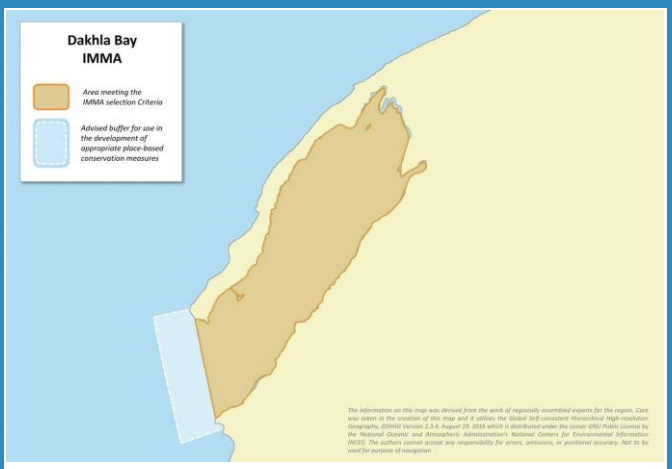

Area Size

466 km²

Qualifying Species and Criteria

Atlantic humpback dolphin – *Sousa teuszii*

Criterion A; B (1); D (1)

Common bottlenose dolphin – *Tursiops truncatus*

Criterion B (1)

Summary

Dakhla Bay is an enclosed inland sea, characterised by very shallow waters, located on the coast of Northwest Africa, just north of the Mauritanian border. The Bay hosts a small resident population of common bottlenose dolphins (*Tursiops truncatus*) and is home to the northernmost population of the Atlantic humpback dolphin (*Sousa teuszii*), which is endemic to the Atlantic coast of Africa. The Atlantic humpback dolphin population in Dakhla Bay is separated from the nearest known neighbouring population in the Banc d'Arguin, Mauritania by over 400 km, rendering this population discrete and isolated and at even greater risk of extirpation than other populations of this Critically Endangered species.

Dakhla Bay IMMA

Description:

The Dakhla Bay is a small inland sea, 25 nautical miles long and 5-7 nautical miles wide, closed off from the ocean by the elongated Rio de Oro Peninsula, and a complex system of sandbars, with narrow passes separating it from the ocean. Much of the bay's extent, particularly around its edges, is shallower than 5 m. However, there are pockets of deeper waters in the middle of the bay, ranging down to a maximum of 14 m (Lakhdar et al., 2010). The sea bottom is sandy and the water turbidity is high, and the bay is subject to large tidal ranges and high winds (Hilmi et al., 2017), making it a world-class wind-surfing destination. Strandings of common bottlenose dolphins (*Tursiops truncatus*), common minke whales (*Balaenoptera acutorostrata*), a Bryde's whale (*B. edeni*) and pygmy sperm whales (*Kogia breviceps*) have been documented in the Dakhla Bay inland waters between 2015 and 2022. Off the coast from Dakhla, the shelf delimited by the 200m depth contour extends over 110 km from shore. This coast is within the African Large Marine Ecosystem (ALME), influenced by the Canary Current System that creates a very strong coastal upwelling and extremely dynamic oceanographic processes, making it one of the most productive ALMEs in the world (Caldeira et al., 2002; UNEP-CMS, 2008; Mason, 2009; UNEP-CMS, 2012; Sala et al., 2013; Satia 2015), and supporting a great diversity of species.

Figure 1: Atlantic humpback dolphin (*Sousa teuszii*) leaping in Dakhla Bay, Western Sahara.
Photo credit: A.J.T. p Lagune Dakhla / Trouk Youth Association to Protect the Gulf of Wadi Daha (TYA)

Criterion A: Species or Population Vulnerability

The Atlantic humpback dolphin (*Sousa teuszii*) is assessed as Critically Endangered on the IUCN Red List (Collins et al., 2015, 2017). This species is one of the most threatened of all cetaceans and is found only in the nearshore waters of the Atlantic coast of Africa (e.g. Weir et al., 2021). The species is limited to shallow nearshore habitats between Angola in the south and Dakhla Bay, south of Morocco in the north, and within these habitats exists in fragmented, discontinuous populations (Van Waerebeek et al., 2004; Weir & Collins, 2015). Dakhla Bay represents the northern extreme of the known range of the species, and the nearest documented population is located over 400 km to the south in the Banc d'Arguin, Mauritania (Weir & Collins, 2015).

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

Dakhla Bay hosts small resident populations of both common bottlenose dolphins (*Tursiops truncatus*) and Atlantic humpback dolphins. The first reports of both species in the bay included observations of mixed groups containing both species in 1989 (Beaubrun, 1990). During systematic cetacean surveys comprising 750 km of survey effort in the coastal areas between the Cintra and Dakhla Bays in February 1996, the only cetaceans observed were inside Dakhla Bay (Notarbartolo di Sciara et al., 1998). Sightings included six groups of common bottlenose dolphins (average group size of 6.8) and four groups of Atlantic humpback dolphins (average group size of 6.9, total of 21 different individuals identified). The two

Figure 2: Common bottlenose dolphins (*Tursiops truncatus*) in Dakhla Bay.
Photo credit: A.J.T. p Lagune Dakhla / Trouk Youth Association to Protect the Gulf of Wadi Daha (TYA)

Figure 3: Common bottlenose dolphin (*Tursiops truncatus*) breaching in Dakhla Bay.
Photo credit: A.J.T. p Lagune Dakhla / Trouk Youth Association to Protect the Gulf of Wadi Daha (TYA)

species were never observed together during this survey. During the survey, a dead juvenile Atlantic humpback dolphin entangled in the line of an octopus trap was documented (Notarbartolo di Sciara et al., 1998).

Figure 4: Atlantic humpback dolphin (*Sousa teuszii*) caught in the line of an octopus trap in Dakhla Bay in 1996.
Photo credits: Elena Politi

Between 2010 and 2017, bird researchers and local nature groups working in the northernmost portion of the Dakhla Bay reported regular observations of Atlantic humpback dolphins, often in mixed groups with common bottlenose dolphins, with group sizes limited to a maximum of three humpback dolphins at a time (Moores et al., 2018). Citizen science efforts from local wildlife tours in Dakhla Bay have documented (via video and photographs) the regular presence of Atlantic humpback dolphins and common bottlenose dolphins over many years.

Dozens of observations have been documented and shared via Facebook and with researchers from the Consortium for the Conservation of the Atlantic humpback dolphin dating back to 1995 and extending to as recently as December 2022 (mixed groups including a humpback dolphin) and June 2023 (a video showing 4-5 bottlenose dolphins) (Trouk Youth Association to Protect the Gulf of Wadi Daha, unpublished data).

However, these observations are also limited to the northernmost portion of Dakhla Bay, which is the focus of windsurfing and other tourism activities that facilitate reports of observations. No systematic surveys have been carried out in other portions of the bay since 1996. As such, the current population size and conservation status of both species in the Bay is unknown. However, the data collected in 1996, together with the recent confirmations of both species' continued presence, and knowledge of the high site fidelity and restricted ranging patterns of both coastal bottlenose dolphins (e.g. Wells et al., 2014) and humpback dolphin species (e.g. Jefferson & Curry, 2015) provides credible evidence that both species are still resident in the bay.

Criterion D: Special Attributes
Sub-criterion D1: Distinctiveness

Van Waerebeek et al. (2004) described five proposed management stocks of Atlantic humpback dolphins based on their geographical locations and the likelihood of possible population connectivity and/or genetic isolation. The Atlantic humpback dolphin population in Dakhla Bay represents the northernmost of these management stocks, and is separated from the nearest management stock to the south by over 400 km – a distance highly unlikely to be covered by humpback dolphins. Genetic isolation is presumed, and the Atlantic humpback dolphin population in the bay can be considered distinct in both its geographic location at the northern boundary of the species' range, and its regular association with common bottlenose dolphins, which has not been documented anywhere else in the species' range (see Weir & Collins, 2015), and may be driven by the apparent low densities of both species that make inter-species associations advantageous for foraging and protection.

Supporting Information

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PDF made available for download at ***https://www.marinemammalhabitat.org/factsheets/dakhla-bay-imma/***