

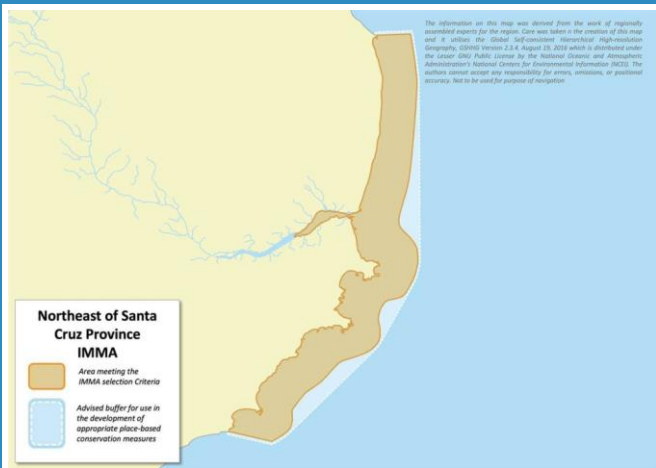
Northeast of Santa Cruz Province IMMA

Summary, continued.

South American sea lions (*Otaria byronia*) and South American fur seals (*Arctocephalus australis*) with 2,505 and 500 individuals respectively.

Description:

The IMMA is located in the Province of Santa Cruz, Argentina. Its coastline is characterised by long pebble beaches, wide bays, river mouths such as the Ría Deseado, and coastal ridges composed of gravel and sandy gravel. This area is influenced by cold waters of sub-Antarctic origin draining from the Fuegian channels and Magellan Strait. The area has a semi-diurnal tidal regime and the average tidal range is 3.20 m. Along the coast there are extensive giant kelp beds of *Macrocystis pyrifera*. The area between Cabo Blanco (47°19'S 65°44'W) in the north and Bahía Laura (48°21'S 66°21'W) in the south encompasses three marine protected areas: Cabo Blanco and Ría Deseado provincial reserves, and Pingüino Island Interjurisdictional Marine Park. Ría Deseado is a breeding area of Commerson's dolphins and Chilean dolphins. The boundaries of this IMMA also encompass South American sea lion and South American fur seal rookeries.



Area Size

2 297 km²

Qualifying Species and Criteria

Commerson's dolphin –

Cephalorhynchus commersonii

Criterion B (1); D (1)

Chilean dolphin – *Cephalorhynchus eutropia*

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

South American sea lion – *Otaria byronia*

Criterion C (1)

South American fur seal – *Arctocephalus australis*

Criterion B (1)

Summary

The Northeast of Santa Cruz Province IMMA hosts a total of eight marine mammal species, four of which occur regularly and fulfil some aspects of key life cycle functions in the area, and two of which are simply regularly present. The primary species include the only population of Chilean dolphins (*Cephalorhynchus eutropia*) in Atlantic waters, located 600 km from the nearest known population to the south. There is also a subpopulation of Commerson's dolphins (*Cephalorhynchus commersonii*) that has characteristics that differentiate them genetically from the Commerson's dolphins that occur further south in Tierra del Fuego and the Strait of Magellan. The IMMA also contains rookeries for

Criterion A: Species and Population Vulnerability

Chilean dolphins (*Cephalorhynchus eutropia*) have been recorded in this particular area of the Argentine coast, at Ría Deseado, more than 600 km north of the closest known population, which is located at the southern tip of the continent, closer to the species' core range on the Pacific coast of South America. Although there is no abundance estimate available for the number of Chilean dolphins in this IMMA, available information suggests that since 2009, only three Chilean dolphins have been recorded in the Ría Deseado (Morgenthaler et al., 2014). This is a small resident population that is extremely vulnerable to local extirpation (Morgenthaler et al., 2014). The species is listed as Near Threatened on the IUCN Red List of Threatened Species (Heinrich et al., 2017), but this population's isolated status, and the entire species' fragmented distribution and reliance on small pockets of coastal habitat that often brings it into contact with anthropogenic threats, mean that all necessary measures must be taken to protect it.



Figure 1: A Chilean dolphin (*Cephalorhynchus eutropia*) sighted in Ría Deseado. Photo credit: Miguel Iñíguez

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

Since 2009, three individual male Chilean dolphins have been recorded in the Ría Deseado (Morgenthaler et al., 2014). These three photo-identified individuals were observed on multiple occasions between November 2009 and January 2012. Morgenthaler et al. (2014) also describe observations of dolphins in the Ría Deseado area that could be Chilean dolphins, but they were difficult to distinguish from sympatric Commerson's dolphins (*Cephalorhynchus commersonii*) because their ventral surfaces were not visible. Furthermore, they describe possible hybrid individuals with characteristics of both Chilean and Commerson's dolphins. Given Chilean dolphins known limited home ranging patterns, and the very few, but repeated observations of known individuals in the same area, it is likely that the Ría Deseado hosts an isolated remnant population of Chilean dolphins in danger of local extirpation.

The presence of Commerson's dolphins year-round suggests that the population is resident in the Ría Deseado estuary (Iñíguez & Tossenberger, 2007; Righi et al., 2013). Abundance has been estimated using photo-identification that successfully identified 26 resident individuals within the estuary (Iñíguez & Tossenberger, 2007). Another study carried out between 2002 and 2004, indicated that adult abundance was higher during spring (34 and 35 individuals in 2002 and 2003, respectively) and decreased during autumn (7 individuals) and winter (16 individuals) (Righi et al., 2013).

Mating and calving takes place during the austral spring and summer, between September and February at Ría Deseado (Iñíguez, 1991; Iñíguez & Tossenberger, 2007; Righi et al., 2014). Calves were

present in the study area on 58 occasions (6.09% of total sightings) over 200 days of survey effort between 1986 and 1991 and 1994 and 1997 (Iñíguez & Tossenberger, 2007).

Commerson's dolphins in the Ría Deseado display unique feeding behaviour in the IMMA, driving prey against anchored ships, piers, and beds of giant kelp (*Macrocystis pyrifera*) thereby reducing the number of potential escape routes for the fish (Iñíguez & Tossenberger, 2007).

The IMMA also hosts a permanent South American fur seal (*Arctocephalus australis*) rookery and accompanying feeding habitat. Aerial surveys and land observations conducted in January 1994, February 2020 and May 2011 estimated that between 300 and 500 individuals are present at Cabo Blanco, and the IMMA also encompasses their feeding habitat (Crespo et al., 2015).

Criterion C: Key Life Cycle Activities

Sub-Criterion C1: Reproductive Areas

There are five South American sea lion (*Otaria byronia*) rookeries in the IMMA: Cabo Blanco, Roca Foca, Islote Lobos, Isla Blanca and Isla Pingüino (Grandi et al., 2015). Aerial surveys conducted in January 2012 yielded an estimate of 146 individuals for Cabo Blanco, 61, including one pup, for Islote Lobos, 1707, including 31 pups, for Isla Blanca, and 591 for Isla Pingüino (Grandi et al., 2015). The presence of this species is recorded year-round in the region (Iñíguez, pers. comm.). The five rookeries present in this IMMA represent about 9% of the total number of colonies in the province of Santa Cruz, with 2,505 individuals recorded in January 2012 (Grandi et al., 2015).

Criterion D: Special Attributes

Sub-Criterion D1: Distinctiveness

The IMMA hosts the only known population of Chilean dolphins in Argentine Atlantic waters (Morgenthaler et al., 2014). The population appears to be discontinuous with the rest of the species' range, given that the nearest known population is 600 km south of this IMMA.

There is evidence for reduced gene flow (at least of females as shown by mitochondrial DNA analysis) between Commerson's dolphins in all of the sampling locations suggesting 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 sampling location (including Ría Deseado) should 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). Ongoing research of microsatellite markers indicates a similar pattern of differentiation among localities, and for Puerto Deseado signals of genetic intromission have been detected in the "grey morph" of Commerson's dolphins, indicating some genetic flux with Chilean dolphin in the area (Coscarella, unpublished information).



Figure 2: Two Chilean dolphins (*Cephalorhynchus eutropia*) sighted in Ría Deseado. Photo credit: Miguel Iñíguez

Supporting Information

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