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**PROPOSAL FOR THE INCLUSION OF LAHILLE'S BOTTLENOSE DOLPHIN
(*Tursiops truncatus gephyreus*) IN APPENDIX I AND II OF THE CONVENTION***

Summary:

Argentina, Brazil, and Uruguay submit the following proposal to list Lahille's bottlenose dolphin (*Tursiops truncatus gephyreus*) in Appendix I and II of CMS.

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PROPOSAL FOR THE INCLUSION OF LAHILLE'S BOTTLENOSE DOLPHIN (*Tursiops truncatus gephyreus*) IN APPENDIX I AND II OF THE CONVENTION

Background

Argentina, Brazil, and Uruguay submit the following proposal to list Lahille's bottlenose dolphin (*Tursiops truncatus gephyreus*) in CMS Appendix I and II of CMS.

1. PROPOSAL

To include Lahille's bottlenose dolphin (*Tursiops truncatus gephyreus*) in Appendices I and II

2. PROPONENTS

Argentina, Brazil and Uruguay.

3. BASIS OF THE PROPOSAL

4. Taxonomy

- 1.1 Class: mammal
- 1.2 Order: cetartiodactyla
- 1.3 Family: Delphinidae
- 1.4 Genus or species and, where appropriate, subspecies: *Tursiops truncatus gephyreus* (Lahille, 1908)
- 1.5 Scientific synonym: *Tursiops gephyreus*
- 1.6 Name or common names in all languages used by the Convention.

Spanish: Tonina, Delfín mular, Delfín nariz de botella, Tonina común, Delfín de Lahille, Ferón and Ferone

English: Lahille's bottlenose dolphin, Bottlenosed dolphin, Bottlenose dolphins

Portuguese: Golfinho nariz de garrafa, boto de Lahille

2. Overview

Tursiops truncatus is distributed extensively around the world (Wells *et al.*, 2019). Lahille's dolphin (*Tursiops truncatus gephyreus*) is one of three subspecies recently recognized by the Taxonomy Committee of the Marine Mammal Society (2018) for the genus *Tursiops*. The International Whaling Commission (IWC) recently carried out a re-assessment of the taxonomy of *Tursiops* globally, validating the existence of three subspecies of the genus, including *Tursiops truncatus gephyreus* (IWC, 2018). Two subspecies are recognised in the southwest Atlantic Ocean: Lahille's bottlenose dolphin, *Tursiops truncatus gephyreus* and common bottlenose dolphin, *Tursiops truncatus truncatus*. The former is endemic to the coastal waters of southern Brazil, Uruguay and Argentina, with two Evolutionarily Significant Units (ESU), one in southern Brazil-Uruguay and the other in Argentina (Vermeulen *et al.*, 2017; Fruet *et al.*, 2014). *T. t. gephyreus* has a triangular dorsal fin, its length is longer and its coloring is light gray in comparison to *T. truncatus* (Vermeulen & Cammareri, 2009^a). Due to its marked decline in both margins of the Río de la Plata estuary since the 1990s and the small regional population size, the subspecies is classified as *Vulnerable*. (VU) under the D1 criterion of the IUCN (Vermeulen *et al.*, 2019a) and as *Endangered* (EN) in Brazil (MMA 2022)

and Argentina (Vermeulen et al., 2019b). In Uruguay, the subspecies was recently listed as Endangered in the first assessment of the conservation status of the National Red List of Threatened Species of mammals.

3. Migrations

3.1 Types of movement, distance, the cyclical and predictable nature of migration

The southern Brazil-Uruguay ESU covers the area between the state of Paraná in Brazil and the Uruguayan coast. Current abundance estimates for several localities in southern Brazil and Uruguay were made within the framework of Projeto Gephyreus – an international research initiative that coordinates sampling efforts at six sites throughout the range of Lahille's bottlenose dolphins to understand population parameters from a metapopulation dynamics perspective. The following movements between areas were recorded based on data from systematically monitored sites: four individuals photographed in Tramandaí were sighted in Torres; two individuals photographed in Torres were sighted in Tramandaí; nine individuals photographed in Lagoa dos Patos were photographed in Uruguay; eight individuals photographed in Uruguay were photographed in coastal waters adjacent to Lagoa dos Patos. The movements between Brazil and Uruguay occur mainly in the autumn and winter months and include animals of both sexes and of all ages (Laporta 2009, Laporta et al. 2017; Fruet et al. 2023).

In Argentina, Vermeulen et al. (2016) demonstrated long-term site fidelity (more than five years) in Bahía San Antonio. The re-sighting rates in Argentina further suggest the existence of a sub-unit in Bahía Blanca, but also confirm some connectivity (with movements of more than 200-290 km) along the coast and thus a greater potential for gene flow within the region.

3.2 Proportion of migrant population, and reasons for considering it a considerable proportion: No migration has been detected, hardly any movement between local population units.

4. Biological data (other than migration)

4.1 Distribution (current and historical)

There are records of *Tursiops truncatus* further south and north of this range, but so far it remains uncertain whether these sightings refer to the Commerson's dolphin or another subspecies of *T. truncatus* (for example, Simões-Lopes and Fábian 1999, Bastida and Rodríguez 2003, Goodall 1989, Goodall et al. 2011, Vermeulen et al. 2017). The Argentinean subpopulation extends within Argentinean waters from southern Buenos Aires province to Chubut province (Vermeulen et al. 2017). The southern Brazil-Uruguay subpopulation extends from the state of Paraná to the coast of Uruguay, where there are local and resident populations in estuaries and rivers. Records further north in Brazil are uncommon and represent transient animals. The geographical gap between the two subpopulations is related to the estuary of the Río de La Plata and the northern coast of Buenos Aires province (Vermeulen et al. 2017).

4.2 Population (estimations and trends)

Two genetic and geographically isolated subpopulations of *T. t. gephyreus* are recognized: one located in the north of the subspecies' range in southern Brazil and Uruguay, and a second in the south of the subspecies' range in Argentina (sampled genetically in Bahía San Antonio; Fruet et al. 2014). So far, it is not known whether the observed genetic separation is caused by adaptation to different biogeographic regions (Fruet et al. 2014), although the lack of information regarding the area between Bahía Blanca and Uruguay may be influencing the

interpretation of the results. The abundance of this subspecies has been estimated for most of its range, with a maximum total population size of 600 individuals (Vermeulen et al., 2019).

Southern Brazil-Uruguay subpopulation

The southern Brazil-Uruguay subpopulation comprises at least five management units (MU) characterized by moderate asymmetric gene flow (Fruet et al. 2014). One MU is located in Uruguay and southern Brazil, while the other four are located in Brazil. Two of the latter are strongly associated with estuaries (Estuario da Lagoa dos Patos and Lagoa) and two are distributed along the coast (Lagoa dos Patos Norte and Florianópolis) but have some degree of site fidelity in bays and river mouths, specifically the Itajaí River, the North Bay, the Mampituba River and the Tramandaí River. Robust estimates of abundance using capture-recapture methods are only available for estuarine MUs and are described below.

--Southern Lagoa dos Patos, Uruguay management unit

The ESU of southern Lagoa dos Patos, Uruguay includes animals inhabiting from the Uruguayan coast up to and including Lagoa dos Patos. In Uruguay, an abundance of 63 individuals (95% CI: 54–74) was estimated for the year 2008 (Laporta et al. 2016) and a decrease in the frequency of sightings has been observed in the Rio de La Plata estuary since the 1980s and 1990s (Lázaro and Praderi 2000). In Laguna de los Patos the abundance estimate is 78 (95% CI = 70–86) in 2012 (Fruet et al. 2015).

Recently, using mark-recapture models applied to data collected during six sampling periods between 2019 and 2022 (Gephyreus Project), abundance was estimated for each area per period of sampling effort. Abundances ranged from 53 (95% CI 50–57) to 62 (95% CI 48–76) in Laguna; 95% CI: 80–174) to 252 (CC 95%: 143–361) in the Lagoa dos Patos estuary and adjacent sea coast; from 20 (IC 95%: 11–30) to 29 (IC 95%: 16–41) in Tramandai; from 4 (CI 95%: 3–8) to 47 (CI 95%: 37–57) in Torres; from 8 (CI 95%: 3–12) to 24 (CI 95%: 4–12) in Bahía Norte; from 10 (CI 95%: 7–14) to 38 (CI 95%: 21–55) in Uruguay. Combining these estimates from all areas, the total estimate of Lahille's bottlenose dolphins ranged from 246 (95% CI: 183–309) in the first period of sampling effort to 398 (95% CI: 245–550) in the sixth period of sampling effort. Assuming that the current effort is satisfactory to assess the total number of individuals in the area covered, we added up the average estimates for each population unit over all cycles to estimate a regional population size (metapopulation) of 316 individuals across southern Brazil and Uruguay (Fruet et al. 2023). Population trends are available only for Laguna and Lagoa dos Patos, which are relatively stable over the last two decades.

Subpopulation of Argentina

In Argentina, data from the 1970s in northern Buenos Aires province indicated an estimated abundance of approximately 100 resident dolphins (inferred from the number of individuals identified between San Clemente del Tuyú and Miramar); (Bastida and Rodríguez 2003). Studies carried out during the 1990s failed to record any individuals in the same study area and it was concluded that these dolphins had completely disappeared in the last decade (Bastida and Rodríguez 2003, Vermeulen et al. 2017). No other coastal areas were identified where abundance has increased substantially over time, ruling out any hypothesis of a range shift (Vermeulen et al. 2017). Possible explanations for this disappearance are related to overfishing and other drastically increased anthropogenic pressures on the marine environment in that time period, e.g. pollution, habitat degradation, etc.; (Bastida and Rodríguez 2003), but no empirical data are available to support this hypothesis. In the province of Buenos Aires, dolphins are currently only found in the south of the province, in Bahía Blanca and Bahía Anegada. While precise estimates of abundance in this region specifically are not available, numbers are believed to be low based on photo-identification data for the period 2010–2016, not exceeding 50 individuals (Vermeulen et al. 2017). In Río Negro province, an abundance of 83 (95% CI = 73 to 112) individuals was estimated in Bahía San Antonio

between 2009 and 2011 (using catch-recapture data and Pollock's Robust Design; Vermeulen and Bräger 2015), extending at least along the entire coast of Golfo San Matías (Failla et al. 2016, Coscarella et al. 2016, Vermeulen et al. 2016, 2017). Based on a viability analysis, numbers were estimated to be declining at a rate of 1.1% per year during the study period from 2009 to 2011 due to a low recruitment rate related to low numbers of breeding females (Vermeulen and Bräger 2015). 53 dolphins were identified in the province of Chubut in the 1970s (Würsig and Würsig 1977). Aerial transect surveys conducted between 1999 and 2007 resulted in an abundance estimate of 34 dolphins (CV = 0.20) (Coscarella et al. 2012). Both figures should be considered a maximum for the subspecies, as the estimates include both *T. t. truncatus* and *T. gephyreus*, which occur in sympatry in the area. These combined data indicate the existence of a very small and probably declining subpopulation. 200 individuals are estimated for Argentina. Photo-identification-based studies showed movements of individuals between Río Negro province and Chubut and therefore some individuals could be represented in several datasets (Coscarella et al. 2016).

4.3 Habitat (short description and trends)

Lahille's bottlenose dolphins are found mainly in very shallow coastal waters (e.g. Vermeulen 2017), including estuaries, bays and lagoons, and occasionally enter rivers (e.g. Simões-Lopes 1991, Bastida and Rodríguez 2003, Failla et al. 2016). In coastal areas, sightings occur mainly along the breakwater, within 3km of the coast (Di Tullio et al. 2015; Lodi et al. 2017). Sightings data suggest that there are no movements into waters deeper than 30m (Vermeulen 2017), although movements of individuals occur frequently along the coast (Simões-Lopes and Fábian 1999, Laporta 2009, Laporta et al. 2016b, Coscarella et al. 2016, Vermeulen et al. 2016, Laporta et al. 2017). Lahille's bottlenose dolphins are parapatric with common bottlenose dolphins (*T. t. truncatus*) in Brazil and Uruguay, but there are sympatric records in Río Negro province and Chubut, Argentina (Vermeulen et al. 2017). Throughout most of their range, Lahille's bottlenose dolphins maintain defined, long-term, multigenerational ranges (Daura-Jorge et al. 2013, Fruet et al. 2015, Giacomo and Ott 2016, Laporta et al. 2016b, Vermeulen et al. 2016).

4.4 Biological characteristics

T. t. gephyreus is larger and has a smaller, triangular dorsal fin, a relatively longer snout and lighter gray coloration than offshore bottlenose dolphins (Vermeulen and Cammareri 2009a, Fruet et al. 2017).

Lahille's bottlenose dolphins have a marked breeding season, with most births occurring between late spring and summer (Vermeulen and Brager 2015, Fruet et al. 2016).

The mean survival rate in San Antonio Bay ranged from 0.97 (\pm 0.037 SE) to 0.99 (\pm 0.010 SE) for the period 2006–2011 (Vermeulen and Brager 2015). For the resident population of Bahía San Antonio (Argentina), the mean calving interval (2006–2011) was 3.5 ± 1.03 years, ranging from two to five years, with an estimated 3.5 births/year in the population. Taking into account an estimated maximum population size of 83 individuals, this results in a minimum annual birth rate of 4.2% (Vermeulen and Brager 2015).

They have great behavioral plasticity, with inter- and intra-population variations in behavior. They are known for cooperative fishing with artisanal fishermen in some localities in southern Brazil (Simões-Lopes et al. 1998, Ilha et al. 2018), where they are recognized as intangible natural heritage (e.g. in Laguna, Santa Catarina, Municipal Law No. 521, of 10 November 1997, declares the Lahille's bottlenose dolphin as Natural Heritage of the Municipality). These dolphins live in complex societies, usually in small groups that tend to associate by chance for a short period of time or to perform specific behaviors despite their long-term multigenerational ranges and small population sizes (Daura-Jorge et al. 2012, Vermeulen et al. 2009, 2018).

The mean group size ranges between three and six individuals, depending on the locality (Vermeulen et al. 2009, Domit et al. 2016), with a maximum group size of around 50 animals recorded in Bahía San Antonio, Argentina (Vermeulen et al. 2015).

4.4 Role of the taxon in its ecosystem

The ecological roles of small cetaceans in communities and ecosystems remain poorly quantified. Still, there are ecosystem functions associated with top predators, which include top-down effects (e.g., direct predation and risk effects) and bottom-up effects (e.g., translocation of nutrients within and between ecosystems). They may also be consumed by other marine predators, in particular killer whales (*Orcinus orcanus*) and large sharks, but in the case of Lahille's bottlenose dolphins predation rates are apparently low. Ecosystem mass balance models suggest that small cetaceans may affect populations of short-lived prey species (particularly fish and cephalopods), but other factors (e.g. eutrophication and fisheries) also affect ecosystem functioning and population trends. Dolphins may also mediate the translocation and recycling of limiting nutrients between spatially distinct ecosystems on a daily basis.

Isotopic values of dolphins from Argentina were different from those from Uruguay and Brazil, reflecting variations in diet composition and/or baseline isotopic values. The considerably large isotopic niche of dolphins in Argentina remained in Period I, following the trend of stable carbon and nitrogen isotopic values over the decades. In this area, the mixing models showed a diet with a high proportion of demersal prey, mainly from coastal marine waters. Lahille's bottlenose dolphins from Uruguay showed stability in nitrogen isotopic values, but an increase in carbon isotopic values over the decades. This increasing trend was consistent with the reduced use of estuarine waters of the Río de la Plata by the species reported in recent decades. In these areas, species also showed a high proportion of demersal fish species. Finally, dolphins from Argentina and Uruguay showed partial and total niche isotopic segregation during Periods I and II, respectively, probably reflecting spatial/ecological structuring in this region. The samples from Brazil and Uruguay, on the other hand, were not statistically different, probably forming an ecological unit.

5. Conservation status and threats

5.1 IUCN Red List Classification

Vulnerable D1 (Vermeulen et al., 2019)

5.2 Equivalent information concerning the assessment of conservation status

In 2021, the IWC established the Lahille's bottlenose dolphins Task Team (LBDDTT). Since that time, the LBDDTT continued to follow up on the IWC recommendations and provided updates on research and conservation of the bottlenose dolphin across the three countries, following previous recommendations made (and reiterated) by the Scientific Committee (IWC, 2019c, p.49; 2020c, p.88) for: (a) an assessment of the conservation status of the Argentine population; (b) governments to take immediate action to reduce the level of bycatch, particularly in the MUs of southern Brazil; (c) continued monitoring throughout its range to increase knowledge of life history parameters, assess trends in abundance, and document the prevalence and aetiology of chronic skin disease; and (d) recommending that a Lahille's dolphin health assessment program be implemented, including the use of the Committees' contaminant mapping tools. Regarding the LBDDTT, the Scientific Committee recommended (i) coordinating regional efforts between Argentina, Uruguay and Brazil to estimate and monitor stock parameters; (ii) seeking ways to work in cooperation with fishing communities and fisheries authorities to reduce bycatch; and (iii) exploring possible synergies with the Franciscana CMP.

5.3 Threats to the population (factors, intensity)

Due to their low numbers, high site fidelity and restricted coastal range, bottlenose dolphins are particularly sensitive to local anthropogenic impacts. The Argentina subpopulation is of particular conservation concern due to its small size, its apparent genetic isolation from the rest of the subspecies and its low genetic variability (data obtained so far show only one mtDNA haplotype).

Subpopulation of Argentina

Within Argentina, Marcovecchio et al. (1990, 1994) and Moreno et al. (1984) reported elevated levels of heavy metals in bottlenose dolphins in several regions along the coast. Vermeulen and Bräger (2015) indicated this as a possible cause of the apparent decline associated with a low recruitment rate (due to low numbers of breeding females) in their study area in Bahía San Antonio, Río Negro. It was suggested that adult mortality may not be the most direct and imminent threat to Lahille's bottlenose dolphins in the country and that observed declines are more likely related to reduced reproductive success. (Vermeulen and Bräger 2015, Vermeulen et al. 2017). However, more data is required in the long term to confirm this hypothesis. In general, within this subpopulation there are few records of bycatch in fishing gear or mortality from collision with vessels (Crespo et al. 1994, 1997, 2008), and no high levels of adult mortality were detected in the last 30 years (Coscarella et al. 2012; Vermeulen et al. 2017). Other likely threats to this subpopulation include reduced prey availability caused by environmental degradation and overfishing (Cauhepe, 1999), especially in Buenos Aires province and Chubut (Bastida and Rodríguez 2003, Coscarella et al. 2012). However, there is still insufficient data to support these hypotheses.

Finally, it is worth mentioning that during the 1970s and 1980s, specimens were captured in the northern coastal sector of the province of Buenos Aires for exhibition. Between 1977 and 1980, 16 specimens were captured for the General Rodríguez Zoo, Province of Buenos Aires, of which six died during the captures and the adaptation period (Castello and Pinedo, 1981; Heras, 1991). On the other hand, in 1984, the Mundo Marino Aquarium reported having ten specimens of *T. t. gephyreus* (FVSA and MACN, 1985). The effects of these catches on the population are unknown.

Southern Brazil-Uruguay subpopulation

Similar to the situation in Argentina, the mortality of adults does not seem to be the cause of the decreased number of bottlenose dolphins in Uruguay (P. Laporta personal observation). Although there is very little information regarding possible direct and indirect threats to the subspecies in Uruguayan waters, contamination from agricultural effluents could be a cause for concern due to the contamination load detected in other marine organisms at the discharge of the Andreoni Canal (Lercari and Defeo 1999, Sauco et al. 2010), which is an area with high occurrence of this subspecies. The reduced availability of dams caused by overfishing and the destruction of the benthic ecosystems by this fishing is another possible threat to this subspecies in Uruguay. Just like in Argentina, the bycatch of bottlenose dolphins in fishing gear is rare, as evidenced by only a few studies reporting the bycatch of nine individual in total, despite systematic studies (Pilleri and Gihl 1972; Praderi 1985, 2000; Domingo et al. 2006; Laporta et al. 2006; Franco-Trecu et al. 2009; Passadore et al. 2015). However, in the last four years two stranded animals with signs of bycatch in artisanal fishing nets and/or subsistence fishing nets were reported dead. There were also a further two alive animals with injuries around the peduncle and caudal fin, possibly caused by interaction with fishing nets (P. Laporta, personal observation). This is supported by the observation of fishing gear located within 300 meters of the coast, which is legally prohibited between October and April by the Uruguayan National Aquatic Resources Directorate (DINARA).

Meanwhile, in Brazil, accidental mortality in fishing gear, especially coastal gillnets and beach seines, is currently the main threat to these dolphins (Fruet et al. 2016). The bycatch rates in the Lagoa dos Patos estuary are supposedly the highest among the entire subspecies range (Fruet et al. 2014, Fruet et al. 2016). Between 2002 and 2006, 21 individuals were found dead on the coastal beaches close to the Lagoa dos Patos estuary, and these individual clearly showed signs of interaction with fishing. This accounts for 46% of the total mortality of *T. t. gephyreus* in the area. The number of bycaught dolphins per year oscillates between two and nine (average = 3.4; SD = 1.6). This number exceeded the potential biological extraction (which ranges from 0.128 and 1.67 individuals per year) of the MU of the Lagoa dos Patos estuary and may lead to a reduction if it continues.

Plausible arguments to explain the apparent stability of this MU are based on abundance estimates over several decades, which state that bycatch is heavily skewed towards young males, thus delaying their effects on the population dynamic. Bycatch may also affect coastal dolphins not taken into account in the abundance estimate as the dolphins in three MUs spill over from their range into this area. Therefore, the apparent stability of the Lagoa dos Patos estuary MU should be taken with caution. For the other MUs in Brazil, the mortality rates appear to be much lower than in the Lagoa dos Patos estuary (for example, 27% of mortality observed in the state of Santa Catarina, Simões-Lopes and Ximenez 1993). However, recent records indicate an increase which results in a similar level of bycatch (for example, 50% of the mortality observed in the Laguna MU; Bezamat et al. 2018).

Although they are still emerging, the results of recent studies in southern Brazil indicate that the individual levels of PCB in this subspecies in the Lagoa dos Patos estuary and Laguna MUs frequently exceed the risk thresholds of reproductive deterioration and appearance physiological effects established for the species (Righetti 2018). There are also increasing records of cutaneous injuries in *T. t. gephyreus*, which may result from water contamination (for example, Van Bresseem et al. 2007, Reif et al. 2009). The first case of Iacaziosis (LLD) in southern Brazil was recorded in the early 1990s in a dolphin in the Laguna MU (Simões-Lopes et al. 1993). More recent data indicate an increase in the prevalence of LLD in the Laguna MU, as well as in bottlenose dolphins in other coastal MUs in southern Brazil (Moreno et al. 2008). Especially in the Laguna MU, LLD was recorded at 5.6% in individuals between 2006 and 2009, increasing to 13.9% from 2013 to 2014 (Van Bresseem et al. 2015).

5.4 Threats connected especially with migrations

The main threat related to latitudinal movements is bycatch in small-scale coastal fishing, especially individuals in Uruguay that regularly travel to the coastal area of southern Brazil, where there is a lot of artisanal fishing with gillnets and seines.

5.5 National and international utilization

In Argentina, it is a species that is used for tourism as part of nature trips. These activities are carried out from the coast in the Rio Negro estuary (Failla et al., 2014) and cover the Bahía Blanca estuary (Iñiguez, personal communication), Bahía San Antonio (Vermeulen et al., 2019) and Playa Unión (Coscarella et al, 2003).

There is also a species used for tourism in Brazil. Cooperative fishing still has a high socio-cultural and economic value in some towns as it is a unique event where Lahille's bottlenose dolphins interact with artisanal cast net fishers while they are fishing for mullets, thus benefitting both the fishermen and dolphins. Another important figure is that the interaction is beneficial for the animal's survival as the dolphins that practice cooperative fishing have 13% increase in survival rates (Cantor et al. 2023).

6. State of species protection and management

6.1 National protection status

Argentina

- National Act No. 22,241 for the conservation of wildlife species
- Act No. 25,577, prohibiting the killing of cetaceans in domestic waters
- The United Nations Convention on the Law of the Sea, approved by National Act No. 24,542/1995
- CITES, approved by National Act 22,344
- Convention on Biological Diversity, approved by National Act No. 24,375
- Provincial Act No. 4115 (Río Negro); comprehensive protection of marine mammals in provincial waters
- Provincial Act XI- 4 (ex 2381) (Chubut); comprehensive protection of marine mammals in provincial waters

Uruguay

- Decree 13/993 - Ministry of Livestock, Agriculture and Fishing conservation and preservation of marine mammals
- Decree 238/998. Ministry of Livestock, Agriculture and Fishing. Ban on killing and protection of marine mammals.
- Act No. 16,320. Ministry of Economic Affairs and Finance. Conservation and preservation of marine mammals.
- Included in the Priority Species List for the Conservation of the National System of Protected Areas. National Directorate of the Environment - Ministry of Housing, Spatial Planning and the Environment. 2013.
- Focal point of conservation in the protected area of Cerro Verde and La Coronilla Islands.
Decree 285/011, of 10 August 2011.
- Endangered. Red List of Mammals in Uruguay. In progress

Brazil

- Federal Act (Act 7,643, of 18 December 1987)
- In Laguna, Santa Catarina, Municipal Act No. 521, of November 10, 1997, declares the Lahille's bottlenose dolphin as Natural Heritage of the Municipality.
- In Rio Grande, Rio Grande do Sul, Municipal Act No. 8,820, of 8 June 2022, declares the Lahille's dolphin as Natural Heritage of the Municipality.
- Municipal Decree No. 3922/2013 prohibits the recreational use of jet skis in the main areas of concentration of the Laguna MU and regulates the speed and space for jet skiing.
- Municipal Act No. 1,998, of 18 June 2018, prohibits the use of gillnets in the core areas of the Lahille's Dolphin MU in Laguna.
- In the state of Rio Grande do Sul, increasing threats led to the subspecies being listed as "Vulnerable" in its list of Endangered Fauna species (State Decree 51,797, of September 8, 2014).
- In 2012, a protection area was established in the estuary of the Patos lagoon and the adjacent marine system, prohibiting gillnet fishing from boats in order to reduce bycatch (Article 8 of Inter-ministerial Regulation 12/2012 - Brazil 2012). The area covers a line parallel to the coast, with a distance of 30km (15km to the north and 15km to the south of the mouth of the estuary) and a width of two kilometers from the coast. It also covers two kilometers around the breakwaters and five kilometers from the estuary area closest to the mouth of the estuary, which corresponds to the areas with the highest density of fishing nets and *T. t. gephyreus* (Di Tullio et al. 2015).

6.2 International protection status

The International Whaling Commission (IWC) recently carried out a re-assessment of the taxonomy of *Tursiops* globally, validating the existence of three subspecies of the genus, including *Tursiops truncatus* *gephyreus* (IWC, 2018). In 2021, the IWC established the LBDTT, which is composed of researchers from the three range countries plus other international specialists (see item 5.2 of this document for more details).

It is included in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which covers species that are not necessarily threatened with extinction but could become so unless trade is strictly controlled.

6.3 Management measures

Since 2016, Argentina has been implementing the National Action Plan to reduce interaction between marine mammals and fisheries in Argentina (NAP Mammals). This aim of this action plan is to contribute to managing the fishery ecosystem and assessing the interactions between them and the marine mammals in order to reduce the negative impacts on both.

The Bahía Blanca, Bahía Falsa and Bahía Verde Multiple Use Nature Reserve and the Gaviota Cangrejera Islet Nature Reserve are located in the Bahía Blanca Estuary, which is where 87% of sightings were recorded between October 2020 and April 2023 (Petracci et al., 2023). Both reserves are currently starting a process of updating their management plans, which is expected to include this subspecies.

Argentina has a total of 500 protected areas (PA), which represents an area of 36,947,536 hectares (13.3% of the national territory). These areas include those run by the National Park Administration, provinces and protected marine areas (PMA). Of the 500 PAs, 31 are protected coastal marine areas (PCMA), 3 are PMAs and 34 are protected marine territories (SIFAP, 2020). *Tursiops truncatus* has been recorded in 27 PAs (Hevia et al., 2022).

Uruguay

The Lahille's bottlenose dolphin has been included in the list of priority species for conservation of the National System of Protected Areas and is a focal conservation target of the protected area of Cerro Verde and La Coronilla Islands. The Red List of mammals for Uruguay is currently being drawn up and the Lahille's bottlenose dolphin has been listed as Endangered. A dialogue has started with DINARA to seek solutions to bycatch in fishing nets and to generate a fishing exclusion area similar to the one in southern Brazil, 1km from the coast.

Brazil

At national level, in 2012, a protection area was established in the Lagoa dos Patos estuary and the adjacent marine system, prohibiting gillnet fishing from boats in order to reduce bycatch (Article 8 of Interministerial Regulation 12/2012 - Brazil 2012). The area covers a line parallel to the coast, with a distance of 30km (15km to the north and 15km to the south of the mouth of the estuary) and a width of two kilometers from the coast.

It also covers two kilometers around the breakwaters and five kilometers from the estuary area closest to the mouth of the estuary, which corresponds to the areas with the highest density of fishing nets and *T. t. gephyreus* (Di Tullio et al. 2015).

The Lahille's bottlenose dolphin is currently listed as *Endangered* on the National Endangered Species List and part of the Marine Cetacean Conservation Action Plan (MMA, 2022). Among others, the following actions involving this dolphin are planned: 1.1 Evaluate the effectiveness of the INI MPA/MMA No 12 of 2012 for the reduction of bycatch of marine cetaceans; 1.3

Propose the inclusion of specific fisheries control and inspection operations in critical areas and bycatch periods for *S. guianensis* and *T. gephyreus*, including different government departments; 1.8 Monitor the trends and populational parameters of *S. guianensis* and *T. gephyreus* in the areas with the highest occurrence of bycatch; 1.15 Propose the management of local fisheries in areas where *S. guianensis* and *T. gephyreus* are present.

It is also important to mention that at the local level, in 2019, the Santa Catarina Environment Institute (IMA) held a Workshop to define a State Action Plan to conserve the Lahille's bottlenose dolphin population in Laguna (Portaria No. 214/2019). This plan aims to support efforts to: (i) reduce bycatch in gillnets; (ii) regulate boat traffic and reduce noise pollution; (iii) monitor dolphin population parameters and dolphin health conditions; (iv) monitor and propose actions to improve and guarantee the quality of the habitat; (v) involve society in conservation actions.

6.4 Habitat conservation

Throughout its range there are coastal marine areas that directly or indirectly provide conservation measures for this subspecies. For Argentina, at least 27 such areas administered by federal or provincial governmental bodies have been identified (Hevia et al., 2022). Most of the Protected Areas (PAs) in Argentina were not created for the protection of cetacean populations but some have included them *a posteriori*. It is important that PAs that have cetaceans within their boundaries incorporate them into their management plans or, if they have already been created and established and there is a strong scientific basis for their relevance to a particular species, it may be necessary to expand the boundaries of these coastal marine protected areas to provide maximum protection (Hevia et al., 2022). This could also be applied to the situation in Brazil and Uruguay. In Uruguay, there are four protected marine-coastal areas in the regions of Maldonado and Rocha. In Brazil, two protected marine areas are identified at the federal level throughout the species' range: APA Anhatomirim and APA da Baleia Franca.

6.5 Population monitoring

For the Bahía Blanca area, the Estación de Rescate de Fauna Marina "Indio Fidalgo", the Reserva Natural de Uso Múltiple Bahía Blanca, Bahía Falsa and Bahía Verde, and the Fundación Cethus have initiated a joint study on *T. t. gephyreus*. This study employs photo-identification and acoustic techniques and focuses mainly on population estimation. The photographs obtained from this project will be shared and compared with other existing catalogs in the region. Tissue and bone samples have also been collected from stranded and dead specimens and from specimens deposited in local collections for genetic studies.

In southern Brazil and Uruguay, the species is the focus of an international conservation initiative, which is an international multi-institutional research network that works in a coordinated manner for the research and conservation of the Lahille's bottlenose dolphins. This project, called "Proyecto Gephyreus", is coordinating a simultaneous photo-identification sampling effort at six sites across the subspecies' range to understand the ESU of southern Brazil/Uruguay from a metapopulation dynamics perspective. This effort started in 2019.

From a local perspective, the subspecies is the focus of long-term monitoring (since the 1970s) at two sites: Laguna and Lagoa dos Patos. Photographs for mark-recapture studies and skin and fat samples for contamination, genetic, epigenetic and stable isotope studies are collected annually at these locations. Bioacoustics studies are also under development. For other sites, such as Tramandai, Torres and Baía Norte in Brazil and along the coast of Uruguay, monitoring is more recent but with the intention of long-term continuity.

7. Effects of the proposed amendment

7.1 Anticipated benefits of the amendment

The Lahille's bottlenose dolphin has been and is a flagship species of the southwest Atlantic and conservation measures that mitigate threats to this subspecies will benefit a wide range of marine migratory species across multiple taxonomies. At the same time, it has a strong historical and cultural component in coastal communities that would be preserved. For example, a town in the northern coastal sector of the province of Buenos Aires bears their name Las Toninas (literally translated as "The bottlenose dolphins"), which would indicate how common their sightings were in the past, fishermen in southern Brazil interact with them (for example in Laguna) and the old coastal settlers predicted the weather according to the direction in which the dolphins swam.

The incorporation of the species into international agreements, such as CMS, could help drive improvements in national and regional management, as well as foster collaboration between the three countries.

7.2 Potential risks of the amendment

No risks are foreseen from including *T. t. gephyreus* in Appendices I and II. In fact, the main risk encountered is that decisions will not be taken quickly and efficiently to protect the different subpopulations found throughout its range. Another risk would be the lack of funds to carry out a comprehensive program in the three countries and to comply with the recommendations of the IWC, for example. In this sense, with modest funds, it has been possible to make good progress in recent years as shown by recent publications (e.g. Petracci et al., 2023, Vermeuler et al., 2019); Fruet et al., 2016; Fruet et al. 2023)

7.3 Intention of the proponent concerning development of an Agreement or Concerted Action

The proponents could take forward a *Concerted Action* on Lahille's bottlenose dolphin under CMS. They will also continue to collaborate and strengthen their participation within the IWC LBDTT and explore the possibility of developing a Lahille's Dolphin Conservation and Management Plan.

8. Range States

Argentina (Buenos Aires, Río Negro and Chubut), Brazil (Paraná, Santa Catarina and Rio Grande do Sul), Uruguay.

9. Consultations

10. Other remarks

11. References

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