

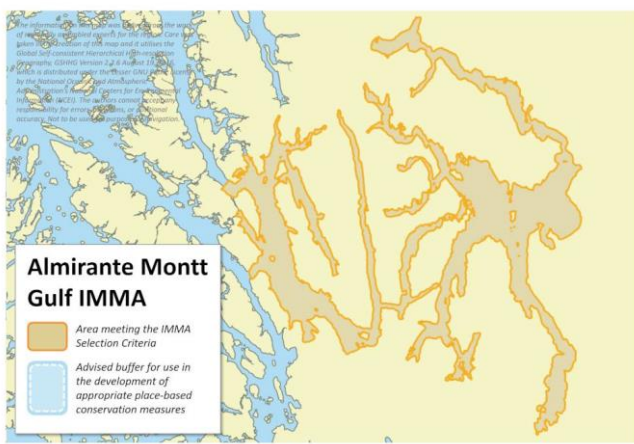
# Almirante Montt Gulf IMMA

## Description:

The Almirante Montt Gulf (GAM) is part of the expansive fjord system of southern Chile. It extends from West to East for approximately 15 nautical miles, its narrowest width in the N-S direction being 4 miles. Four large estuaries converge in the area: the Última Esperanza estuary to the northeast, the Obstruccion estuary to the south, the Poca Esperanza estuary to the southwest, connected to the gulf through the Valdés channel, and the Worsley estuary to the northwest. Collectively these converging estuaries are referred to as the GAM system. The Sea surface temperature ranges from 6°C to 7.2°C and the salinity ranges between 14.6 psu and 32 psu (Mujica & Medina 2000). Some of the area forms part of the Kaweskar National park (Chile).

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

The Almirante Montt Gulf is considered the only area of continental Chile that hosts reproductive colonies of elephant seals, *Mirounga leonina* (Acevedo et al., 2014, Capella & Gibbons, 2016, Capella et al., 2017). The species has been recorded consistently in the area since 2014 with a maximum number of 61 animals in 2018-2019 (Capella & Gibbons, 2021). Capella et al., (2017) documented year-round elephant seal presence, with a peak in abundance observed between November and March (average 27.1; range 12-46 animals) (Capella et al., 2017). Although the species was historically relatively common, and the population large, after extensive hunting the last elephant seal in Chile was killed in 1840 (Philippi, 1892 – in Torres et al., 1997). This



## Area Size

2 174 km<sup>2</sup>

## Qualifying Species and Criteria

Chilean dolphin – *Cephalorhynchus eutropia*

Criterion B (1); D (1)

Southern elephant seal – *Mirounga leonina*

Criterion B (1); C (1)

## Marine Mammal Diversity

*Arctocephalus australis*,

*Cephalorhynchus commersonii*, *Hydrurga leptonyx*,

*Lagenorhynchus australis*, *Lagenorhynchus obscurus*, *Otaria byronia*, *Megaptera novaeangliae*

## Summary

The Almirante Montt Gulf system is part of the southern Patagonian Fjords in Chile. The area is of great importance to a number of marine mammal species. The area hosts the northernmost southern elephant seal (*Mirounga leonina*) reproductive colony in the southeast Pacific region. The species was almost extirpated in the region and this breeding colony represents an important site to support the recovery of the species in the southeast Pacific. This IMMA also sustains one of the two largest populations of Chilean dolphins (*Cephalorhynchus eutropia*) in the southern Patagonia Fjords.



Figure 1: Elephant seal (*Mirounga leonina*) in channels nearby to the Almirante Montt area. Photo: Carlos Olavarria.

breeding colony represents one of the few colonies that appear to be recovering after the species was practically extinct in Chile (Torres et al., 1997). There is no information about the genetic identity of this recently discovered colony, and whether or not it represents a newly colonised haul-out site or a newly discovered but previously used haul-out site. Although elephant seals fitted with Rototags in breeding colonies in Peninsula Valdes and Falkland/Malvinas have been observed at other elephant seal colonies in Chile (e.g. Almirantazgo Sound), none of these animals have ever been documented within the Almirante Montt Gulf. This breeding colony represents one of the only three elephant seal breeding colonies in Chile (Acevedo et al., 2016), and could indicate a new incipient colonization of the historical breeding grounds.

The Chilean dolphin, *Cephalorhynchus eutropia*, has been mostly studied in the northern portions of its'

range. The population located south of the Gulf of Penas differs genetically and constitutes an independent management unit from populations in the north (Pérez-Alvarez et al., 2015). Documented records and abundance estimates are very low in the Patagonian and Fuegian fjords (Gibbons et al., 2000, Gibbons et al., 2001, Lesrauwaet & Gibbons, 2008). The Almirante Montt Gulf, which has been systematically surveyed, is considered one of the two most important sites in the Southern Patagonia for the species (Capella & Vilina, 2010, Capella & Gibbons, 2013). Relatively large groups (15 individuals) have been recorded in the area (Gibbons & Capella, 2021). Based on photo-identification and mark-recapture studies Capella and Gibbons (2021) estimated that at least 120 individuals are present in the Almirante Montt Gulf area. However, low inter-annual re-sighting rates (~2%) suggest that the Almirante Montt Gulf could sustain a larger population than these 120 individuals. Capella and

Gibbons (2021) suggest that this low inter-annual re-sighting rate could be explained either by an open population with frequent immigration and emigration, or a resident population confined to the Almirante Montt Gulf but widely distributed with only a small proportion of individuals sampled. They suggest that this population size is probably much larger than this estimate. In either scenario, a local population size of over a hundred animals is significant for the Chilean dolphin and emphasizes the importance of the Almirante Montt Gulf for the species.



Figure 2: Chilean Dolphin (*Cephalorhynchus eutropia*) nearby channels to Almirante Montt area. Photo: Carlos Olavarria.

## Criterion C: Key Life Cycle Activities

### Sub-criterion C1: Reproductive Areas

The presence of elephant seal pups in the IMMA was confirmed in three consecutive reproductive seasons with a maximum of 4 pups/season. Several of the pup records were neonates (Capella et al., 2017). This area corresponds to one of only three breeding colonies in Chile (Acevedo et al 2016). Although the pup production is still low in comparison with other colonies in other areas of the Southern Hemisphere (e.g. Peninsula Valdes in Argentina) its contribution to the total pup production in Chile, after the extirpation of the population, represents more than 17% of the total pup production annually in Chile, estimated at only ~23 individuals (Acevedo et al., 2016, Capella & Gibbons, 2021). This highlights the importance of the

area for the recovery of the extirpated population. Moreover, the elephant seal assemblage of the Almirante Montt Gulf is the northernmost established colony within the South Eastern Pacific, 325 km north of those known in the Almirantazgo sound (Capella et al., 2017).

## Criterion D: Special Attributes

### Sub-criterion D1: Distinctiveness

The population of Chilean dolphins located south of the Gulf of Penas differs genetically and constitutes an independent management unit from *Cephalorhynchus eutropia* populations in the north of  $-42^{\circ}$  latitude (Pérez-Alvarez et al., 2015).

## Supporting Information

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