

SC/68B/CMP/18

IWC Eastern South Pacific Southern Right Whale Conservation Management Plan Progress Report April 2020

Barbara Galletti Vernazzani



INTERNATIONAL
WHALING COMMISSION

IWC Eastern South Pacific Southern Right Whale Conservation Management Plan – Progress Report April 2020

Bárbara Galletti Vernazzani

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 in 2012 and the Governments of Chile and Peru signed a Memorandum of Understanding in 2018 to work on the conservation of this population. Important advances have been made during 2019-2020 particularly related to the Passive Acoustic Monitoring project, the collection of photo-IDs, and a genetic sample to aid in population identity, the educational environmental and media outreach program, and the planning of the third coordination meeting and the workshop on experience exchange on whale watching and research permits. Unfortunately, funding limitations and more recently the Covid-19 pandemic have affected the implementation of some of the activities. Additional funding will be needed in order to complete the 2019-2020 Implementation Strategy. The CMP has proved 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 and 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.

The MOU is oriented to coordinate cooperation in the conservation of this whale population and strengthen the importance of the IWC Eastern South Pacific southern right whale CMP, representing a strong political commitment from both countries to increase public awareness and coordinate policies to prevent its extinction, among others.

In the short-term, the CMP is focused to 1) obtain baseline data, particularly referring to population size, concentration areas of the species (breeding or feeding areas) and stock structure; 2) conduct a detailed assessment of potential impacts in identified concentration areas and; 3) develop specific mitigation strategies.

Over these years significant advances have been made and the Implementation Strategy 2019-2020 was endorsed by the IWC (CMP 2018) to overcome new challenges.

This report summarizes advances made from April 2019 to March 2020 regarding the implementation of priority actions outlined under the Implementation Strategy 2019-2020.

Advances on the Implementation Strategy 2019-2020

Priority actions identified under the Implementation Strategy 2019-2020 include: conduct coordination meetings among stakeholders (COORD-01); increase survey efforts on possible breeding ground (RES-05); increase effort to collect photo ID and genetic data (RES-02 and RES-03); strengthen capacities on entanglement and stranding response in both countries (PACB-02); increase species identification capacities along the coast of Chile and Peru (PACB-03); provide advice on whale watching regulations for this population (MIT-03); develop strategy to raise citizens' awareness and increase Range States capacities (PACB-01); create a web platform to report sightings (RES-01); prevent entanglements and disentangle whales (MIT-01); adopt alert systems to reduce the risk of collisions (MIT-02) and prevent and fight pollution to the marine environment (MIT-06).

a) Reporting

In May 2019 the 68a meeting of IWC Scientific Committee was held in Nairobi, Kenya. Three documents on CMP were presented: the 2019 CMP progress report (Galletti Vernazzani, 2019), the scientific report on the passive acoustic monitoring program (Galletti Vernazzani *et al.*, 2019); and preliminary results from study on genetic diversity and connectivity of southern right whale populations of the Southern Hemisphere (Carroll *et al.*, 2019) that includes the only genetic sample currently available for this population.

The MoU between Peru and Chile for the CMP was **highlighted** as a success. The Committee **reiterated** the importance of the CMP for the conservation of this critically endangered population and **encouraged** its continued coordination between Peru and Chile.

The Committee also **commended** the scientific work and international cooperation being undertaken for the passive acoustic monitoring program and looked forward to receiving the results of the acoustic studies (IWC, 2019).

b) Third CMP coordination meeting (COORD-01) and Workshop on Experience Exchange (MIT-03)

The implementation of the CMP requires strong support from different organizations and commitment from Range States. The CMP Steering Committee has stressed that the implementation of the CMP continues to be at their earlier stages and therefore the conduction of annual coordination meetings is considered critical to ensure its long-term continuation and integration to national policies.

The CMP steering committee has also identified as highest priority action the conduction of a governmental workshop on experience exchange about whale watching regulations and research permits. Unregulated approaches to mothers and calves may seriously disrupt nursing behavior and could result in negative impacts. In extreme situations, they may even cause the death of the animals. The lack of regulations, enforcements capacities and/or the delay in granting research permits may result in the loss of valuable response time and opportunities to save individuals and/or collect important scientific information. The CMP provides an excellent opportunity to standardize measures in both countries to have consistent regulations that facilitate the protection of individuals and/or collection of samples.

Considering that several governmental representatives of the CMP coordination meeting will also need to attend the workshop on experience exchange, the steering committee considered appropriate conducting back to back meetings of the third CMP coordination meeting and the workshop on experience exchange.

The workshop on experience exchange is planned as a two-day workshop with presentations and group discussions. It should focus on giving a general overview of existent whale watching regulations and research permit systems, reviewing research and rescue proceedings in Chile and Peru, identifying challenges and proposing standardized procedures for both States. A draft agenda can be found in Annex 1.

The third CMP coordination meeting is planned for one day, and will address, *inter alia*, a review of its advances, an evaluation to modify strategies if needed, and the preparation of a report to the IWC.

The third coordination meeting and the workshop on experience exchange on whale watching regulations and research permits are planned to be conducted in Lima, Perú. Costs were estimated at GBP13,700 and funding options are being explored.

Over the past years, the IWC has faced continual financial difficulties and there were not enough funds to cover the coordination meetings or the workshop considered in the Implementation Strategy 2019-2020.

Currently, funding alternatives from Range States are being explored to ensure a governmental long-term support for these types of meeting.

The coordination meeting and workshop was expected to be conducted during 2020, pending funding approval, however due to Covid-19 pandemic, the meetings are currently suspended until further notice.

c) *Passive acoustic monitoring (RES-05)*

Another CMP highest short-term priority is to identify a breeding aggregation area for this population (RES-05). Over the years, most sightings of southern right whales only lasted a single day and no breeding area has been identified yet. Since 2016, the IWC Scientific Committee has been supporting the project “*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. Two passive acoustics devices were acquired, and it was expected to be recording year-round on two different sites. However, due to funding constraints and a 30% reduction of IWC Research Fund for this project, monitoring has been possible only in one site per year.

In July 2019 the project successfully completed its first year of passive acoustic monitoring in the coastal waters of northwestern Isla de Chiloe (southern Chile) and since September 2019 recordings are being collected in coastal waters of the Arauco Gulf (central Chile). If additional funding becomes available, data collection in northern Chile (Antofagasta Region) will follow.

Unfortunately, due to the Covid-19 pandemic, it was not possible to conduct the last maintenance of the equipment at Arauco Gulf scheduled for late March 2020.

Analysis of acoustic data is underway. The amount of data collected is significant and analysis have been slower than expected due to hard drive and computer capacity. Manual annotation of acoustic data is not time-efficient. A Southern Right Whale automatic detector is being developed and tested. Between November 2018 and March 2019 and the detector confirmed the presence of southern right whale upsweeps in December 2019 off northwestern Isla de Chiloe.

A more detailed report on the PAM project has also been submitted to the 68b IWC Scientific Committee Meeting (Galletti Vernazzani *et al.* 2020).

d) *Increase efforts to collect photo-identifications (RES-02)*

Collaboration has been essential in recording sightings of the species. During the last year, at least seven opportunistic sightings were recorded in the coast of Chile thanks to the information provided by different groups and institutions contributing to the Southern Right Whale Sighting Network. These included a total of three cow-calf pair.

The first record was reported in 07 July 2019 and corresponded to a cow-calf pair sighted in Antofagasta, northern Chile. Based on photo-identification records of the whales obtained using a drone, the whales were

sighted in the area for over a month until 8 august. The second sighting was reported on August in Chome, central Chile. Three sightings were reported during September in Pichidangui, Quintay (central Chile) and Puñihuil (southern Chile).

Another two sightings were reported in October in northern Chile (Bahía Salada and Huasco) but due to the close proximity of the sighting dates and locations, it is most probably that these could correspond to the same individuals.

Since the whales were swimming, most of the sightings lasted only one day. Efforts were conducted to individually photo identify the whales sighted at Quintay but it was not possible to find them.

During the period, two photo-ID were obtained thanks to the use of aerial drones, highlighting the great contribution of this technology to monitor such a small population.

e) Increase efforts to collect genetic data (RES-03)

The single genetic sample available for this Eastern South Pacific southern right whale population, obtained in 2017 from a carcass of an individual that died due to entanglement in fishing gear (Galletti Vernazzani *et al.* 2017), was used to assess the genetic diversity and connectivity of southern right whales (*Eubalaena australis*) found in the Brazil and Chile-Peru wintering grounds and the South Georgia (Islas Georgias del Sur) feeding ground (Caroll *et al.* In press).

Its outstanding results revealed that the Chile-Peru sample had a maternal lineage previously only observed in the Indo-Pacific and had a nuclear genotype that appeared admixed between the Indo-Pacific and South Atlantic. Thus, the Chile-Peru population could have historically been a “stepping stone” between the South Atlantic and Indo-Pacific, rather than more closely linked to the Southwest Atlantic wintering grounds (Caroll *et al.* In press)

During its 68a meeting, it was noted that the study genetically links this population more closely to the Indo-Pacific than to the South Atlantic. The IWC Scientific Committee welcomed this information, particularly as nothing was known about the origins of the Chile-Peru population, and whether it is a remnant population or a result of recent colonisation; the data presented suggest the former. (IWC, 2019).

f) Development of strategy to raise citizens' awareness and increase Range States capacities (PACB-01)

During this period, there have been several actions related to media outreach and environmental education.

During 2019, meetings were held with local authorities and artisanal fishermen from northwestern Isla de Chiloe to inform about the PAM project. Educational lectures to more than 60 children from two different public schools of Ancud and Cocotue (Chiloe Island) were conducted, as well as in-depth workshop to more than 15 fishermen and tourist operators on species identification and its conservation status. Similar workshops were planned for 2020 at coastal communities of the Arauco Gulf. However due to the Covid-19 pandemic, these activities have also been postponed.

Various national and international media articles have been published about this Critically Endangered population and the CMP. Among them a special note in the first CMP bulletin, highlight the MOU between Chile and Peru for this population.

The text of the CMP is already translated into Spanish and two scientific papers have been published over this period on the acoustic and genetics of this population (Jacobs *et al.*, 2019; Carroll *et al.*, In Press).

g) Funding

During April 2019-March 2020, the CMP received support to conduct activities from the Governments of Chile and Peru, IWC Research Fund, IWC Conservation Management Plan Fund, Patagonia Environmental Grants Fund from Tides Foundation, Centro de Conservacion Cetacea, COPAS-Sur Austral from the University of Concepción, Centro i-Mar from the University of Los Lagos, NOAA Northeast Fisheries Science Center (USA), University of Saint Andrews (UK), the British Antarctic Survey (UK) and the Fishermen Union Viento Fuerte from Puñihuil, as well as several individuals.

The IWC has faced continual financial hurdles, so it had to reduce its costs in some aspects. The IWC CMP Fund has limited funding and the IWC Research Fund also was reduced. Therefore, some activities, particularly related to the coordination meetings and PAM project, were affected and couldn't be conducted as planned under the Implementation Strategy 2019-2020.

Currently, funding alternatives are being explored, including support from Range State to ensure the long-term continuation of coordination meetings as well as external funding sources.

It is expected and necessary to ensure continual funding and support for the proper completion of the implementation strategy 2019-2020 towards the recovery and long-term conservation of this Critically Endangered population of whales.

Conclusions

Coordination efforts have proved to be essential for the effective and positive implementation of the eastern South Pacific southern right whale CMP. Since 2019, we have been working to conduct the activities planned under the 2019-2020 CMP Implementation Strategy.

Important advances have been made during this period particularly related to the PAM project, the collection of photo-IDs and a genetic sample to aid in population identity, the educational environmental and media outreach program, and the planning of the third coordination meeting and workshop on experience exchange on whale watching and research permits.

Unfortunately, funding limitations and more recently the Covid-19 pandemic have affected the implementation of some of the activities.

Additional funding sources are being explored and will be needed in order to complete the 2019-2020 Implementation Strategy, in particular the conduction of the III CMP coordination meeting and the workshop on experience exchange on whale watching and research permits.

References

- Carroll, E.L., Gaggiotti, O.E., Galletti Vernazzani, B., Ott, P.H., Neveceralova, P., Vermeulen, E., McMillan, L.F., Andriolo, A., Baker, C.S., Bamford, C., Best, P., Cabrera, E., Calderan, S., Chirife, A., Fewster, R.M., Flores, P.A.C., Frasier, T., Freitas, T.R.O., Groch, K., Hulva, P., Kennedy, A., Leaper, R., Leslie, M.S., Moore, M., Oliveira, L., Seger, J., Stepien, E.N., Valenzuela, L.O., White, B., Zerbini, A. and Jackson, J.A. 2019. Genetic diversity and connectivity of southern right whales (*Eubalaena australis*) found in the Chilean wintering ground and South Georgia/Islas Georgias del Sur feeding ground. Paper SC/68a/SH/06 presented to the IWC Scientific Committee, May 2019 (unpublished). 19pp. [Available from the IWC]
- Carroll, E., Ott, P.H., McMillan, L.F., Galletti Vernazzani, B., *et al.* In Press. Genetic diversity and connectivity of southern right whales (*Eubalaena australis*) found in the Brazil and Chile-Peru wintering grounds and the South Georgia (*Islas Georgias el Sur*) feeding ground. Journal of Heredity.
- Conservation Management Plan. CMP. 2018. Eastern South Pacific Southern Right Whale Conservation Management Plan Implementation Strategy 2019-2020. Document IWC/67/CC/18 presented at IWC 67 biennial meeting, Florianopolis, Brazil. September 2018. 8pp.
- Galletti Vernazzani, B., Arroyo, P. Goya, E. and Palma. A. 2016. Revised Conservation Management Plan for Eastern South Pacific Southern Right Whale Population (*Eubalaena australis*). Paper IWC/SC66b/BRG23 submitted by the Governments of Chile and Peru to the 66 Biennial Meeting of the International Whaling Commission, June 2016. (unpublished). 30pp. [Available from the IWC]
- Galletti Vernazzani, B., Chirife, A., Cabrera, E., Sironi, M. and Brownell Jr., R.L. 2017. Entanglement and death of a Critically Endangered Eastern South Pacific southern right whale (*Eubalaena australis*) in Chile. Paper SC/67a/HIM/14 presented to the IWC Scientific Committee, May 2017 (unpublished). 10pp. [Available from the IWC]
- Galletti Vernazzani, B. 2019. IWC Eastern South Pacific Southern Right Whale Conservation Management Plan: Progress Report April 2019. Paper SC/68A/CMP/05 presented to the IWC Scientific Committee, May 2019 (unpublished). 7pp. [Available from the IWC]
- Galletti Vernazzani, B., Buchan, S., Brownell Jr. R.L., Cholewiak, D., Goya, E., and Moore, S. 2019. Progress Report on Passive Acoustic Monitoring of the Eastern South Pacific Southern Right Whale, a Key to Improve Conservation Management Plan Outputs: May 2018-April 2019. Paper SC/68A/CMP/06 presented to the IWC Scientific Committee, May 2019 (unpublished). 7pp. [Available from the IWC]
- Galletti Vernazzani, B., Buchan, S., Brownell Jr. R.L., Cholewiak, D., Goya, E., Moore, S., Pérez-Santos, I., Rojas, C. 2020. Progress Report on Passive Acoustic Monitoring of the Eastern South Pacific Southern Right Whale, a Key to Improve Conservation Management Plan Outputs: May 2019-April 2020. Paper SC/68b/CMP/XX presented to the IWC Scientific Committee, May 2020 (unpublished). 9pp. [Available from the IWC]
- International Whaling Commission. IWC. 2019. Report of the 68a annual meeting of the Scientific Committee. Kenya, Nairobi.
- Jacobs, E., Duffy, M., Magolan, J., Galletti Vernazzani, B., Cabrera, E., Landea, R., Buchan, S. and Sayigh, L. 2019. First acoustic recordings of critically endangered eastern South Pacific southern right whales (*Eubalaena australis*). *Marine Mammal Science* 35(1):284–289. <https://doi.org/10.1111/mms.12519>
- Memorandum de Entendimiento. MOU. 2018. Memorandum de Entendimiento entre el Ministerio de Relaciones Exteriores de la República de Chile y el Ministerio de Relaciones Exteriores de la República de Perú para Coordinar la Cooperación en la Conservación de la Población de la Ballena Franca Austral del Pacífico Sudeste. 4pp

ANNEX 1

Draft Agenda

Workshop on Experience Exchange on Whale Watching Regulations and Research Permits

1. Welcome and introduction
2. Adoption of the agenda

PART 1 – Whale Watching

3. Overview of whale watching regulations
 - General review (speaker - IWC WW)
 - The values of whale watching (educational, scientific, economical, social, etc.) (speaker - IWC WW)
 - Whale watching in Chile
 - Main species and areas (speaker - Subpesca)
 - Regulations: History and Current State (speaker - Subpesca)
 - Special regulations for SRW WW and Contingency Plan for SRW (speaker Subpesca and Directemar)
 - Whale watching in Peru
 - Main species and areas (speaker IMARPE)
 - COMUMA, Advances and Future Work (speaker – TBC)
4. Case study 1 – Whale Watching in Ecuador: History, Successes and Challenges (speaker – TBC)
5. Working group discussions 1 “Developing whale watching regulations and compliance mechanisms”
 - Species, safety, values and type of regulations (air, at sea, diving, etc.)
 - Compliance and license mechanisms
 - Special measures for eastern South Pacific southern right whales
6. Work plan to standardize measures and protocols

PART 2 – Research Permits

7. Overview of research permits processes for sampling dead stranded and live animals
 - Permit process in Chile (speaker Subpesca y Sernapesca)
 - Permit process in Peru (speaker Produce e Imarpe)
8. Case study 2 – Challenges faced by research permits (speaker - TBC)
9. Working group discussion 2 “Processes, Timing and Rapid Response”
 - Stranding procedures
 - Live animal procedures
 - Developing networks for southern right whales - Creation and implementation of a rapid response system (speaker CMP coordinator)
10. Workplan to standardize measures and protocols
11. Final conclusions
12. Review and adoption of workshop report