Proposal for Development of a Targeted Research and Monitoring Plan for the Emperor Penguins

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*submitted by Delegation of China*

Summary:

The ICG on the *Development of a Antarctic Special Protected Species (hereinafter called “ASPS”) Action Plan for the emperor penguins* has collected new information and obtained some new findings about the status of emperor penguins through the six rounds of discussion: the emperor penguins are currently listed as Near Threatened in the IUCN Red List, the population of the species has been increasing in the regional (Antarctic) scale, the northernmost emperor penguin colony on Snow Hill Island is stable, the known and emerging terrestrial and marine threats affecting emperor penguin are considered relatively small if not negligible, the threat assessment of climate change and sea ice reduction on the species is considerably uncertain, and the threat is predicted to take place only until after 2050. As a result, it is recommended that the CEP to establishes an ICG to develop a targeted research and management plan for the emperor penguins as Near Threaten species at the regional (Antarctic) scale, instead of designating it as a ASPS, to ensure the consistency in the application of Annex II to the Protocol and the *Guidelines* *for CEP Consideration of Proposals for New and Revised Designations of Antarctic Specially Protected Species under Annex II of the Protocol (hereinafter called “*the *Guidelines”)* adopted in 2005.

1. Background

At the request of the UK, SCAR initiated a review of the status of the emperor penguins with the intention of categorizing it as an Antarctic Specially Protected Species (hereinafter as “ASPS”). In April 2021, SCAR presented to CEP XXIII two documents: WP 37 *Projections of future population decline emphasize the need to designate the emperor penguin as an Antarctic Specially Protected Species* and IP22 rev.1 *Projections of future population decline indicate the need to designate the emperor penguin as an Antarctic Specially Protected Species.* Conclusions of the two documents are that the emperor penguin was vulnerable to ongoing and projected climate change, noting that loss of suitable breeding habitat is the most important challenge for the species, thereby warranting protection as an ASPS.

Consequently, the Committee agreed to establish an ICG with the following TOR: *with reference to* the *Guidelines, and taking into consideration of ATCM XLIII/WP37, ATCM XLIII/IP22 and other input from Members, Observers, and other relevant scientific, environmental and technical organizations, prepare a draft Action Plan for the emperor penguin, and report to CEP XXIV.*

At the 40th meeting of SC-CAMLR in October 2021, Working Paper SC-CAMLR/40-9 rev.1 informed SC-CAMLR of the ICG work, and invited SC-CAMLR to engage in the ICG process and to provide input or queries to the conveners of the ICG (SC-CAMLR/40-9 rev.1). The SC-CAMLR welcomed the analysis and encouraged CCAMLR members to contribute to further development of the action plan through Dr K. Hughs, the contact person listed in the paper, or the ICG site at CEP (SC-CAMLR 40 Report, paragraph 5.7). CCAMLR noted the discussion of the SC-CAMLR (CCAMLR-40, paragraph 8.1).

2. The status and trends of Emperor Penguins

In the assessment provided in ATCMXLIII/WP37, SCAR states that models and analyses indicate that the Emperor Penguins might best be classified within the IUCN Red List as *Vulnerable*. However, the findings in the *draft Action Plan* developed through six rounds of ICG discussion, participated by Argentina, Australia, China, Ecuador, France, Germany, New Zealand, Norway, Portugal, South Africa, Spain, the United Kingdom, the United States, ASOC, COMNAP, IAATO and SCAR, revealed another scenario with respect to the status and trends of the emperor penguins. Here are some of them:

1) the emperor penguins were last assessed in August 2019, and listed as Near Threatened in the IUCN Red List (IUCN, 2012, 2019).

2) the observed population of the emperor penguins around Antarctica has been increasing. The global emperor penguin population was estimated as 135,000-175,000 breeding pairs in 1992 (Martinez, 1992). The most recent global survey of the emperor penguins by VHR satellite imagery revealed that the population comprised ~238,000 breeding pairs, or ~595,00 birds (Fretwell et al., 2012), calculated across 46 colonies. Since then, additional apparent breeding locations have been discovered, bringing the total to 61colonies [IUCN website: 54 colonies[[1]](#footnote-1)] with probably c. 256,500 breeding pairs (Fretwell & Trathan, 2020). Colonies expand and contract, depending upon prevailing weather conditions (Richter et al., 2018). Surveys of the northernmost emperor penguin colony on Snow Hill Island have recorded stable population values in recent years compared to the first counts made a few years ago (Libertelli & Coria, 2017a, Libertelli & Coria, 2017b).

3) The species is projected to undergo a moderately rapid population decrease as Antarctic sea ice begins to disappear within the next few decades because of climate change ([BirdLife International, 2020](https://www.iucnredlist.org/species/22697752/157658053)), but major changes to sea ice prevalence are not projected to begin until after 2050.

4) Other known and emerging terrestrial and marine threats affecting emperor penguin are considered relatively small if not negligible (Trathan et al., 2015) (see Table 1 of the draft Action Plan).

5) IPCC AR6 observed that for Antarctic sea ice, regionally opposing trends and large interannual variability result in no significant trend in satellite-observed sea ice area from 1979 to 2020 in both winter and summer (high confidence). {2.3.2} The low confidence in the projections of Antarctic sea ice gives large uncertainty to prediction for the coming 100 years (IPCC, 2019). Therefore, modelled colony population forecasts of the emperor penguins are of large uncertainty.

6) SCAR admitted in ATCM XLIII/WP 37 that the species is currently listed as Near Threatened, and has not been up-listed due to the uncertainty about future green gas levels and emission scenarios, future sea ice projections, and because the assessment also depends upon a degree of model verification against population trend.

7) The monitoring data extracted from the website of MAPPPD on the populations of emperor penguins in the 8 ASPAs listed in Table 2 of the draft Action Plan demonstrated an inconsistency between the purpose the ASPAs designated and the population of emperor penguins assumed as being protected. The population of emperor penguins has fluctuated in 4 ASPAs, fell down in 3 ASPAs (ASPA127,169,173), and disappeared in one ASPA (e.g. ASPA 107) after the establishment of the ASPAs. Targeted, tailored research and monitoring programs as well as management measures focused on the cause of decline may be needed on the basis of serious scientific assessment. (see the Annex of this paper)

In summary, the emperor penguins are currently listed as Near Threatened in the IUCN Red List, the population of the species has been increasing at the regional (Antarctic) scale, the northernmost emperor penguin colony on Snow Hill Island is stable, the known and emerging terrestrial and marine threats affecting emperor penguin are considered relatively small if not negligible, and the considerable uncertainty regarding the threat from climate change and sea ice reduction which is predicted to take place only until after 2050. Considering these facts, it may be inappropriate to designate the emperor penguins as an ASPS at this stage, in accordance with Annex II to the Protocol and the *Guidelines* adopted in 2005.

3. Recommendation:

In consistent with the past practices of the CEP on the designation of ASPS and taking into account the scientific advice of SCAR (paragraphs 9-1, ATCM XXVIII/WP34; paragraph 9-11, ATCM XXIX/WP38), **it is recommended that**:

the CEP to establish an ICG to develop a targeted research and management plan for emperor penguins as Near Threaten species at the regional (Antarctic) scale, with a view to providing early warning of possible worsening conservation status around Antarctica (at the regional level as a whole).

1. <https://www.iucnredlist.org/species/22697752/157658053> [↑](#footnote-ref-1)