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**IWC Eastern South Pacific Southern Right Whale Conservation Management Plan –  
Progress Report April 2023**

**Barbara Galletti Vernazzani**



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# IWC Eastern South Pacific Southern Right Whale Conservation Management Plan – Progress Report April 2023

Bárbara Galletti Vernazzani<sup>1</sup>

<sup>1</sup>IWC Eastern South Pacific Southern Right Whale CMP Coordinator, Centro de Conservación Cetacea and Pacific Whale Foundation, Concon, Chile

## Abstract

Eastern South Pacific southern right whale population found off Chile and Peru is one of the most threatened whale populations worldwide. Historically abundant, this population was classified as Critically Endangered by IUCN. The International Whaling Commission adopted a Conservation Management Plan (CMP) for this population and the Governments of Chile and Peru signed a Memorandum of Understanding. Important advances have been made since last year, including 1) completion of Passive Acoustic Monitoring project off Antofagasta, 2) training of Peruvian specialist in deployment and maintenance of acoustic equipment, 3) workshop on experience exchange on whale watching and research permits, 4) virtual expert workshop to review historical and recent data, 5) fourth CMP coordination meeting, 6) completion of 6-year review and updated CMP version, and 7) increase collection of sighting records and photo-ID, including the northernmost sighting recorded to date for this population off Ecuador and the largest aggregation recorded off Isla de Chiloé. The CMP has proven to be a key framework to facilitate the implementation of conservation measures for this Critically Endangered population of whales and to enhance international collaboration for its long-term recovery.

## Introduction

The geographical range of the Eastern South Pacific population of southern right whales (*Eubalaena australis*) comprises the waters of Chile and Peru. Historically abundant, this population was classified as Critically Endangered by IUCN in 2008 due to the impacts of commercial whaling that reduced its numbers to a current estimate of less than 50 mature individuals. Depleted by the 1850's, the southern right whale population of Chile and Peru has not shown any signs of recovery.

Efforts to protect this whale population include the adoption of a Conservation Management Plan (CMP) by the International Whaling Commission (IWC) in 2012 (Galletti Vernazzani *et al.*, 2016) and a Memorandum of Understanding (MOU) between the Ministries of Foreign Affairs of Chile and Peru in 2018 (MOU, 2018).

The CMP aims to guide and encourage Range States, stakeholders and international partners to take steps towards the recovery of this population to levels that will allow the species to withstand both environmental and anthropogenic impacts and ensure its long-term survival.

Over these years significant advances have been made and a new Implementation Strategy 2023-2024 was endorsed at IWC68 (IWC, 2022a).

This report summarizes advances made from April 2022 to March 2023.

## Reporting at SC68d

In May 2022, the SC68d meeting of IWC Scientific Committee was held virtually. A CMP progress report (Galletti Vernazzani, 2022) and preliminary results from PAM project were presented (Rojas-Cerda *et al.*, 2022).

*The Committee reiterates the importance of the CMP for the conservation of the critically endangered Southeast Pacific southern right whale population. The Committee welcomes the progress made and draws attention to the need for funding to continue to conduct the PAM field work (IWC, 2022b).*

*The Committee:*

(1) **commends** the scientific work and international cooperation being undertaken for the PAM (passive acoustic monitoring) project and **congratulates** the researchers for the results, which will assist in designing future sighting surveys and providing baseline information on the potential location of breeding grounds.

(2) **notes** the importance of increasing information about the presence of the species in southern Chile, especially the Golfo de Penas which could merit funding for additional monitoring efforts.

### **Passive Acoustic Monitoring and training of peruvian specialist**

Since 2016, the IWC Scientific Committee has been supporting the project “*Passive Acoustic Monitoring of the Eastern South Pacific population of southern right whales, a key to increase the results of the CMP*”, with the aim to facilitate the identification of potential breeding areas along the coast of Chile and Peru.

This is the first project to use passive acoustic monitoring (PAM) for this population in the entire Eastern South Pacific. One year of acoustic data has been recorded off Isla de Chiloe between 2018-2019 and five months off Arauco Gulf between 2019-2020. One year monitoring off Antofagasta, northern Chile (S23° 54' 26.5" - W70° 31' 36.6", depth 143m) was completed from 2022-2023.

Between 16-19 March 2023, Dr. Rodolfo Cornejo, representative from Instituto del Mar del Peru, participated at the PAM field expedition off Antofagasta to be trained on the deployment and maintenance of the acoustic equipment. The training included activities of conducting maneuvers to rescue, deploy and anchor the hydrophone, set up the anchorage (buoys, ropes, knots, etc.), download the data, programme the software and cleaning and maintenance of the acoustic equipment, among others. Dr. Cornejo also take the opportunity to bring part of the acoustic equipment back to Lima, Peru to be used in the upcoming monitoring of Peruvian waters.

Analysis of acoustic data has been conducted for Arauco and Isla de Chiloé providing important information about the presence of this population at Isla de Chiloé (Rojas-Cerda *et al.*, 2022). Next proprieties for acoustic analysis include analyzing data off Antofagasta and use the automatic acoustic detector of PAM in 2012 southern Chiloe data and other existing datasets.

During 2023-2024, it is also expected to implement the PAM project off Peru and Golfo de Penas, austral Chile. Work on logistics and site selection are being developed to enable monitoring at both locations.

Over these years, a deck-unit has been provided in-kind by the University of Concepcion to be used on the PAM project, and it was expected to continue to be used for the PAM project in Peru. Unfortunately, one of the available deck-units in Chile was damaged and therefore the remaining units are being shared by several projects and there are no longer any unit available to be send to Peru. There is no such equipment in Peru neither.

A deck unit is critical to recover the existing acoustic release (IXBlue AR701AE OCEANO 500) and implement the PAM project that requires equipment maintenance each 76 days. In this sense, we would kindly request research institutions and/or governments from other countries - that have deck unit compatible with OCEANO 500 acoustic release - if they could provide it in-kind or rent it to the project for one year period. Alternatively, a deck-unit could be purchased for the PAM project but no funds have been considered for it in the past.

The PAM at Golfo de Penas will be able to be conducted as it will share the remaining deck-unit with other acoustic projects that are being conducted in Chile.

## **Increasing efforts to record sightings and collect photo-identifications**

During 2022, at least 10 additional sightings totaling 14 individuals of the species have been reported thanks to the information provided by different groups and institutions contributing to the Southern Right Whale Sighting Network. These 2022 sightings included a total of three cow-calf pair. Since 2017, Golfo de Penas has been systematically monitored during spring. Over three years, sightings of southern right whale mother-calf pairs have been reported. Unfortunately, during 2022, no southern right whales were sighted.

Surprisingly, one mother calf-pair was reported by Pacific Whale Foundation Ecuador, during September 2022, being the northernmost sighting of the species recorded and extending its distribution of range until Ecuador.

Furthermore, during January-February 2023, 28 sightings of southern right whales, comprising 44 individuals have been recorded on three marine surveys off Isla de Chiloé. It is very likely that some of these sightings correspond to same individuals as no photo-ID has been conducted yet. Nevertheless, this is the largest aggregation of southern right whales reported for the Eastern South Pacific since the end of commercial whaling. Defecation was recorded and likely feeding behavior. One mother-calf pair was also recorded (Galletti Vernazzani *et al.* 2023).

In 2022, also four sightings of seven southern right whales likely in feeding activities were found off Isla de Chiloe (Galletti Vernazzani *et al.* 2022). Surface Active Groups have already been reported off Isla Chiloé in 2011 and 2020 (Galletti Vernazzani *et al.*, 2014; Anon., 2021). These new sighting records further strengthen the increasing evidence about the importance of Isla de Chiloé for the conservation of this population, not only for likely breeding activities (Galletti Vernazzani *et al.* 2014) but also for feeding activities, which is consistent with the year-round presence reported for this species in the area and data obtained from acoustic analysis (Rojas-Cerda *et al.* 2022).

## **Virtual Expert Workshop**

A virtual expert workshop on the 6-year review of the eastern South Pacific southern right whale CMP was conducted in August 2022. 26 experts from Chile, Peru, USA, Argentina, New Zealand and UK that have previous work on southern right whales attended the workshop. The expert workshop represents a critical part of the CMP six-year review and was aimed to a) review historical and recent data on Chile-Peru southern right whales in order to inform and update the scientific information under the CMP and b) review and identify new short-term, medium-term and long-term research, monitoring and mitigation actions. The full report (IWC, 2022c) was presented at the Fourth CMP coordination meeting and at IWC68.

Historical catches and distribution were discussed at the workshop. It was highlighted the southern Chile area as an important former whaling area and that mother-calf targeted by bay whaling could explain the difficulties for this population to show signs of recovery.

When discussing population structure and genetic analyses it was noted the importance of collecting biopsy samples and the possibility and values of sampling mother-calf pairs.

Recent distribution was also analyzed based on acoustic and sighting data. Information on the impact of noise from vessel traffic in southern Chile was also presented. Data provided important information about the range expansion in waters of Peru, a possible breeding area in northern Chile and highlighted the importance of southern Chile (Los Lagos and Aysen region) for possible breeding, calving and feeding activities for this species that also overlap with former whaling area.

The workshop also reviewed the threats faced by this population and updated the CMP risk assessment. Major concerns were raised by entanglement events recorded for this species, the potential collision with vessels in northern and southern Chile and the salmon farming impacts (entanglements, ship strikes and water pollution, among others) in southern Chile. In particular, great concern was expressed on the serious threat the current levels of salmon farming and its expected expansion poses to the whales in the region. It was highlighted that

the salmon farming industry currently overlaps with the main areas of historical catches and recent important data reported for Los Lagos and Aysen region.

Some new priority actions were proposed from the expert workshop that are currently included at the 2023 updated version of the CMP.

### **Workshop on Experience Exchange**

The workshop on Experience Exchange on Whale Watching Regulations and Research Permits was conducted on October 2022 in Lima, Peru. The workshop was aimed to exchange of experiences between governmental institutions of Chile and Peru on regulatory aspects, national mechanisms, and the possibility of establishing consistent procedures along southern right whale distribution range. Twenty-four officials from Chile and Peru participated, including IWC representatives and special guests from Argentina, Ecuador and USA. It results were presented more extensively at the Fourth CMP coordination meeting (IWC, 2022d) and at IWC68.

The first day of the workshop was dedicated to whale watching. The general framework of the whale watching activity in Latin America and responsible whale watching (socioeconomic, research, education and conservation) was reviewed. Chile presented its regulatory framework which includes a special case for southern right whales, where observation can only be carried out on land-based platforms; for that purpose, they have a contingency plan to control this special measure. Peru has a resolution that only regulates the minimum distances of approach to marine cetaceans, with special considerations for mother-calf pairs, and recently a manual of good practices for the observation of marine fauna, including cetacean has been delivered.

Several recommendations were raised, such as the need to legislate whale watching from the beginning, the benefits to have only one regulatory entity to improve efficiency, the importance of promoting the transfer of skills to local actors, and to consider a more general regulation regarding cetaceans with something more specific for species such as the southern right whale. Peru informed that to advance in the process to make consistent regulations with those enforced in Chile, internal meetings between the Ministry of Production and IMARPE will be undertaken to modify the regulations on whale watching distances to allow observation only from land-based platform.

The second day of the workshop focused on research permit systems. Chile and Peru presented the procedures for the issuance of permits. Brownell presented the procedures and permits framed within the MMPA in the US, as well as the framework in the U.S. Stranding Responses, highlighting the collaboration of the public and private entities. The workshop also discussed the virtual expert workshop recommendations to address issues related to obtaining biopsy samples from mother-calf pairs and the possibility to undertake in the future satellite TAG activities. A working document on sampling protocols and information that supports the need to take mother-calf biopsies, endorsed by the IWC Scientific Committee, would be very valuable to justify the issuance of permits.

Some recommendations included to define criteria for the evaluation of research requests for southern right whales, to consider different types of permits (research, photography and filming for documentaries), to call for researchers who have experience in taking biopsy samples to apply for research permits that could be used whenever an opportunistic sighting occurs, to jointly review protocols for strandings response of cetaceans specifically for southern right whale, and to establish a stranding and disentanglement response network in Peru where SERNAPESCA offered to contribute with training.

New and additional CMP priority actions and activities have been identified during the workshop and these have been included on the 2023 updated version of the CMP.

#### **Fourth CMP coordination meeting, 6-year CMP Review and Implementation Strategy 2023-2024**

The Fourth CMP Steering Committee coordination meeting was held in Lima Peru on 5<sup>th</sup> October 2022. Its full report (IWC, 2022d) was presented at IWC68. The meeting was focused on advancing the 6-year review of the CMP and coordinating future steps. It was attended by 17 participants from governmental institutions off Peru and Chile, representatives of IWC and invited participants from Argentina and Ecuador.

The meeting reviewed activities conducted under the CMP from 2016 to 2022 and received reports of the virtual expert workshop and experience exchange workshop on whale watching and research permits. It also established a work plan to review and update the CMP for the next 6 years period 2023-2028 and it was agreed to present it at the next meeting of the Scientific and Conservation Committee.

Due to the workload to undertake the 6-year review, it was agreed that the implementation strategy 2023-2024 should focus on the most critical activities identified so far that could be implemented on the short term and other pending activities would be reviewed in more details at the next fifth CMP Steering Committee coordination meeting.

In summary it was agreed on the Implementation Strategy 2023-2024 for the short term that finalizing the 6-year review of the CMP was one of the most immediate priority. Other short-term activities identified were to conduct V and VI coordination meetings; continue to implement the Passive Acoustic Monitoring Program (Peru and Golfo de Penas); conduct additional training workshop on disentanglement response in Peru; develop a scientific and technical document on recommendations and protocols for the collection of biopsy samples to be submitted to the Scientific Committee in order to get advice/endorsement; provide advice from Chile to Peru on the development of whale watching regulations; establish working groups on disentanglement and stranding response to ensure continual training on both countries; evaluate advantages and disadvantages of different platforms to report sightings and; translation of MoU and submission to IWC (this latter was already done at IWC68).

#### **Discussion and conclusions**

Significant advances have been made over the last year and a new updated version of the CMP, based on the 6-year review is already guiding future conservation efforts for 2023-2028. Of particular importance is the implementation strategy 2023-2024 in the short-term as these are key activities to coordinate and strengthen priority actions included under the new updated version of the CMP.

Acoustic and sighting data on southern right whale presence in Chilean Patagonia, particularly off Isla de Chiloé and Golfo de Penas, has been highlighted as very important for the species and therefore it is critical to focus more research efforts on these areas. The PAM program has already considered Golfo de Penas as one of the next sites to monitor. With the new information on the exceptional presence of southern right whales during austral summer on recent years off Isla de Chiloé (part of former whaling area), it is also proposed to undertake visual surveys that may cover larger areas.

The expedition to Golfo de Penas and Isla de Chiloé should seek to increase photo-ID and genetic collection as well as assess the health status of Chile's Critically Endangered southern right whale population, one of the priority actions identified under the virtual expert workshop and included on the 2023 CMP version. The use of drones offers a novel technological tool to assess their health status and contribute to their conservation, as they can identify individual whales with aerial photographs and give data to measure their size and body condition (photogrammetry). Dr. Fredrik Christiansen, a drone photogrammetry expert at Aarhus University (Denmark), has already committed to contribute with a drone equipment and to conduct a workshop to build capacity in Chile for drone-based research on southern right whale that will allow researchers along Chile to start gathering important data to assess health status of this population.

Analysis of acoustic data will continue, and the need for a deck-unit is of crucial importance to implement the PAM project in Peru.

Coordination efforts have proved to be essential for the effective and positive implementation of the eastern South Pacific southern right whale CMP. It is expected to continue to work collaboratively for the conservation of this population and to successfully implement the activities planned under the Implementation Strategy 2023-2024.

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