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CONCERTED ACTION FOR SPERM WHALES (*Physeter macrocephalus*) OF THE EASTERN TROPICAL PACIFIC [1]

Adopted by the Conference of the Parties at its 14th Meeting
(Samarkand, Uzbekistan, February 2024)

The Concerted Action for Sperm Whales of the Eastern Tropical Pacific was first adopted at the 12th Meeting of the Conference of the Parties (UNEP/CMS/COP12/Concerted Action 12.2) and extended and revised by the 13th Meeting of the Conference of the Parties (COP13) (UNEP/CMS/COP13/Doc.28.1.2 and UNEP/CMS/COP13/Doc.28.1.2/Add.2).

A report on implementation was submitted to the 14th Meeting of the Conference of the Parties (COP14) (UNEP/CMS/COP14/Doc.32.2.4) including a proposal for extension and revision, which was approved by the Parties.

(i). Proponent:

Red de Cachalotes del Pacífico & CMS Scientific Council Expert Working Group on Animal Culture and Social Complexity

(ii). Target species, lower taxon or population, or group of taxa with needs in common:

Class: Mammalia
Family: Physeteridae
Order: Artiodactyla
Species: *Physeter macrocephalus*
Population: Eastern Tropical Pacific sperm whale clans

(iii). Geographical range:

Chile, Ecuador, Panama, Peru

(iv). The case for continued action:

Primarily, our gaps in knowledge stem from the logistical and financial constraints of studying a highly oceanic, deep-sea dwelling species at a spatial and temporal scale that is comparable to that of their life histories and movements. Thus, besides the long-term projects off the Galápagos Islands and in the Sea of Cortez, no other monitoring projects exist in the region (Table 1). Colleagues have been able to opportunistically collect data on sperm whales through collaborations with whale-watching operations (Table 1). However, surveys carried out on these platforms are limited in time and space by the needs of tour operators.

[1] The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CMS 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.

Table 1. Summary of data collected on sperm whales across the etP. Detections may refer to visual or acoustic encounters. Data marked in green has been analysed and/or published, while data in orange has not.

						Type of Data Collected			
Region	**Time period**	**Type of research**	**Funding sources**	**Predominant age/sex classes**	**Clans Identified**	**Detections**	**Photo-Identification***	**Coda Recordings***	**Other**
Galapagos Islands	1985 – 2022	Dedicated surveys	Public research funds Foreign NGO's	Females/ Juveniles Mature males	X	X	X	X	X Defecation rate Fecal samples Skin samples Surface behavior
Mainland Ecuador	1985 – 1996	Dedicated surveys	Public research funds (Canada) Foreign NGO's	Females/ Juveniles Mature males	X	X	X	X	X Skin samples Defecation rates
Chile (Northern)	2000	Dedicated surveys	Public research funds (Canada) Foreign NGO's	Females/ Juveniles Mature males	X	X	X	X	X Defecation Rate
Chile (Central)	2006 – 2022	Opportunistic (Whale-watching platforms)	Whale-watching operations Self-funded	Unknown		X	X		
Perú (North & South)	1995 - 2002	Opportunistic	Public funds (IMARPE)	Unknown		X			
Costa Rica (Pacific)	2009-2022	Opportunistic (Whale-watching platforms)	Whale-watching operations	Unknown		X			

						Type of Data Collected			
Region	**Time period**	**Type of research**	**Funding sources**	**Predominant age/sex classes**	**Clans Identified**	**Detections**	**Photo-Identification***	**Coda Recordings***	**Other**
Mexico (Gulf of California)	1998 - 1999	Dedicated Surveys	Unknown	Females/ Juveniles Mature males		X	X		
Mexico (Great Islands in the Gulf of California)	2010 - 2018	Dedicated Surveys	Unknown	Unknown		X	X		

*Datasets that can be used to determine clan identity.

Questions that arise from our current knowledge pertaining to the 2017 Action Plan include:

1. **What is the current population status and distribution of sperm whales from the *Regular*, *Plus-One, Four-Plus*, *Palindrome, Short, Rapid Increasing*, and *Slow Increasing* clans?** Although the *Short* clan has been sighted across the region and in recent years, we have no reports of any of the other clans. Particularly, the *Regular* and *Plus-One* clans, which were frequently sighted in the 1980s and 1990s, have not been documented since. Likewise, there is no information about the newly described clans.

2. **What is the foraging ecology (including diet, foraging strategies, and feeding success) of each of the sperm whale clans in the etP?** While we have recent data on the foraging success of *Short* clan sperm whales, there is no information on the foraging ecology of any of the other clans since the 1990s.

3. **What are the primary anthropogenic threats faced by each of the clans in the etP?** The impact each of the previously identified threats has on individual sperm whales is unknown. Particular attention needs to be given to the increased fishing of the main prey of sperm whales in the etP, *D. gigas.*

4. **How vulnerable/resilient are each of the ETP clans to anthropogenic threats and environmental change?**

Future research should be directed toward answering the questions above to adequately determine **whether and how these clans should be conserved separately according to their differing responses to environmental pressures.**

Formalizing the “Cachalotes del Pacífico” network is a key step toward answering these questions. However, we identified a lack of financial support among Range States to sustain the logistically demanding fieldwork that is required for studying sperm whales at a clan level. In the cases in which long-term dedicated monitoring has taken place, funding has been provided by research funds and NGOs based in high-income countries (e.g., Canada, the United Kingdom, United States). This highlights the need to build ties among Range States and institutions from high-income countries.

A tool that would propel data acquisition on the distribution and behavior of sperm whale clans to new levels in the region is autonomous recording. Autonomous hydrophone recorders can be moored at the bottom of the ocean floor, drift at the ocean’s surface, or glide along the water column. By constantly recording the acoustic landscape in a site, they can be used to assess sperm whale distribution, population size, behavior, and clan identity. An array of autonomous recorders along the etP waters can gather data in any condition (e.g., overnight, in rough seas, and distant waters) throughout the year at a significantly lower cost than active surveys. Such arrays have been instrumental in greatly increasing knowledge of cetacean distributions off North America and in informing place-based conservation policies.

Our current knowledge of the behavior and distribution of sperm whale clans in the etP provides strong support for sperm whale clans having distinct behaviors, ecologies, and distributions. It is highly likely that they then experience different levels of human impacts. However, the specific status of each of the clans with respect to anthropogenic threats remains unknown. In the face of the threats identified in the region, we strongly recommend continued research and support toward answering these questions.

Additional research and conservation fronts to be fostered are recommended as follows:

- Assessment and prediction of cumulative multiple-anthropogenic stressors (e.g., climate change, illegal, unregulated, and unreported (IUU) fishing, and ocean pollution) affecting and influencing the population health, behaviour, and survival of sperm whales in the ETP.

- Knowledge mobilization of science and community-based conservation outreach with remote, coastal communities, and peoples of the ETP to foster capacity-building and awareness to champion sperm whale conservation.
- We emphasize the need for collaboration mechanisms that funnel funds toward research in low-income Range States and highlighting the potential of autonomous recording technologies to propel data acquisition.