CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Thirty-third meeting of the Animals Committee
Geneva (Switzerland), 12 – 19 July 2024

Appendices of the Convention

Periodic Review of species included in Appendices I and II

PERIODIC REVIEW OF *ARCTOCEPHALUS TOWNSENDI*

1. This document has been prepared by the CITES Scientific Authority of Mexico (CONABIO)*.

2. At the 29th Meeting of the Animals Committee (Geneva, Switzerland, July 2017) and in response to Notification to the Parties No. 2017/069, Mexico and the United States of America offered to review the Guadalupe fur seal (*Arctocephalus townsendi*) under the Periodic Review of species included in the CITES Appendices, in accordance with Resolution Conf. 14.8 (Rev. CoP19).

3. *Arctocephalus townsendi* is distributed in the Pacific from central Mexico along the United States, with a few records in southern Canada, although breeding colonies are only known to exist in Mexico. The current population is estimated at 34,000-44,000 individuals and is increasing. The islands where this species breeds are located within protected areas and the species has the highest level of protection in Mexico and the United States of America, whereas Canada has regulations in place for the management of marine mammals. Current threats are not related to direct use, domestic or international trade of the species, but rather to pollution, climate change, net entanglement and invasive species.

4. The Guadalupe fur seal is the only species of the genus *Arctocephalus* listed in Appendix I; all other species of the genus are listed in Appendix II. International trade of *A. townsendi* has been almost non-existent since its listing in 1975 and is mainly limited to the exchange of scientific specimens.

5. After a comprehensive review of the status of the species, Mexico recommends the transfer of the Guadalupe fur seal (*Arctocephalus townsendi*) from Appendix I to Appendix II considering that it does not meet the biological criteria set out in Annex 1 of Resolution Conf. 9.24 (Rev. CoP17) and in accordance with precautionary measures A1 and A2 of Annex 4 of the same Resolution.

6. Mexico requests the Animals Committee's opinion on the periodic review of *Arctocephalus townsendi* presented in the Annex to the document.

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* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

A. Proposal

To transfer *Arctocephalus townsendi* from Appendix I to Appendix II considering that international trade does not constitute a threat to the species, in accordance with paragraph 1 of the Fundamental Principles laid down in Article II of the text of the Convention, that it does not meet the biological criteria set out in Annex 1 of Resolution Conf. 9.24 (Rev. CoP17), and in accordance with precautionary measures A1 and A2 of Annex 4 of the same Resolution.

B. Proponent

Mexico

C. Supporting statement

1. Taxonomy

1.1. Class: Mammalia

1.2. Order: Carnivora

1.3. Family: Otariidae

1.4. Species: *Arctocephalus townsendi* Merriam, 1897

1.5. Scientific synonyms: *Arctophoca philippii townsendi* and *Arctocephalus philippii townsendi*

1.6 Common names:

English:	Guadalupe Fur Seal
French:	Otarie à fourrure d'Amérique
Spanish:	Lobo Fino de Guadalupe
Dutch:	Guadalupe Zeebeer
Portuguese:	Lobo-marinho-de-Guadalupe
Russian	Гуадалупский морской котик

2. Overview

The proposal is to transfer the Guadalupe fur seal (*Arctocephalus townsendi*) from Appendix I to Appendix II. This species is a member of the family Otariidae distributed in the Pacific coastline of central Mexico and the United States, with a few records in southern Canada, although breeding colonies are known only in Mexico. The species is listed in Appendix I, whereas the rest of the genus is listed in Appendix II. In the 1920s it was considered extinct, due to heavy hunting pressure. However, since 1933 the population in Mexico has been under full protection, and a breeding colony was found in 1954. The population has grown from 200 individuals in 1954 to 34,000-44,000 individuals today. The numbers continue to increase, and the species has colonized a new breeding area. It is classified as Least Concern with an increasing population trend in the IUCN Red List, and the species has the highest level of protection in both Mexico and the United States of America. The islands where it breeds are located within protected areas. There is almost no domestic or international trade, which mainly involves only the exchange of scientific specimens. No harvest of the species is allowed in the countries where it occurs and no increase in demand is foreseen as a result of the transfer to Appendix II. Current threats are not related to direct use or domestic or international trade of the species, but rather to pollution, climate change, net entanglement and invasive species. Consequently, the Guadalupe fur seal does not meet the biological criteria set out in Annex 1 of Resolution Conf. 9.24 (Rev. CoP17), and the proposal is in accordance with precautionary measures A1 and A2 of Annex 4 of that Resolution.

3. Species characteristics

3.1 Distribution

The Guadalupe fur seal (*Arctocephalus townsendi*) is distributed in temperate North Pacific waters along the west coast of North America from central Mexico (Ortega-Ortiz *et al.* 2019) to southern British

Columbia, Canada (Norris *et al.* 2017; Norris & Elorriaga-Verplancken, 2019 in McCue, *et al.* 2021), with rare sightings in Alaska (Lambourn *et al.* 2012). The species breeds mainly in Mexico on Guadalupe Island, where 99% of births take place. In recent years, San Benito Archipelago has become an important recolonization site, with the birth of <30 pups per year since 2007 (Figure 1; Aurioles Gamboa *et al.* 2010; Sierra-Rodríguez 2015; Elorriaga-Verplancken *et al.* 2016; Norris & Elorriaga-Verplancken 2019, 2020).

It appears that *Arctocephalus townsendi* has been present in the Farallón islands, Sinaloa, since 2014. In January 2020, 492 individuals were counted, increasing to 771 in November, most of them juveniles (Gutiérrez-Osuna *et al.* 2022). Also in 2020, an incipient non-breeding colony was established on Islote de las Ánimas (Bahía de la Paz, Baja California Sur), where various counts were made throughout the year and a maximum of 119 juvenile individuals were observed in August (Elorriaga-Verplancken *et al.* 2021).

Figure 1. Range of the Guadalupe fur seal (*Arctocephalus townsendi*) off the west coast of North America (from McCue, *et al.* 2021).

3.2. Habitat

The Guadalupe fur seal (*A. townsendi*) inhabits the interface between marine and terrestrial ecosystems, as it feeds on a high diversity of prey in coastal and oceanic waters but rests, breeds and moults in terrestrial areas, mainly on Guadalupe Island. Guadalupe Island is part of the Guadalupe Island Biosphere Reserve, whose marine and terrestrial zones represent a total area of 476,971 ha (CONANP 2009, 2023). The reserve has a core zone and a buffer zone, which represent 5.03% and 94.97% of the total area, respectively. The core zone consists of Guadalupe Island, which is volcanic and has an area of 253.8 km²; it is located 240 km southeast of Ensenada, Baja California (CONANP 2009, 2023; García-Aguilar *et al.* 2013).

The climate on Guadalupe Island is Mediterranean, characterized by rainy winters and dry summers. As on the entire western coast of Baja California, the climate ranges from desert to temperate-dry, and water temperatures range from 14.9 to 21.7 °C. The island is located in the southern region of the California Current System, a surface current (0-300 m) that carries water from higher latitudes towards the equator during most of the year; this current is characterized by low salinities and temperatures (Lynn & Simpson, 1987) and accelerated primary productivity (Hernández de la Torre *et al*, 2005; Pares-Sierra *et al*, 1997).

The coastline where this species lives is rugged, with numerous coves, hidden inlets, holes, crevices, caves, lava tubes, basalt dykes, vertical cliffs, narrow pebble beaches, and two long, wide beaches of gray-black sand. The west and north sides of the island are inaccessible due to the constant pounding

of wind and waves. The eastern side is almost as steep as the western side, but the sea is calmer, protected from the prevailing north-westerly winds and swells by the mountain range that runs along the island (Berdegué, 1957).

3.3. Biological characteristics

The Guadalupe fur seal is a medium-sized marine pinniped with diurnal and nocturnal habits. Females reach sexual maturity between 3 and 4 years of age, and males reach it at up to 5 years of age (SEMARNAT, 2018). The breeding period lasts from mid-June to August, with activities on land or shallow areas. The breeding system of this species is polygynous, as a single male can have up to 12 females in its territory (Aguilar & Larrea, 2011). Males are the first to arrive at the breeding sites to establish territories during the mating season (Riedman, 1990). They regularly maintain their territories for at least 31 days, through vocalizations, threat displays and physical fights with other males, although this length of time varies depending on various factors (i.e., age, size, ability to compete; Peterson *et al.* 1968; Riedman, 1990).

After mating, there is a delay in implantation of about two months. Apparently, females choose the best male and territory to give birth and care for the only pup they have annually; lactation lasts approximately 8 months. Females are residents of the breeding areas, so their feeding trips take place in the regions surrounding these colonies with the feeding strategy known as the feeding cycle, which is typical of otariids and consists of alternating between the females feeding themselves and caring for and nursing the pups (Boness & Bowen 1996). This contrasts with males, which tend to migrate when the breeding period is over (Gallo-Reynoso 1994). Females of *A. townsendi* frequent oceanic waters, at a distance of up to 444 ± 151 km with an average time at sea of 14 ± 8.2 days and at average depths of 30 m (Pierson 1987, Gallo-Reynoso 1994, Gallo-Reynoso *et al*. 2008, Gallo-Reynoso & Figueroa 2010).

3.4. Morphological characteristics

Guadalupe fur seals are dark brown to silver in colour with thick golden fur. They show sexual dimorphism: adult males are considerably longer, stockier and three to four times heavier than adult females. Adult males are over 2.5 m long and weigh >220kg (Gallo-Reynoso 1994), but these measurements are probably underestimated as larger males cannot be safely handled and measured. On average, adult females measure 1.5 m (range: 1.37-1.65 m) and weigh 50 kg (range: 40-55 kg; Gallo-Reynoso 1994). Pups are born with black fur; on average, they weigh 5 kg, are 64 cm long, and reach 14 kg and 89 cm at weaning, with males being longer, but not heavier than females at these stages (Gallo-Reynoso & Figueroa-Carranza, 2010). The species has long vibrissae (i.e., whiskers), which are usually white in adult females. They also have long, prominent, slightly downturned ears that protrude from the head. The muzzle is elongated and pointed with a flattened top. Adult males have broad necks, chests and shoulders with a slightly reddish-toned mane composed of longer, coarser guard hairs that are lighter in colour than the body coat. The fore flippers have short, dark fur on the dorsal surface that extends from the shoulder in a "V" shape but does not reach the tip of the flipper. The hind flippers are long and, whereas the dorsal surface is partly covered in fur, the entire sole is covered with black, leathery, hairless skin (McCue, *et al.* 2021).

3.5. Role of the species in its ecosystem

Pinnipeds are usually high trophic level predators in their ecosystems, influencing the population balance of their prey (Rivera, 2011). In the specific case of *A. townsendi*, scat analysis showed a diet with a specialist tendency composed of 92% of cephalopods and only 8% of fish (Gallo-Reynoso 1994; Hernández, 2009). In addition, this species can be predated by killer whales (*Orcinus orca*) and some shark species, such as the great white shark (*Carcharodon carcharias*) and the bull shark (*Carcharhinus leucas*; Aguilar 2011). Given the ecological importance of the Guadalupe fur seal, as it is an apex predator with strong fidelity to its colony and high longevity (Porras-Peters *et al*. 2008, Elorriaga-Verplăncken, 2009, Mejia-Ruiz, 2011), it is considered as a sentinel species and a bioindicator of the ecosystem (Godinez-Reyes et al. 2006).

4. Status and trends

4.1 Habitat trends

The main issue concerning Guadalupe Island Biosphere Reserve is the disturbance of ecosystem processes by both natural and external events. Alien invasive species are a problem on the island,

particularly mammals such as goats, dogs, cats and mice (CONANP, 2009). Cats currently pose a serious threat, as they are widespread on the island and have negative effects on the breeding colonies of some birds. Dogs have been removed from the reserve but caused problems to the pinniped populations due to disease transmission or predation of offspring (Gallo-Reynoso *et al*. 2005).

The marine ecosystem of the reserve is also affected by climate change and meteorological/oceanographic phenomena such as El Niño-Southern Oscillation (ENSO; SEMARNAT, 2018). Higher temperatures can affect the reproductive behaviour of the species (e.g., the ability of males to defend territories; pups may be born closer to the sea, increasing the likelihood of being swept away by waves). Higher water temperatures can affect the distribution, abundance, and subsequently the availability and quality of prey for Guadalupe fur seals (McCue, *et al*. 2021).

Another effect of climate change and increased water temperature is the accelerated melting of land ice, such as glaciers, which leads to higher sea levels. During the period between 1901 and 2010, global mean sea level rose by 0.19 m (IPCC 2014). Some models predict that global sea level rise could exceed two metres by 2100 (Bamber *et al*. 2019). Many beaches and coastlines across the world have experienced the impacts of sea level rise, especially in island communities. The terrestrial habitat of the Guadalupe fur seal is essentially a narrow strip surrounded by steep cliffs, which may be particularly problematic if the coastline disappears due to increasing sea levels (McCue *et al*. 2021).

4.2. Population size

The population of *A. townsendi* is estimated at 34,000-44,000 individuals, with an estimated annual growth rate of 10-11% (CONANP 2018; García-Aguilar *et al*. 2018; Hernandez-Camacho & Trites, 2018). In a count of pups on Guadalupe Island, 4,924 individuals were sighted (García-Aguilar *et al*. 2018). The San Benito Archipelago colony has also experienced sustained growth (17.1% according to Sierra-Rodríguez, 2015), but breeding activity is low, which suggests that the increase could be related to the immigration of animals from Guadalupe Island (Aurioles Gamboa *et al*. 2010). García-Capitanachi (2011) estimated the population of San Benito Archipelago at 2,500 individuals between 2008 and 2010, and at 4,572 individuals in 2012 (Angell 2014; Sierra-Rodríguez 2015).

4.3. Population structure

From 1991 to 1993, the population observed on Guadalupe Island was composed of 35.7% adult females, 22.1% pups, 9.7% juveniles, 26.4% adult males, 4.7% subadult males and 1.3% undetermined individuals (Gallo-Reynoso 1994). During the breeding seasons of 2007 and 2008, the population structure in San Benito Archipelago comprised 34.5-23.4% adult females, 0.4% pups, 18.6-29.1% juveniles, 6.2-12.6% subadult males, and 1.1-1.2% adult males, with a high percentage of indeterminate individuals (between 39.2% and 33.3%, Aurioles-Gamboa *et al.* 2015).

4.4. Population trends

The historical population size is unknown but has been estimated at up to 200,000 individuals prior to human influence (Hamilton 1951; Hubbs 1979). In the 18th and 19th centuries, the Guadalupe fur seal was intensively hunted by the fur industry, to the extent that it was believed to be extinct by the 1920s (Wedgeforth 1928). In 1954, a small colony was found in Mexico (Hubbs 1956) and protection of the species was put in place (SEMARNAT, 2018). Since the 1950s, the species has experienced a recovery from an estimated population of 200-500 individuals to over 30,000 (García-Capitanachi *et al*. 2017; Carretta *et al*. 2017). Overall, the population is increasing (Figure 2) and slowly spreading, with minor and temporary declines associated with El Niño events (Aurioles-Gamboa, 2015).

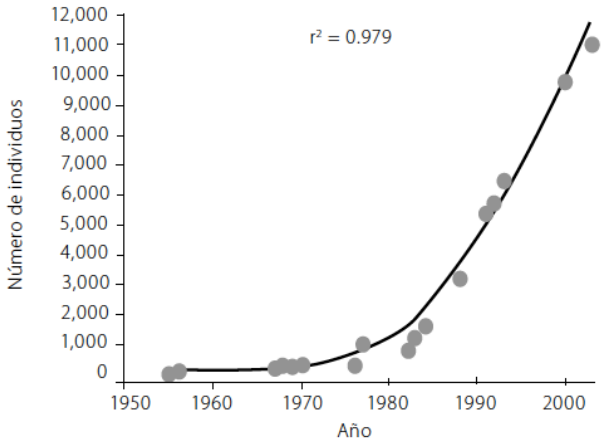


Figure 2. Population growth of *Arctocephalus townsendi* in 53 years on Guadalupe Island. Growth began at rates of 1 to 2% per year and increased at a faster rate by the 1970s. The carrying capacity of the island has not yet been reached and the population continues to increase (Gallo-Reynoso *et al*. 2005).

4.5. Geographic trends

An expansion of the breeding area has been observed, as births of Guadalupe fur seals have occurred in San Benito Archipelago and on San Miguel Island. However, these births represent less than 1% of the total annual births (Aurioles-Gamboa *et al.* 2010; Sierra-Rodríguez 2015; Elorriaga-Verplancken *et al.* 2016a; Norris & Elorriaga-Verplancken 2019, 2020, McCue *et al.* 2021). The remaining 99% occurs on Guadalupe Island. Recent sightings of *A. townsendi* at sites further north suggest an expansion of its current range, although these sites are within the limits of its historical range and as such should be considered as recolonization sites (McCue *et al*. 2021).

5. Threats

The main threats faced by the species are related to the effects of human activity in the areas surrounding Guadalupe Island and San Benito Archipelago:

- Pollution of the marine environment is a constant threat; an example is the ingestion of plastic pollutants (McCue, *et al*. 2021). The vulnerability of *A. townsendi* to fuel/oil spills due to its fur type should also be noted (Aurioles-Gamboa, 2015).

- There do not seem to be any conflicts between the Guadalupe fur seal and the fisheries of the area (i.e., lobster, abalone). However, signs of net entanglement were observed in 12 adult males, 3 subadults and 2 adult females (SEMARNAT, 2018) during the 2013-2016 breeding seasons at Punta Sur, Guadalupe Island.

- As mentioned above, the presence of alien invasive species on Guadalupe Island has had an impact on the health of the colony, as *Leptospira*, a bacterial spirochete that causes leptospirosis, has been detected (Ziehl Quirós, 2015, SEMARNAT, 2018). *A. townsendi* is also vulnerable to other pathogens such as parasites and bacteria (i.e., *Klebsiella* sp., *Pseudemonas* sp., *Proteus* sp. and *Enterobacteria* sp.; Hanni *et al.* 1997).

- The increase in sea surface temperature during meteorological/oceanographic events such as El Niño and its effect on prey availability (McCue *et al.* 2021).

6. Utilization and trade

6.1 National utilization

Mexico: Article 60 Bis. of the General Wildlife Act (Ley General de Vida Silvestre; DOF, 2021) specifies that: “No specimen of marine mammal, whatever the species, may be subject to extractive exploitation, whether for subsistence or commercial purposes, with the exception of capture for scientific research and higher education by accredited institutions". Moreover, Article 55 Bis of the same Act states that: "The import, export and re-export of specimens of any species of marine mammal or primate, as well as their parts and derivatives, with the exception of those destined to scientific research, and samples of liquids, tissues or reproductive cells of specimens in captivity, are prohibited...". The CITES

Management Authority of Mexico (DGVS-SEMARNAT) reports that only one Wildlife Management and Conservation Unit (UMA, Spanish acronym; the legal scheme that allows for the management of wild species) is registered to keep the species in captivity, but it has no specimens in its inventory.

United States: hunting of this species is not permitted (see section 7.1).

6.2 Legal trade

Domestic trade:

Mexico: The Management Authority (DGVS-SEMARNAT) has not issued permits for the harvest of this species in the last 15 years.

United States of America: Commercial exploitation of this species is not permitted (see section 7.1).

International trade:

According to the CITES Trade Database (UNEP-WCMC, 2023), 24 transactions were recorded for *A. townsendi* between 1975 and 2022, most of them for scientific purposes (S; 52%); commercial trade in the species (30.4% of the transactions) occurred before 1993 or involved pre-Convention specimens (i.e., bone carvings). Of the specimens recorded, 60.8% were recorded as being wild (source code W) and the rest were recorded with source codes U, I, O or no code. Country of origin: 65% of the transactions in the database showed the United States as the country of origin, whereas 17.4% of transactions originated in Mexico, one transaction showed Canada as the country of origin, and two transactions were of unknown origin. Specifically, in the last 10 years Mexico has issued only two CITES permits for the export of 2,273 biological samples (source code W) for scientific purposes to the United States.

6.3 Parts and derivatives in trade

In the period between 1975 and 2022, the CITES Trade Database (UNEP-WCMC, 2023) mainly recorded the use of (scientific) specimens, although there are also records of derivatives (in kilograms, prior to 1984), clothing (one specimen), live specimens (3 transactions with 1 individual each), skulls (one specimen) and carvings (two specimens).

6.4 Illegal trade

The CITES Trade Database (UNEP-WCMC, 2023) also recorded the export of a skull of illegal origin (source code I) from Mexico to the United States for personal purposes (P) in 2011.

United States: Some illegal trade in Guadalupe fur seals or specimens may occur, but information on this activity is not available (McCue *et al.* 2021).

Mexico: According to the Mexican Law Enforcement Authority (PROFEPA), in the last 15 years there have been no records of any information on any seizures/confiscations at the national level or attempts to export specimens at ports, airports or borders.

6.5 Actual or potential trade impacts

There does not seem to be a national or international market that might threaten wild populations. Most records of international trade involve specimens for scientific purposes. Given the prohibitions on its use by both Mexico and the United States (see section 7.1), no commercial trade in the species is foreseen in the future.

7. Legal instruments

7.1 National

Mexico: In 1933, a presidential agreement established a permanent ban on hunting species of fur seals and elephant seals in all waters under federal jurisdiction of the Mexican Republic, on the basis that these were species with very small populations (DOF, 1933). More recently, Article 60 Bis. of the General Wildlife Act prohibits the harvest of any species of marine mammal. In addition, *A. townsendi* is included

in the category "In Danger of Extinction" (P; DOF, 2019) in Mexico's list of species at risk (NOM-059-SEMARNAT-2010). The species is also included in Mexico's "List of priority species and populations for conservation" (DOF, 2014), which implies promoting the development of projects for its conservation and recovery, along with that of the ecosystems, habitats and species with which it is associated.

United States: The species is protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA), as well as certain state laws (in California, Oregon, and Washington). Additional protection against the trade and capture of Guadalupe fur seals has been granted by the Fur Seal Trade Act, which prohibits the capture, transport, importation, or possession of fur seals and sea otters, and the Lacey Act, which prohibits trade in wildlife, fish and plants that have been illegally taken, possessed, transported or sold (McCue *et al.* 2021).

Canada: This country has multiple Marine Mammal Regulations (MMR), which are a set of rules that regulate the capture (i.e., fishing, hunting) and management of marine mammals included in the Fisheries Act.

7.2 International

The International Union for Conservation of Nature (IUCN) has classified *A. townsendi* as Least Concern on its Red List with an increasing population trend (LC; Aurioles-Gamboa 2015). The Guadalupe fur seal is the only otariid species listed in CITES Appendix I; all other *Arctocephalus* species are listed in Appendix II.

8. Species management

8.1 Management measures

Mexico has a Conservation Action Programme for the Guadalupe Fur Seal (Programa de Acción para la Conservación del Lobo Fino de Guadalupe; SEMARNAT 2018), whose general objective is to consolidate, promote and implement specific actions and conservation strategies for the species' populations. This program is structured and implemented with the active participation of various stakeholders (i.e., the government, academia, the civil sector) in a framework of co-participation and co-responsibility. The Programme also provides a general diagnosis of the current status of the populations and the main threats facing them, and provides various conservation strategies with activities and indicators for the short, medium and long term (SEMARNAT, 2018).

Mexico also has the "Protocol for Marine Mammal Stranding Care" (DOF, 2014), and the United States has the Marine Mammal Health and Stranding Response Program (McCue, *et al.* 2021); the goal of both is to coordinate emergency responses for sick, disoriented, injured or dead marine mammals. Both programs involve government authorities, researchers and civil society in the care networks. Canada's Marine Mammal Regulations (MMR) also include prohibitions on disturbance to marine mammals, as well as certain management issues.

8.2 Population monitoring

Previously, monitoring was carried out in Mexico in different seasons. Currently, the Conservation Action Programme provides for comprehensive surveys by combining three approaches: marine, terrestrial and aerial (i.e., drones; SEMARNAT 2018). The use of these three combined approaches can also facilitate the development of a model by conducting simultaneous counts. Moreover, it is considered that such counts should be carried out on both Guadalupe Island and San Benito Archipelago, mainly during the month of August, which coincides with the peak of births. It should be noted that there were 300 tagged individuals in 2018 (SEMARNAT 2018).

8.3 Control measures

8.3.1 International

The Guadalupe fur seal is the only otariid species included in CITES Appendix I (see section 7.2).

8.3.2 Domestic

Mexico: The Federal Environmental Protection Agency (Procuraduría Federal de Protección al Ambiente, PROFEPA) is present at ports, airports and border crossings to ensure compliance with domestic environmental laws and international agreements. PROFEPA verifies compliance with legal provisions and non-tariff restrictions established for the import, export, re-export and return of goods whose import and export are subject to regulation by the Ministry of the Environment and Natural Resources (SEMARNAT), including species included in the list of species at risk (NOM-059-SEMARNAT-2010). Compliance with legal and regulatory provisions on Isla Guadalupe is achieved through strategies and actions that combine inspection, supervision and monitoring through PROFEPA in coordination with the Ministry of the Navy (SEMAR), in conjunction with the National Commission on Natural Protected Areas (CONANP), the National Commission for Aquaculture and Fisheries (CONAPESCA) and the local community (CONANP 2009).

United States: Under the Marine Mammal Protection Act (MMPA), the National Marine Fisheries Service (NMFS) has jurisdiction over the management of activities that may affect Guadalupe fur seals in U.S. waters or by U.S. citizens. The NMFS is responsible for conducting scientific research, issuing permits, establishing regulations and enforcing laws as necessary to fulfil the purposes of the MMPA.

Canada: Fisheries and Oceans Canada is responsible for monitoring activities and ensuring that regulations are enforced. However, other law enforcement agencies, including the Royal Canadian Mounted Police and the Quebec Provincial Police, are also involved in monitoring.

8.4 Captive breeding and artificial propagation

Mexico: The Management Authority (DGVS-SEMARNAT) reports that there are no captive breeding programs in Wildlife Management and Conservation Units (UMAs) or in Properties or Facilities that Manage Wildlife in Confined Form, Outside its Natural Habitat (PIMVS).

8.5 Habitat conservation

Due to its biological and ecological relevance, the area comprising Guadalupe Island and its islets was declared a Biosphere Reserve by presidential decree on 25 April 2005 (DOF, 2005). Similarly, since 2016, San Benito Archipelago is part of the Baja California Pacific Islands Biosphere Reserve [Reserva de la Biosfera Islas del Pacífico de la Península de Baja California] along with Bahía Magdalena Archipelago, Adelaida Island, Cedros Island, Coronado Archipelago, Todos Santos Archipelago, San Martín Island, and San Jerónimo Archipelago (DOF, 2016). The Biosphere Reserve label is granted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to help protect an ecosystem with plants and animals of unusual scientific and natural interest. Both reserves are administered by Mexico's National Commission on Natural Protected Areas (CONANP).

In the United States, the National Park Service (NPS) reported sightings of the species in Channel Islands National Park, Golden Gate National Recreation Area, and Point Reyes National Seashore, and a historic occurrence in Santa Monica Mountains National Recreation Area. Other national parks that exist within the range of the Guadalupe fur seal include Cabrillo National Monument and Redwood National Park in California; Lewis and Clark National Historical Park in Oregon; and Olympic National Park, Ebey's Landing National Historical Preserve, and San Juan Island National Historical Park in Washington (McCue, *et al.* 2021).

8.6 Safeguards

The existing regulatory mechanisms, along with numerous state and federal laws and regulations in the United States and Mexico, provide adequate protection for Guadalupe fur seals (McCue, *et al*. 2021; see sections 7.1, 8.1, and 8.3.2). The breeding colonies are located within protected areas (see section 8.5).

Mexico and the United States do not allow the capture of marine mammals or domestic or international trade in them (see section 7.1.). Therefore, if the species is transferred to Appendix II, no extractive use will be allowed.

CITES: Precautionary measures in Annex 4, paragraphs A1 and A2 of Resolution Conf. 9.24 (Rev. CoP17):

- It is proposed to transfer the species from Appendix I to II to allow monitoring of any potential international trade for at least two intervals between meetings of the Conference of the Parties (A1).

- The species does not meet the biological or trade criteria for listing in Appendix I (A2a): the wild population is not small; there is no observed, inferred or projected decline in the number of individuals or the area of habitat; it does not have high vulnerability; there are no short-term fluctuations; the area of distribution is not restricted; and the population is growing rapidly. It only presents considerations on item A) iii) because a majority of individuals are concentrated geographically during one or more life-history phases in breeding colonies on Guadalupe Island and San Benito Island. However, the populations are not restricted to a single location on the islands, the islands are relatively large and the carrying capacity has not been reached; also, the islands are protected areas with very little (temporary) human presence, and the population is dispersing and colonizing new islands (San Benito Island is a relatively recent breeding site) center).

- At least 2 of the required precautionary safeguards are met (2a):

    - The species is not in demand in international trade, nor is its transfer to Appendix II likely to stimulate trade in, or cause enforcement problems for, any other species included in Appendix I (A2ai): taking into account that trade is scarce, it involves mainly scientific specimens (with a high probability of proper identification at the species level) and that the other species of the genus are listed in Appendix II, no increase in demand or enforcement problems are expected.

    - Domestic legislation and control measures are adequate and sufficient to implement the regulations associated with Appendix II, and are even stricter as they prohibit harvest and trade of the species (2aii).

9. Information on similar species

The most relevant diagnostic feature that distinguishes fur seals from sea lions is the presence of an inner layer of hair or underfur, which has a density of hair follicles approximately 50 times greater than that of terrestrial mammals and is essential for thermoregulation (Arnould 2008). The genus *Arctocephalus* differs from *Callorhinus ursinus* (the northern fur seal) in that its fur extends over the front flippers and ends in a line over the metacarpals; by contrast, in *C. ursinus*, the fur ends at the base of the flippers, at the wrist, in a defined line (Repenning *et al.* 1971; Arnould 2008).

The 8 species of the genus *Arctocephalus* (*A. australis* from South America, *A. forsteri* from New Zealand and southern Australia, *A. galapagoensis* from the Galapagos Islands, *A. gazella* from the Antarctic Ocean, *A. townsendi* from Guadalupe Island, *A. philippii* from Juan Fernandez Islands, *A. pusillus* from South Africa and Australia and *A. tropicalis* from sub-Antarctic waters) generally have uniform dark brown to dark grey fur on the dorsal surface with a grizzled appearance caused by the tips of the guard hairs (i.e., outer coat) being white or pale. The coat is paler on the ventral surface, especially around the abdomen. There may be some variation in the shade of the coat and the degree of greying, depending on how dirty the animal is, its age, sex, and the time elapsed since the last moult (annual seasonality, late summer-early fall; Arnould 2008). The exception is the subantarctic fur seal (*A. tropicalis*) as it has a distinctive coloration: the chest and face (i.e., muzzle and around the eyes to below the ears) are pale or creamy yellow, while the top of the head and dorsal surface are dark brown to gray. The coloration is more marked in males, which also have a conspicuous dark tuft (i.e., crest) on the forehead (Annex 1; Arnould 2008; Jefferson *et al.* 2015).

One study compared the length of guard hairs on the crest, mane and dorsum between adult males of *A. gazella*, *A. tropicalis* and *A. pusillus*. The prominent crest hairs of *A. tropicalis* can measure between 70 and 75 mm and is much shorter in the other species (37-40 mm in *A. gazella* and 17-26 mm in *A. pusillus*). The mane hair of *A. gazella* is much longer and more luxuriant than that of the other species, being 60 mm long (32-42 mm in *A. tropicalis* and 30-46 mm in *A. pusillus*). The dorsal hair is also longer in *A. gazella*, measuring 38-43 mm (21-23 mm in *A. tropicalis* and 15-27 mm in *A. pusillus*; Bonner 1968).

Differences in flipper shape can be used as diagnostic characters between various species. For example, the front flippers of *A. forsteri* are more triangular than those of *A. pusillus*, which are paddle-shaped and more curved. Similarly, *A. gazella* has proportionally longer hind flippers than *A. tropicalis* (Arnould 2008).

A short muzzle with a somewhat flattened end, creating a flat-faced appearance, is more characteristic of *A. galapagoensis, A. gazella* and *A. tropicalis*. A moderate to long muzzle is more characteristic of *A. australis, A. forsteri, A. philippii, A. pusillus* and *A. townsendi* (although this may not be as distinguishable in females and subadults; Jefferson *et al.* 1994). *A. philippii* and *A. townsendi* have a distinctive large, bulbous nose, with downward-facing nostrils (adult males), whereas *A. australis, A. forsteri,* and *A. pusillus* have a small to moderate nose (at the tip of the muzzle), with forward-facing nostrils (Annex 2; Jefferson *et al.* 1994; Jefferson *et al*. 2015).

Skull length, rostral length, forehead height, tooth size and pattern, and the width of the palate between molars appear to be the most useful features for distinguishing between *Arctocephalus* species. The post-canine teeth probably provide the simplest key to their differentiation (Annex 3; Repenning, *et al.* 1971; Brunner, 2004).

Trade in these species is generally low, as the CITES Trade Database (UNEP-WCMC, 2023) only recorded 2,990 transactions for all species of *Arctocephalus* between 1975 and 2023. Trade is mainly focused on skins (38%), mostly from *A. pusillus* (91%), possibly because it is the largest species in the genus *Arctocephalus*: adult males reach between 2 and 2.3 m in length and an average weight of 260 kg, with a maximum weight of 360 kg. Adult females measure 1.2 to 1.7 m and weigh approximately 60 kg, with a maximum weight of 110 kg (Jefferson *et al*. 2015). This species is classified as Least Concern (LC) on the IUCN Red List and its populations exceed one million individuals (Hofmeyr 2015).

Although non-experts may find it difficult to distinguish the skins to species level with the naked eye, there are several specialists in Mexico and the United States who can help with this task. The materials provided here facilitate the identification of other specimens of *Arctocephalus* species.

10. Consultations

A draft of this document was shared with the United States and Canada, which replied that they would share their comments in preparation for the 33rd meeting of the Animals Committee.

11. Additional remarks

None.

12. References

Angell, O. C. 2014. Abundancia y estructura de las colonias de pinnípedos que habitan en el archipiélago San Benito, B.C. México, en el verano e invierno (2012-2013). Tesis para obtener el título de Biólogo Marino. Universidad Autónoma de Baja California Sur. La Paz, Baja California Sur.

Arnould, J.P.Y. 2008. Southern fur seals *Arctocephalus* spp. En Perrin WF, Würsig B, Thewissen JGM (eds). Encyclopedia of marine mammals, 2nd ed. Academic Press, San Diego, CA p 1079−1084.

Aguilar, D. 2011. Propuesta para la elaboración del Programa de Acción para la Conservación de Especies (PACE): lobo fino de Guadalupe: (*Arctocephalus townsendi)* de Isla Guadalupe. Tesis de licenciatura en Biología. UNAM. México

Aurioles-Gamboa, D., Elorriaga- Verplancken, F. and Hernández-Camacho, C.J. 2010. Guadalupe fur seal population status on the San Benito Islands, Mexico. Marine Mammal Science 26(2): 402-408.

Aurioles-Gamboa, D. 2015. Arctocephalus townsendi. The IUCN Red List of Threatened Species 2015: e.T2061A45224420. https://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T2061A45224420.en.

Aurioles-Gamboa D., Elorriaga-Verplancken, F., Hernández-Camacho, C.J. 2015. The current population status of Guadalupe fur seal (Arctocephalus townsendi) on the San Benito Islands, México. Marine Mammal Science. 26:402p

Bamber, J.L., Oppenheimer, M., Kopp, R.E., Aspinall, W.P. and Cooke, R.M. 2019. Ice sheet contributions to future sea-level rise from structured expert judgment. Proceedings of the National Academy of Sciences, 116(23), pp.11195-11200.

Berdegué, J. 1957. La foca fina, el elefante marino y la ballena gris en Baja California, y el problema de su conservación. Ediciones del Instituto Mexicano de Recursos Naturales Renovables, A.C. 14:1-38

Bones, D. J., and Bowen, W. D. 1996. The evolution of maternal care in pinnipeds. BioScience 46:645-654.

Bonner, W. N. 1968. The fur seal of South Georgia. Scientific Report of the British Antarctic Survey 56:1–88.

Brunner, S. 2004. Fur seals and sea lions (Otariidae): identification of species and taxonomic review. Systematics and Biodiversity, 1(3), 339-439.

Carretta J.V., Forney, K.A., Oleson E.M., Weller, D.W., Lang, A.L., Baker, J., Muto, M.M., Hanson, B., Orr A.J., Huber, H., Lowry M.S., Barlow, J., Moore J.E., Lynch, D., Carswell, L., and R.L. Brownell, Jr. 2017. U.S. Pacific Marine Mammal Stock Assessments: 2016. NOAA Technical Memorandum: NOAA-TM-NMFS-SWFSC-577

CONANP (Comisión Nacional de Áreas Naturales Protegidas). 2019. Plan de Manejo Reserva de la Biósfera Isla Guadalupe. https://www.conanp.gob.mx/anp/consulta/Borrador%20PM%20RBIG%20agosto%2009.pdf

CONANP (Comisión Nacional de Áreas Naturales Protegidas). 2023. Modificación al Plan de Manejo Reserva de la Biósfera Isla Guadalupe. https://www.gob.mx/conanp/acciones-y-programas/programas-de-manejo

DOF. 1933. Acuerdo que establece veda para la captura de elefante marino y lobo fino. Tomo LXXVII Número 30. Publicado el 24 de abril de 1933.

DOF. 2005. Decreto por el que se declara área natural protegida, con la categoría de reserva de la biosfera, la zona marina y terrestre que incluye a la Isla Guadalupe, de jurisdicción federal, así como a las demás superficies emergidas que se encuentran dentro de la misma, localizada en el Océano Pacífico, frente a la costa de la Península de Baja California, con una superficie total de 476,971-20-15.79 hectáreas. Publicado el 25 de abril de 2005.

DOF. 2014. Acuerdo por el que se da a conocer la lista de especies y poblaciones prioritarias para la conservación. Diario Oficial de la Federación. Publicado el 05 de marzo de 2014.

DOF. 2014. Acuerdo mediante el cual se expide el Protocolo de atención para varamiento de mamíferos marinos. Publicado el 06 de junio de 2014.

DOF. 2016. Decreto por el que se declara Área Natural Protegida, con el carácter de reserva de la biosfera, la región conocida como Islas del Pacífico de la Península de Baja California. Publicado el 07 de diciembre de 2016.

DOF. 2019. MODIFICACIÓN del Anexo Normativo III, Lista de especies en riesgo de la Norma Oficial Mexicana NOM-059-SEMARNAT-2010, Protección ambiental-Especies nativas de México de flora y fauna silvestres-Categorías de riesgo y especificaciones para su inclusión, exclusión o cambio-Lista de especies en riesgo. Diario Oficial de la Federación. Publicada el 30 de diciembre de 2010. Secretaría de Medio Ambiente y Recursos Naturales. Publicada el 14 de noviembre de 2019.

DOF. 2021. Ley General de Vida Silvestre. Publicada el 03 de julio de 2000. Última reforma publicada el 20 de mayo de 2021.

Elorriaga-Verplancken, F. R., Sierra-Rodríguez, G., Rosales Nanduca, H., Acevedo-Whitehouse K., y Sandoval-Sierra, J. 2016. Impacto de El Niño-Oscilación del Sur de 2015 en la abundancia y los hábitos de alimentación de los lobos marinos de Guadalupe y los leones marinos de California del archipiélago de San Benito, México. Más uno 11:e0155034.

Elorriaga-Verplancken, F. R., Paniagua-Mendoza, A., Hernández-Camacho, C. J., Webber, M. A., Cruz-Vallejo, R., Nevels, C. R., & González-López, I. 2021. A new Guadalupe fur seal colony in the Gulf of California? Ecological and conservation implications. Aquatic Mammals, 47(1), 1-9.

García-Capitanachi, B., Schramm, Y., Heckel, G. 2017. Population fluctuations of Guadalupe fur seals (Arctocephalus philippii townsendi) between the San Benito Islands and Guadalupe

García-Aguilar, M., Gutiérrez-García, C. D., y de la Cueva, D. H. (2013). Terrestrial Habitat Segregation Between the Guadalupe Fur Seal (Arctocephalus townsendi) and the California Sea Lion (Zalophus californianus) at Islas San Benito, México. Aquatic Mammals: 39(1): 54.

García-Aguilar, M. C., Elorriaga-Verplancken, F. R., Rosales-Nanduca, H. and Schramm, Y., 2018. Population status of the Guadalupe fur seal (Arctocephalus townsendi). Journal of Mammalogy, 99(6), pp.1522-1528.

Gallo-Reynoso J., 1994. Factors affecting the populations status of the Guadalupe fur seal, Arctocephalus townsendi (Merriam, 1897), at Isla de Guadalupe, Baja California, México. Tesis de Doctorado. University of California.

Gallo-Reynoso, J. P., Le Boeuf, B. J., Figueroa, A. L., Maravilla Chávez, M. O. 2005. Los pinnípedos de Isla Guadalupe. En: K. Santos del Prado y Peters, E. (eds.). Isla Guadalupe. Restauración y Conservación. Instituto Nacional de Ecología (INE-SEMARNAT), México, D.F., 135-141 p.

Gallo-Reynoso J. P., Figueroa-Carranza A. L., Le Boeuf, B. J. 2008. Foraging behavior of lactating Guadalupe fur seal females. Avances en el Estudio de los Mamíferos de México: 595-614

Gallo-Reynoso J., Maravilla-Chávez, M. y Navarro-Serment, C. 2010. Registros nuevos de pinnípedos no-residentes en el golfo de California, México. Revista Mexicana de Biodiversidad, (81): 209-213.

García-Capitanachi, B., Schramm, Y., Heckel, G. 2017. Population fluctuations of Guadalupe Fur seals (Arctocephalus philippi townsendi) between the San Benito Islands and Guadalupe Island, Mexico, during 2009 and 2010. Aquatic Mammals: 43:492–500.

Godinez-Reyes, C., K. Santos-Del Prado, H. Zepeda-López, A. Aguirre, D. Anderson, A. Parás-González, E. Velarde y A. Zavala-González, 2006, Monitoreo de poblaciones y condición de salud de aves marinas y lobos marinos en islas del norte del Golfo de California, México, Gaceta Ecológica (081):31-45

Gutiérrez-Osuna, M. D. C., Díaz-Gaxiola, J. M., Trites, A. W., & Hernández-Camacho, C. J. 2022. New colony of Guadalupe fur seals (Arctocephalus townsendi) discovered on El Farallón de San Ignacio Island, Gulf of California. Marine Mammal Science, 38(1), 374-382.

Hamilton, A. 1951. Is the Guadalupe fur seal returning? Natural History. 60:90-96

Hanni, K. D., Long, D. J., Jones, R. E., Pyle, P., Morgan, L. E. 1997. Sightings and strandings of Guadalupe fur seals in Central and Northern California, 1988- 1995. Society, 78(2), 684–690.

Hernandez-Camacho, C. J., & Trites, A. W. 2018. Population viability analysis of Guadalupe fur seals Arctocephalus townsendi. Endangered Species Research, 37, 255–267.

Hernández de la Torre, B., G. Gaxiola, R. Aguirre, S. Álvarez, R. Lara-Lara y S. Nájera. 2005. Serie de tiempo de productividad (1997-2003) en el ecosistema marino de Isla Guadalupe. En: Santos del Prado, K. y Peters E. (Eds.). Isla Guadalupe Restauración y Conservación. México: Instituto Nacional de Ecología-Secretaría de Medio Ambiente y Recursos Naturales (INE - SEMARNAT), Centro de Investigación y Educación Superior de Ensenada (CICESE), Grupo de Ecología y Conservación de Islas, A. C. (GECI), Secretaría de Marina (SEMAR). pp. 135-141

Hernández-Montoya, J.C. 2009. Distribución, abundancia y estructura alimentaria del lobo fino de Guadalupe (Arctocephalus townsendi) en Isla Guadalupe, México [Distribution, abundance and alimentary structure of the Guadalupe fur seal (Arctocephalus townsendi) at Isla Guadalupe, Mexico], [dissertation]. México: Centro de Investigación Científica y de Educación Superior de Ensenada.

Hofmeyr, G.J.G. 2015. Arctocephalus pusillus. The IUCN Red List of Threatened Species 2015: e.T2060A45224212.

Hubbs, C. 1979. Guadalupe Fur seal. FAO. Advisory committee on Marine Research. Working Party on Marine Mammals. FAO Fish. Ser. 5(2):24-27

Hubbs, C.L. 1956. Back from oblivion Guadalupe Fur seal: still a living species. Pacific Discovery, 9(6):14-21

IPCC (Intergovernmental Panel on Climate Change), 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

Jefferson, T.A., S. Leatherwood, and M.A. Webber. 1994. Species identification guide. Marine mammals of the world. United Nations Environment Programme (UNEP), Food and Agriculture Organization of the United Nations (FAO), United Nations (UN), Rome, Italy, p. 587 figs.

Jefferson, T. A., Webber, M. A., & Pitman, R. L. 2015. Marine mammals of the world: a comprehensive guide to their identification (2nd edition). Elsevier Inc.

Lambourn, D.M., Jeffries, S.J., Wilkinson, K., Huggins, J., Rice, J., Duffield, D., and Raverty, S.A. 2012. 2007-2009 Pacific Northwest Guadalupe Fur Seal (Arctocephalus townsendi) Unusual Mortality Event (UME) Summary Report.

Lynn, R.J. y Simpson, J.J. 1987. The California Current system: the seasonal variability of its physical characteristics. Journal of Geophysical Research 92(c12):12,947-12,966

McCue, L.M., Fahy, C.C., Greenman, J., and K. Wilkinson. 2021. Status Review of the Guadalupe Fur Seal (Arctocephalus townsendi). 95 pp. National Marine Fisheries Service, Protected Resources Division, West Coast Region, 501 West Ocean Blvd., Long Beach, California, 90802

Mejia-Ruiz, P. 2011. Fidelidad al sitio de nacimiento en el lobo marino de California, Zalophus californianus, durante la temporada reproductiva en las loberas Los Islotes, Golfo de California, México. Tesis de Licenciatura. Universidad Autónoma de Baja California Sor, La Paz B.C.S., México, 53 p.

Norris, T., Fauquier, D., Field, C., Whoriskey, S., Gálvez, C., Rowles, T., Viezbicke, J., and Elorriaga-Verplancken, F. R. 2017. At-sea distribution and habitat use of free-ranging and rehabilitated Guadalupe fur seals. Poster presented at the 6th International Bio-logging Science Symposium, Konstanz, Germany

Norris, T.A., and Elorriaga-Verplancken, F.R. 2019. Guadalupe Fur Seal Population Census and Tagging in Support of Marine Mammal Monitoring Across Multiple Navy Training Areas in the Pacific Ocean, 2018-2019. Technical Report. Prepared for Commander, Pacific Fleet, Environmental Readiness Division. Submitted to Naval Facilities Engineering Command (NAVFAC) Southwest, Environmental Corp, San Diego, CA 9213, under Contract No. N62473-18-2-004. November 2019.

Norris, T.A. and Elorriaga-Verplancken F.R. 2020. Guadalupe Fur Seal Population Census and Tagging in Support of Marine Mammal Monitoring Across Multiple Navy Training Areas in the Pacific Ocean, Preliminary Summary, March 28, 2019 – December 31, 2019. Prepared for Commander, Pacific Fleet, Environmental Readiness Division. Submitted to Naval Facilities Engineering Command (NAVFAC) Southwest, Environmental Corp, San Diego, CA 9213, under Contract No. N62473-18-2-004. March 202

Ortega-Ortiz, C.D., Vargas-Bravo, M.H., Olivos-Ortiz, A., Zapata, M.G.V. and Elorriaga-Verplancken, F.R. 2019. Guadalupe Fur Seal Encounters in the Mexican Central Pacific During 2010-2015: Dispersion Related to the Species Recovery? Aquatic Mammals, 45(2), pp.246-254

Parés Sierra, A. F., López, J. y Pavía, E. 1997. Oceanografía física del Océano Pacífico Nororiental. En: Lavín, M. (Ed). Contribuciones a la Oceanografía Física en México. Monografía No. 3 1:1-24

Peterson, R. S., Hubbs, C. L., Gentry, R. L., y DeLong, R. L. 1968. The Guadalupe Fur Seal: Habitat, Behavior, Population Size, and Field Identification. Journal of Mammalogy, 49(4):665-675

Pierson, M.O. 1987. Breeding behavior of the Guadalupe fur seal, Arctocephalus townsendi. En: Croxall, J.P. y Gentry, R.L. (eds.). Status, Biology, and Ecology of fur seals. NOAA Tech. Rep. NMFS. 51:83-94.

Porras-Peters, H., Aurioles, D., Cruz, V. y Koch, P. 2008. Trophic level and overlap of California sea lions, Zalophus californianus in the Gulf of California. Marine Mammal Science 24(3):554-576.

Rivera, C. 2011. Efecto del tamaño corporal en la diversidad de presas de los Pinnípedos. Tesina de grado de Licenciado en Ciencias Biológicas, Opción Ecología. Universidad de la República, Uruguay. 31 p

Repenning, C.; Peterson, R. y Hubbs, C. 1971. Contributions to the systematics of the southern fur seals, with particular reference to the Juan Fernández and Guadalupe species. Antartic Research Series. 18:1-34

Riedman, M. 1990. The pinnipeds: Seals, sea lions and walruses. University of California Press

SEMARNAT, 2018. Programa de Acción para la Conservación de la Especie Lobo Fino de Guadalupe (Arctocephalus townsendi), SEMARNAT/CONANP, México (Año de edición 2018).

Sierra-Rodríguez G.E. 2015. Recolonización y hábitos alimentarios maternos del lobo fino de Guadalupe (Arctocephalus philippii townsendi) del Archipiélago San Benito, BC, México. MSc thesis, Centro Interdisciplinario de Ciencias Marinas, Instituto Politécnico Nacional, La Paz, BCS.

UJEPC-WCMC/CITES - United Nations Environment Program, Centro Mundial de Vigilancia de la Conservación, 2024 “Base de datos sobre el comercio CITES”.

Wedgeforth, H.M. 1928. The Guadalupe fur seal (Arctocephalus townsendi). Zoonooz, San Diego Zoological Society 3(3):4-9.

Ziehl-Quirós, E. C. 2015. Prevalencia de cuatro enfermedades infecciosas en lobo fino en Isla Guadalupe, México. Tesis de Maestría. Centro de Investigación Científica y de Educación Superior de Ensenada, Baja California.

Annex 1: Visual appearance of the species of the genus *Arctocephalus* (taken from Jefferson *et al*. 2015).

Antarctic Fur Seal

Juan Fernandez Fur Seal

Galapagos Fur Seal

South American Fur Seal

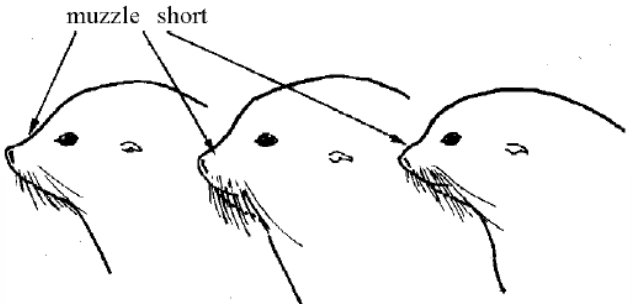
Subantarctic Fur Seal

Cape & Australian Fur Seals

Guadalupe Fur Seal

New Zealand Fur Seal

Annex 2: Differentiation of rostrum shape among species of the genus *Arctocephalus* (based on Jefferson *et al*. 1994).

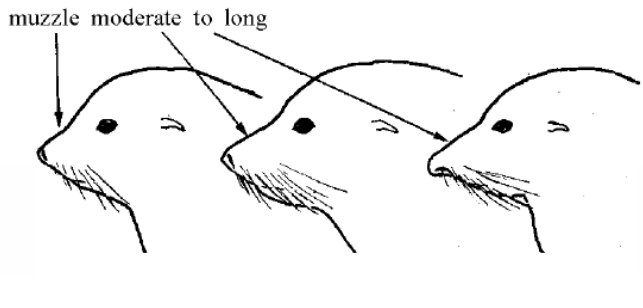


A)

Arctocephalus galapagoensis

Arctocephalus gazella

Arctocephalus tropicalis



B)

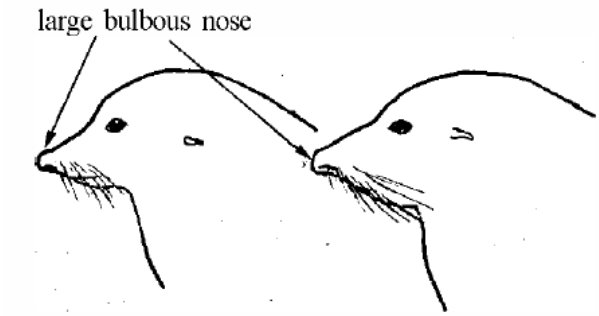
Arctocephalus australis

Arctocephalus forsteri

Arctocephalus philippii

Arctocephalus pusillus

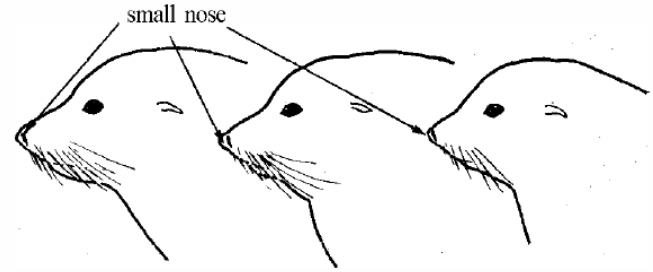
Arctocephalus townsendi



Bi)

Arctocephalus philippii

Arctocephalus townsendi



Bii)

Arctocephalus australis

Arctocephalus forsteri

Arctocephalus pusillus

Annex 3: Typical upper dentition in adults of the 8 species of *Arctocephalus* (all are to the same scale; taken from Repenning *et al*. 1971).