both bays are tied to the larger Everglades watershed, and are strongly affected by Everglades restoration efforts, including increasing freshwater inflows towards Florida Bay and the southern portion of Biscayne Bay.

Figure 1: Common bottlenose dolphin (*Tursiops truncatus*) observed in Florida Bay. Photo credit: Jeremy Kiszka (Florida International University).

Figure 2: Common bottlenose dolphin (*Tursiops truncatus*) feeding in Florida Bay. Photo credit: Jeremy Kiszka (Florida International University).

Criterion A: Species or Population Vulnerability

The American Manatee (*Trichechus manatus*) as a species has been listed as Endangered on the IUCN Red List of Threatened Species (Deutsch & Morales-Vela, 2024). The Florida Manatee (*Trichechus manatus latirostris*) is a subspecies of the West Indian manatee that has not yet been assessed by the IUCN Red List.

Criterion B: Distribution and Abundance Sub-criterion B1: Small and Resident Populations

The waters around the Florida Keys host two Bays, Sounds and Estuaries (BSE) stocks of common bottlenose dolphins (*Tursiops truncatus*), that are recognized by NOAA Fisheries: one in Biscayne Bay and the other in Florida Bay (NMFS, 2021). While there is limited information on residency patterns in bottlenose dolphins in Florida Bay, extensive monitoring and photo-identification of bottlenose dolphins in Biscayne Bay since 1990 has provided a wealth of information (Cardé, 2022). Photo-identification data from 1999-2019 and kernel density estimates to investigate the spatiotemporal dynamics of home range, residency, and community structure of bottlenose dolphins in Biscayne Bay identified two distinct communities, a northern community and a southern community (Cardé, 2022; Cardé et al., in press). The southern community exhibited significantly larger home ranges (95% UD=126.88±93.45 km², 50% UD=32.54±27.46 km²) compared to the northern community (95% UD=68.46±56.55 km², 50% UD =17.0±13.79 km²). Most animals are highly resident in Biscayne Bay, some of them have been identified in the 1990s and are still present in the Bay (Cardé et al., in press).

The boundaries of the IMMA correspond to the extent of confirmed home ranges of common bottlenose dolphins observed residing in Biscayne Bay by a long-term photo-identification study and probably represents the core range of this stock (Litz, 2007, Cardé et al., in press). The Florida Bay resident stock of common bottlenose dolphins is considered to occur both within the bounds of Florida Bay and within the Gulf of Mexico-side portion of the Florida Keys National Marine Sanctuary (FKNMS) southwest to Marathon, Florida.

Sub-criterion B2: Aggregations

Engleby et al. (2002) conducted a year-round photo-identification study of common bottlenose dolphins in Florida Bay in 1999–2000 with most sightings in the southern portion of the bay. Torres (2007) conducted surveys during summers (June–August) from 2002 to 2005 and found that dolphins were present in all areas of the Bay. Sarabia et al. (2018) recorded dolphins in northern Florida Bay from Cape Sable to Flamingo, Florida. From November 1998 to June 2002, year-round surveys were conducted in Florida Bay, documenting 230 unique individuals (Engleby & Powell, 2019). Torres (2007) conducted surveys of Florida Bay in the summers of 2002 through 2005 and documented 437 unique individuals. However, neither of these counts distinguished resident from non-resident animals in the Bay and so may be overestimates of the number of resident animals. There is evidence that transient animals occur within the Florida Bay boundaries, including offshore morphotype animals that move onshore from nearby oceanic waters (Litz et al., 2012), although the frequency of this occurrence is unknown.

Manatees are widely distributed along the coast of South Florida and are particularly abundant during the winter months from Biscayne Bay to Florida Bay, probably in the hundreds (Mayo et al., 1996). However, there is no abundance estimate of manatees within this IMMA.

Criterion C: Key Life Cycle Activities Sub-criterion C2: Feeding Areas

Manatees are known to feed in seagrass meadows in Biscayne and Florida Bays all year-round (Mayo et al., 1996). Several seagrass meadows are used by manatees in Biscayne Bay, particularly the coastal waters of Virginia Key and Cutler Bay (J. Kiszka, unpublished data).

Supporting Information

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Torres, L.G. 2007. *Top predator distribution and foraging ecology in Florida Bay*. Ph.D. thesis. Duke University. 225 pp.

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