ASOC Report to CCAMLR
Submitted by ASOC

Introduction

ASOC and its member groups appreciate the opportunity to participate in the 37th annual meeting of CCAMLR. ASOC has submitted 8 background papers on a variety of issues relevant to the work of the Commission, including on marine protected areas, krill fisheries management, climate change, transhipment and microplastics. During the intersessional period, ASOC and its member groups have worked to enhance the conservation and preservation of Antarctica. This paper summarizes the relevant Antarctic work of our member organisations Greenpeace, The Pew Charitable Trusts, and WWF.

Greenpeace

Since last October, Greenpeace have significantly increased their activity around the campaign for a large-scale network of MPAs in the Antarctic Ocean. The organisation’s primary focus over the past year was a three-month expedition to both the east and west of the Antarctic Peninsula on their ship, the Arctic Sunrise.

Over the course of this expedition the Greenpeace crew facilitated the research of Dr Susanne Lockhart, using submersibles to gather footage and benthic samples which have led to the identification of four new Vulnerable Marine Ecosystems in Domain 1. Further to this research, the Greenpeace team also used a combination of a manta trawl, water and snow samples to test for microplastics and persistent hazardous chemicals. The results of this research were released in a report in June 2018. In summary:

- Seven of the eight seawater samples that were tested contained microplastics, with at least one microplastic fibre per litre
- In addition, nine samples were taken using a manta trawl and analysed for microplastics. Microplastic fragments were detected in two samples
- Detectable concentrations of persistent fluorinated chemicals (PFASs) were found in freshly fallen snow at nearly all of the sites where samples for PFAS analysis were taken. A total of nine snow samples and six water samples were taken.

In addition to the research undertaken, Greenpeace escorted a wide range of journalists, wildlife photographers and international celebrities from over ten countries to the Antarctic to raise awareness about the threats the region is facing. The organisation also released a report highlighting some of the risks associated with the krill fishery, using analysis of historical AIS data from fishing vessels and refrigerated cargo vessels from the previous five years to demonstrate, in particular, some of the risks posed by transhipment in the region. This work is supplemented by a paper submitted to CCAMLR

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3 PFASs are a group of chemicals widely used in industrial processes and consumer products and have been linked to reproductive and developmental issues in wildlife. The snow samples gathered included freshly fallen snow, suggesting some of the hazardous chemicals were atmospheric and not from a local source. The chemicals are persistent and degrade in nature very slowly

this year outlining best practice in transhipment at sea elsewhere globally and suggesting potential measures that might close this regulatory gap.

**The Pew Charitable Trusts**

During 2018, The Pew Charitable Trusts supported a diversity of independent research that has addressed critical knowledge gaps identified by the CCAMLR Scientific Committee. Pew-supported research undergoes a rigorous independent peer review process before being submitted as papers to the CCAMLR Scientific Committee. Pew plans to continue supporting such research in 2019.

**Ecosystem-Based Fisheries Management**

Pew was a major sponsor for the first of two annual workshops aimed to develop a plan for implementing ecosystem-based management of the Antarctic krill fishery. The first workshop took place in the U.S. in September of 2018, and a more intensive workshop will take place in 2019, which Pew also plans to support (see SC-CAMLR-XXXVII/24). Pew has also supported development of a decision support tool that can inform CCAMLR’s goal of advancing ecosystem-based management for the krill fishery to replace interim Conservation Measure 51-07 by 2021 that resulted in an SC-CAMLR paper5. Additionally, Pew has supported research6 on the abundance and trends of Type B killer whales around the Western Antarctic Peninsula to help elucidate the role of this species in the ecosystem.

**Marine Protected Areas**

Pew supported an assessment7 of the levels of benthic and pelagic bioregions encompassed by currently designated and proposed MPAs within the CCAMLR area, which found that designation of the currently proposed MPAs (EAMPA, WSMPA and D1MPA) would make a substantial contribution to overall representativeness of ecosystem types protected in the Southern Ocean.

To assess whether the preliminary proposal for the D1MPA could meet CCAMLR’s MPA objective of protecting populations of key species, Pew supported research8 that sought to examine the risks to krill predators and the fishery caused by displaced fishing under the D1MPA. Pew supported research on the D1 MPA9 that evaluated the potential MPA using a dynamic food-web model that incorporates the effects of climate change through sea-ice concentration. Results indicated that protecting regions where krill are anticipated to concentrate in the future could positively affect biomass accumulation of krill and some krill predators.

Pew sponsored research10 on candidate baseline data for ecosystem indicators in the Ross Sea region for seven previously identified key indicator species which could be used as benchmarks to evaluate MPA performance.

**Climate change**

Pew supported an analysis modelling11 the impacts of rising sea temperature on krill and how that increases risks for predators in the Scotia Sea that is intended to contribute to the proposed climate change response work program. Pew was a major sponsor for the MEASO conference, which aimed to

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6 WG-EMM-18/16. Abundance and trends of Type B killer whales (Orcinus orca) around the western Antarctic Peninsula H. Fearnbach, J.W. Durban, D.K. Ellifrit and R.L. Pitman
9 SC-CAMLR-XXXVII/BG/04. Evaluating MPA scenarios in Planning Domain 1 using a dynamic food-web model. Delegation of the USA
progress many of the issues raised in the CCRWP by developing a Marine Ecosystem Assessment for the Southern Ocean in the context of a changing climate (see WG-EMM-18/14).

**WWF**

*Over the past year, WWF has carried out a wide range of Antarctic conservation work. In this section, we highlight the whale science and conservation initiatives with relevance to CCAMLR.*

**WWF Report: Whales of the Antarctic Peninsula**

WWF and the University of California, Santa Cruz have produced a new report entitled *Whales of the Antarctic Peninsula*. The report highlights:

- Whale species that migrate, feed and inhabit CCAMLR managed areas, with a focus on the Western Antarctic Peninsula (Area 48.1).
- Emerging conservation issues such as krill fishing overlap with key feeding areas; climate change impacts; pollution and threats to migratory pathways on the high seas and national waters; and the role of cetaceans in the maintenance of healthy marine ecosystems in the Southern Ocean.
- Recommendations relevant for CCAMLR including greater collaboration with the International Whaling Commission Scientific Committee (IWC-SC) and consideration of critical whale feeding habitats to inform design and monitoring for future management and marine protection in the region.

**WWF Wildcrowd: a citizen science platform for Antarctic tourism to provide species presence data to monitor ocean habitats.**

The Antarctic tourism sector is an untapped wealth of knowledge who can provide presence data of marine species including whales, penguins, seals and seabirds to better understand predator/prey relationships, distribution and monitor critical feeding habitats under a changing climate.

In response, WWF with Apple has developed Wildcrowd – a new open source IOS and digital platform for naturalists and field guides in the polar tourism industry and available to the public.

Collaborating with researchers from Duke University’s Marine Lab and University of California, Santa Cruz, we will train polar field guides how to use the platform on IAATO tourism vessels this upcoming Antarctic season. The WWF team will produce species distribution models, enhance the functionality of the app over time and share learnings.

Most citizen science projects work independently and many data sets contain a wealth of information that are unknown or unavailable to decision-makers.\(^\text{12}\) Wildcrowd is an attempt to change this by facilitating these independent data and make them freely available in useable formats to government data portals, researchers, and other projects. Website: [www.wildcrowd.net](http://www.wildcrowd.net)

**WWF Report: Whales killed in the Ross Sea Marine Protected Area in 2018.**

WWF has produced a special report demonstrating over 50 Antarctic minke whales were killed inside the Ross Sea Marine Protected Area (General Protection Zone) only months after the MPA entered into force as part of Japan’s New Scientific Whale Research Program in the Antarctic Ocean (NewRep-A).\(^\text{13}\) The report provides background information, analysis and recommendations for policy-makers.

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