

Commerson's Dolphin Habitat Network IMMA

Description:

This IMMA encompasses a large proportion of the global population of Commerson's dolphins. Commerson's dolphins inhabit open coasts, bays, inlets, fjords and estuarine areas close to river mouths (Coscarella, 2005). They are present along the coast of Patagonia, south of 42°S, and occur in discrete locations that are often associated with noticeable geographical features (Rice, 1998; Goodall et al., 1988). From north to south, these locations include the river mouth of the Río Chubut, Bahía Camarones and adjacent waters, Comodoro Rivadavia/Rada Tilly and the southern part of the coast of San Jorge Gulf (Golfo San Jorge), Ría Deseado (not included in this IMMA), Bahía San Julián, the estuary of the Río Santa Cruz, Ría Coig/Coyle and the mouth of the estuary of Río Gallegos at the southern end of the continent. These locations represent critical habitats for the species. All the locations that are important for Commerson's dolphins that are included in this IMMA present either oceanic areas heavily influenced by river runoff, or they are heavily influenced by the presence of tidal currents and strong winds that promote upwelling (Perillo et al., 1989). Most of the areas are characterized by murky waters and low salinity or by cold waters of sub-Antarctic origin draining from the Fuegian and Strait of Magellan Channels (Picolo et al., 1997).

This restricted set of small areas overlap with, or are included in eight protected areas. Bahía Camarones is included in the Parque Interjurisdiccional Marino Patagonia Austral; Comodoro Rivadavia/Rada Tilly overlaps with the Área Natural Protegida Punta Marqués; in the southern coast of Golfo San Jorge it overlaps with the Barco Hundido Provincial Reserve;



Area Size

10 917 km²

Qualifying Species and Criteria

Commerson's dolphin –
Cephalorhynchus commersonii
Criterion B (1); D (1)

Lahille's bottlenose dolphin –
Tursiops truncatus gephyreus
Criterion A; B (1)

Summary

This IMMA is a network of coastal habitats along the coast of Argentina, that are important for small resident populations of Commerson's dolphins. The Commerson's dolphins are patchily distributed and there is a high genetic distinctiveness among groups along the coast.



Figure 1: Protected areas covered by Makenke Interjurisdictional Marine Park (MIMP). Map excerpt from: Sistema de Información de Biodiversidad – sib.gov.ar

for San Julián it overlaps with the Makenke Interjurisdictional Marine Park (MIMP) and Bahía San Julián Restricted Use Area under Especial Protection; the estuary of the Río Santa Cruz partially overlaps with Monte León National Park (Hevia et al., 2022).

In Bahía Camarones there are regular sightings of the two subspecies of bottlenose dolphin (*Tursiops*

truncatus spp.) that inhabits the South Western South Atlantic. Also, killer whales (*Orcinus orca*) have been recorded in the last few years more frequently. The IMMA is also an important area of Peale's dolphins (*Lagenorhynchus australis*) which are associated with long extensions of kelp beds, specially in the Santa Cruz Province. It is also a corridor for the Southern right whale (*Eubalaena australis*), and includes Southern sea lion (*Otaria byronia*) and Southern fur seals (*Arctocephalus australis*) rookeries.

Criterion A: Species or Population Vulnerability

Lahille's bottlenose dolphin (*Tursiops truncatus gephyreus*): This subspecies has been recorded in the IMMA often in mixed groups, feeding and traveling together with common bottlenose dolphins (*Tursiops truncatus truncatus*) especially in the area of Bahía Engaño in the mouth of Chubut river (Vermeulen et al., 2017).

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

Commerson's dolphin: At Bahía Engaño in the mouth of the Chubut River, the population is estimated to be around 350 individuals, most of which remain in the area all year round. There is a decrease in abundance of the species in that area that has been linked to an increase of Sea Surface Temperature during summer months (Coscarella, 2005; Coscarella et al., 2010). In the area of Camarones, the estimate of Commerson's dolphins is 239 individuals (Coscarella, 2005). At Bahía San Julián although there is no population estimation, there have been 95 Commerson's dolphins photo-identified since 1996 (Iñiguez Bessega, unpublished data). For the rest of the areas in this network there are reports on the presence of dolphins, but no estimates of abundance



Figure 2: A typical group of Commerson's dolphins (*Cephalorhynchus commersonii*). Photo credit: M. Iñíguez / Fundación Cethus

are available.

In all the areas calves have been observed. In Bahía Engaño in the mouth of the Chubut river and in Bahía Camarones calves have been reported from September until March (Coscarella, 2005) and in Comodoro Rivadavia/ Rada Tilly from November until May (Coscarella, unpublished information). The breeding season takes place during the austral spring and summer, between September and February (Iñíguez, 1991; Iñíguez & Tossenberger, 2007; Righi et al., 2014). Bahía San Julián is also a reproductive area for Commerson's with at least 4 newborn Commerson's every year (Iñíguez Bessega, unpublished data).

In every area Commerson's were observed chasing and hunting silversides (smelt or whitebait).

Commerson's dolphins are opportunistic feeders,

exhibiting pelagic feeding strategies in northern Patagonia, at the northern end of its range. This species can change its foraging tactics by adapting to different habitats, including those with extreme tidal ranges (Koen-Alonso, 1999). They deploy different hunting techniques in each area. In Bahía Engaño and Camarones, dolphins use not only individual feeding but cooperative feeding (Coscarella et al., 2010). In Bahía San Julián, Commerson's dolphins prey on silversides fish and squid (Iñíguez et al., 2000). At Ría Santa Cruz, diving showed a high frequency during the ebb tide, and could therefore be potentially related to a benthic foraging strategy (Loizaga de Castro et al., 2013). A diet study of Commerson's dolphins at Tierra del Fuego (53°20'S, 68°30'W), showed the presence of benthic preys, indicating that this species feeds at or near the bottom (Bastida et al., 1988).



Figure 3: Commerson's dolphin can breach frequently, especially when in large groups. Photo credit: M. Iñiguez / Fundación Cethus

Lahille's bottlenose dolphins – An abundance estimate for both subspecies of bottlenose dolphins combined, created a joint estimate from aerial surveys indicating a very small population of 34 individuals in the area of Bahía Engaño in the mouth of Chubut river (CI 95% 22-51) (Coscarella et al., 2012).

Criterion D: Special Attributes

Sub-Criterion D1: Distinctiveness

Commerson's dolphins: There is evidence for reduced gene flow (at least of females as shown by mitochondrial DNA analysis) between all of the sampling locations and the suggestions for isolation and divergence of Commerson's dolphin groups over relatively small geographic distances (Cipriano et al., 2011; Kraft et al., 2021). Therefore, the precautionary approach suggests that each discrete location within this IMMA network be considered as a candidate for separate management, with efforts made to identify and reduce potential threats even in the absence of evidence for existing threats (Cipriano et al., 2011; Kraft et al., 2021).



Figure 4: A mixed group of Peale's and Commerson's dolphins. Photo credit: M. Iñiguez / Fundación Cethus

Supporting Information

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