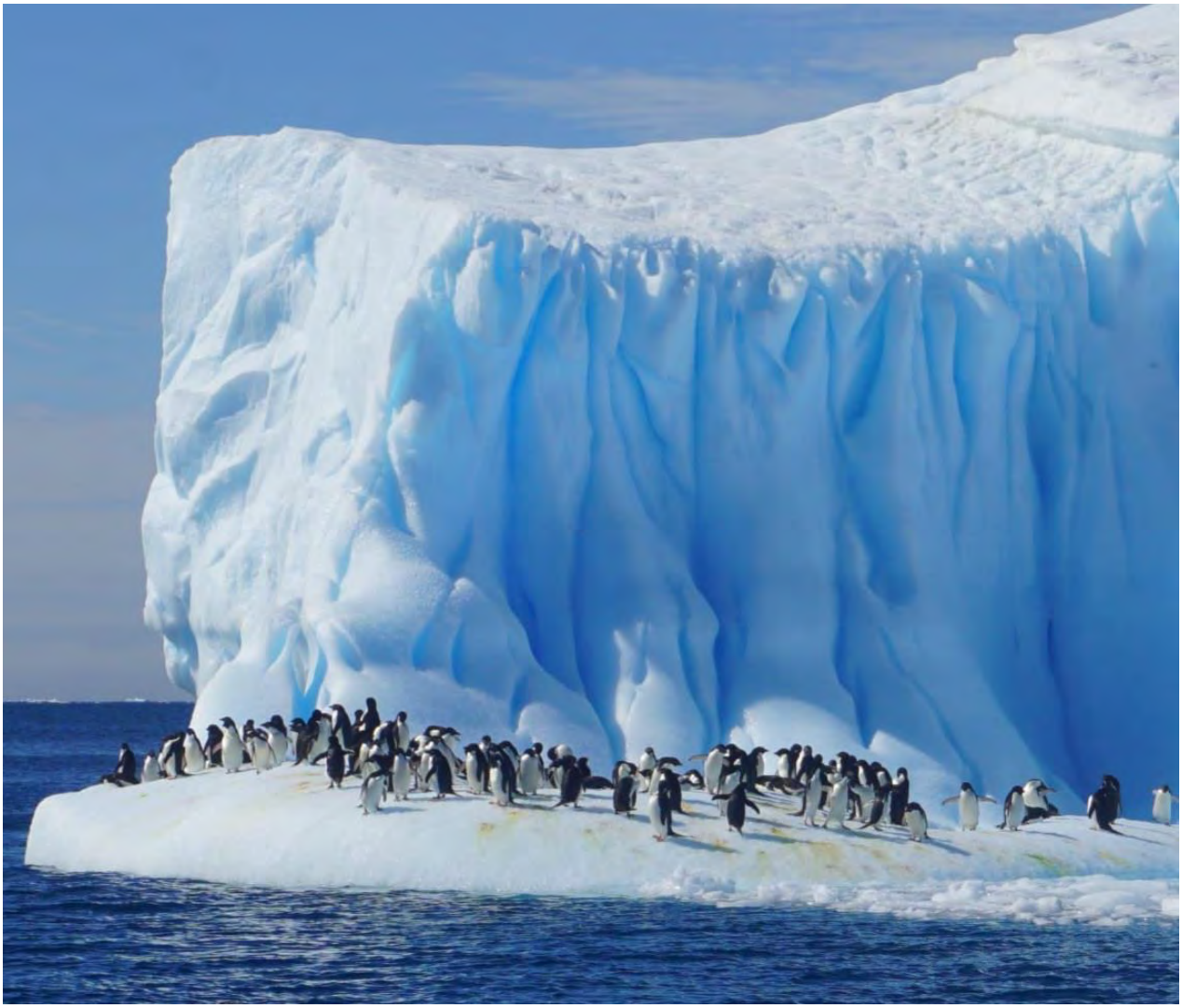
IUCN Strategy, Policy and Programme on Antarctica and the Southern Ocean

by IUCN Taskforce on Antarctica and the Southern Ocean



INTERNATIONAL UNION FOR CONSERVATION OF NATURE, January 2025

Photo Credits for all photographs in this document: Lewis (Lou) Sanson

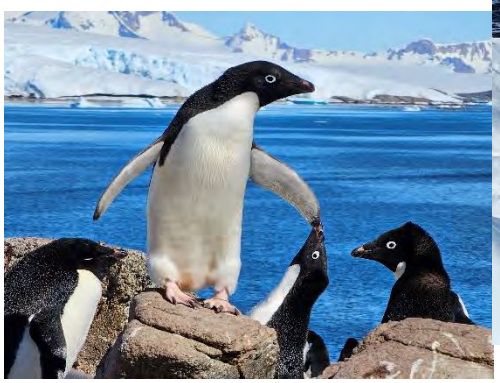
Taskforce Members (as at January 2025):

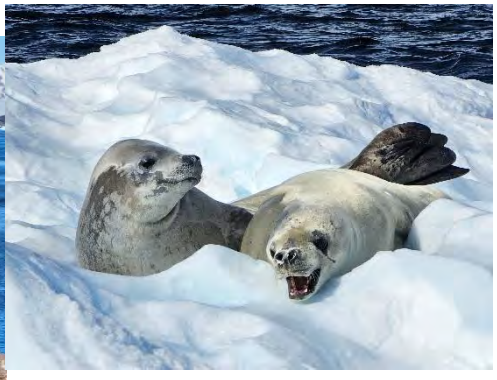
Councillors: Catherine Iorns (Chair), Sonia Castaneda Rial, Peter Cochrane, Sue Lieberman, Hasna Madoud, Imen Meliane, Vivek Menon, Madhu Rao.
Commission Experts: Daniela Cajiao, Neil Gilbert, Ally Kristan, Guillermo Ortuno, Lou Sanson,
Members: Scott Hajost (ASOC), Barry Weeber (ECO)
Secretariat: Heidi Weiskel

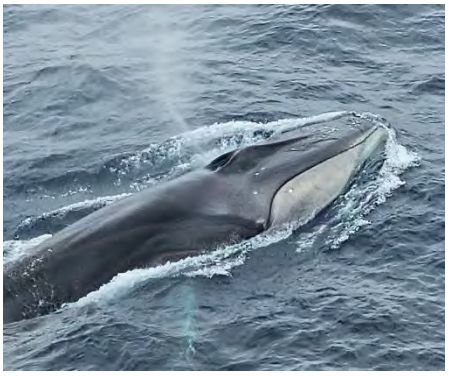
INTERNATIONAL UNION FOR CONSERVATION OF NATURE

World Headquarters
Rue Mauverney 28
1196 Gland, Switzerland
mail@iucn.org
Tel: +41 22 999 0000
Fax: + 41 22 999 0002

Table of Contents







IUCN Strategy, Policy and Programme on Antarctica and the Southern Ocean

"…*feelings of indescribable delight upon a scene of grandeur and magnificence far beyond anything we had seen or could have conceived*."
Captain James Clark Ross, log entry, 1842

"…*the stark polar lands grip the hearts of men who have lived on them in a manner that can hardly be understood by the people who have never got outside the pale of civilisation*"
Sir Ernest Shackleton

Introduction

Antarctica and the Southern Ocean represent 20 percent of the planet's surface. The continent itself is a frozen desert that receives little precipitation, most of which falls as snow. However, this austere appearance belies this area's importance as an ecosystem and its role in global biodiversity and in maintaining and regulating globally important ecosystem services. Antarctica is the only continent with no human-induced extinctions, and demands ongoing attention to maintain its value as a natural reserve devoted to peace, science and high standards of environmental protection.[1]

The Antarctic and Southern Ocean Strategy, Policy and Programme (hereinafter the Strategy) has been developed as a result of the IUCN Council decision C109/28 establishing a Taskforce on Antarctica and the Southern Ocean. It defines the potential areas for intervention by IUCN in favour of Antarctic and Southern Ocean biodiversity. The Strategy will suggest how such interventions will make use of IUCN's network and other strengths, and suggests how component programmes[2] will organise and coordinate their efforts to optimise the Union's impact in the region, particularly through policy interventions and advocacy. It aims to ensure that such efforts further conservation in these regions while contributing to the delivery of the IUCN Programme of work into the future.[3] It also aims to bring the world closer to meeting the global targets under the Sustainable Development Goals Agenda, the Paris Agreement, and the Kunming-Montreal Global Biodiversity Framework.

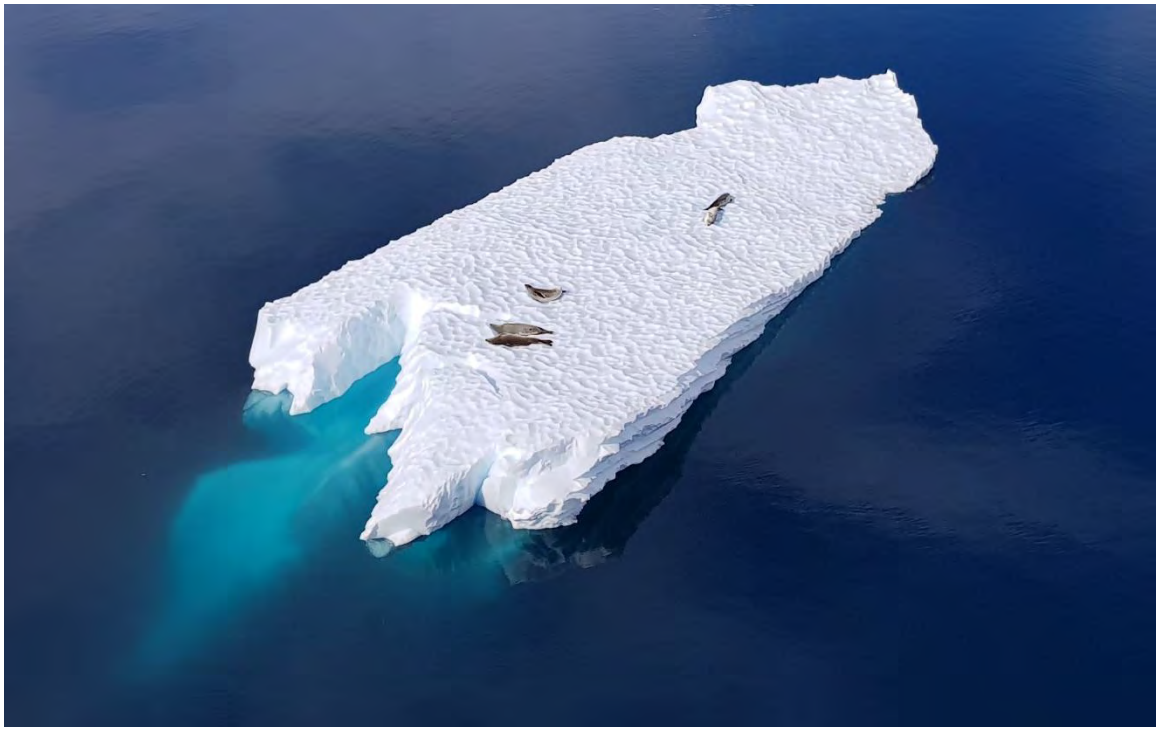
The activities envisaged under the Antarctic and Southern Ocean Strategy are intended to:

- draw on the scientific, legal and technical expertise of IUCN's Secretariat and Commissions to ensure that the best available scientific and technical knowledge is translated into actionable advice for the conservation of biodiversity in the Antarctic and Southern Ocean regions;
- provide significant contributions to the IUCN Programme of work;
- provide a means to deliver on the mandate conveyed by the more than 20 IUCN Congress and General Assembly Resolutions and Recommendations adopted over the years in relation to Antarctica and the Southern Ocean;[4]
- respond to the needs expressed by Members and partners with an interest or concern in the region;
- ensure that the lessons learned in work undertaken in the Antarctic are available to other

[1] See, eg, Pertierra, L. R., et al. (2021). Ecosystem services in Antarctica: Global assessment of the current state, future challenges and managing opportunities. *Ecosystem Services*, *49*, 101299; McCarthy, A. H., Peck, L. S., & Aldridge, D. C. (2022). Ship traffic connects Antarctica's fragile coasts to worldwide ecosystems. *Proceedings of the National Academy of Sciences*, *119*(3), e2110303118.
[2] The term "component programmes" refers to IUCN's programme units. It includes Global Thematic Programmes, Commissions and Regional Programmes
[3] Currently this programme of work is entitled Nature 2030; see WCC-7th-001-fr.pdf (iucn.org). A new 4-year programme and 20-year vision is expected to be adopted in October 2025.
[4] See Appendix 1.

regions;
- compile the evidence in support of the application of a precautionary approach and the implementation of an ecosystem-based approach to fisheries management;
- complement and bring added value to activities being pursued by IUCN Members and partners with an interest in or a conservation concern for the region.

The Strategy will enhance IUCN's capacity to influence, encourage and assist countries, institutions and the private sector to conserve the integrity and diversity of Antarctic and Southern Ocean ecosystems. It is also intended to help ensure that intrinsic values (including wilderness), ecological integrity, and scientific values are given proper consideration. Further, it is intended to help ensure that in those cases where use of natural resources is appropriate, it is done in an equitable and ecologically sustainable way, based on sound science and with full consideration of the precautionary principle.



1 Antarctica and the Southern Ocean

1.1 Overview of the environment and biodiversity

Antarctica and the Southern Ocean have many internationally-significant values: the region harbours critically important and largely intact ecosystems, and plays a vital and unique role in influencing global climate and oceanic circulation systems; it is critically important for many species; it is important for globally-relevant research and monitoring which can provide greater understanding of the natural environment and ecological processes; and greater accuracy of global climate change models. It has great value as the world's largest remaining wilderness area, and it has significant intrinsic and inspirational values.[5] As such, the region provides a wide variety of essential biodiversity and ecosystem services for the world.

The Antarctic Treaty Area comprises the area south of 60 degrees South latitude. The area covered

[5] See, e,g Hanessian, J. (1960). The Antarctic Treaty 1959. *International & Comparative Law Quarterly*, *9*(3), 436-480.

by the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) extends in part north of this limit in the south Atlantic and south Indian Ocean and is intended to include waters up to the Antarctic convergence, the boundary where southern, colder and nutrient-rich waters meet warmer waters, and includes some sub-Antarctic Island Exclusive Economic Zones.[6]

The Antarctic continent contains little biomass, and most terrestrial biodiversity is concentrated in ice-free areas near the coasts; this makes these areas particularly important for Antarctic biodiversity, while being highly vulnerable to human impacts.[7]

In contrast, the Southern Ocean that surrounds Antarctica is highly productive and supports a rich diversity of species. Antarctic krill are central to the marine food web and provide a primary source of food for many species, including whales, seals, sea-birds and penguins.

Threats to Antarctic biodiversity are increasing primarily from climate change, non-native species invasions, localised pollution and the increasing footprint of human activity, including fishing.[8] Of particular concern is the apparent reduction in sea ice cover around Antarctica which has concerning implications for krill productivity as well as for the iconic Emperor penguin, which relies on stable sea ice as a habitat for breeding and moulting. Despite the various threats, comparatively few species in Antarctica or the Southern Ocean have been assessed for the IUCN Red List of Threatened Species, for example, and only one species - the Antarctic Cudweed plant - is listed as Endangered.[9]

Antarctica has never had an indigenous human population; however, during the austral summer, a few thousand people live at stations and bases managed by governmental Antarctic programmes. During the austral winter, the human population living on the continent decreases to around 1,000. In contrast, temporary tourist visitor numbers to Antarctica now number well over 100,000 per year, and appear to be continuing to increase.[10]

1.2 Antarctic Governance

The Antarctic Treaty[11] and related agreements (see below), collectively called the Antarctic Treaty System (ATS), regulate human activities and international relations in the region. The Antarctic Treaty was agreed with the objectives of setting aside disputes over territorial sovereignty, promoting freedom of scientific investigation, and prohibiting military activities on the continent. Every year the original twelve Parties to the Treaty plus those Parties that demonstrate their interest in Antarctica by conducting substantial research activity there - together called the Consultative Parties - meet "for the purpose of exchanging information, consulting together on matters of common interest pertaining to Antarctica, and formulating and considering and recommending to their Governments measures in furtherance of the principles and objectives of the Treaty" (Art. IX). This forum is the Antarctic Treaty Consultative Meeting (ATCM). The Treaty's Article IV puts on hold territorial claims made by seven countries and instead establishes a consensus-based decision-making process among all Consultative Parties to the Treaty. Agreements reached under the

[6] See, eg, Brooks, C. M. (2013). Competing values on the Antarctic high seas: CCAMLR and the challenge of marine-protected areas. *The Polar Journal*, *3*(2), 277-300.
[7] See, eg, Brooks, S. T., Jabour, J., Van Den Hoff, J., & Bergstrom, D. M. (2019). Our footprint on Antarctica competes with nature for rare ice-free land. *Nature Sustainability*, *2*(3), 185-190.
[8] See, eg, Tejedo, P., Benayas, J., Cajiao, D., Leung, Y. F., De Filippo, D., & Liggett, D. (2022). What are the real environmental impacts of Antarctic tourism? Unveiling their importance through a comprehensive meta-analysis. *Journal of Environmental Management*, *308*, 114634.
[9] https://www.iucnredlist.org/species/44044/15245091 - the most recent assessment was 2012.
See this link for the search results: https://www.iucnredlist.org/search?query=antarctica&searchType=species
[10] See, eg, https://geographical.co.uk/science-environment/tourism-numbers-in-antarctica-have-risen-to-over-100000-per-year
[11] The Antarctic Treaty opened for signature on 1 Dec 1959 and entered into force on 23 June 1961. In 2024 there are 58 parties.

auspices of the Antarctic Treaty include:[12]

- The Convention for the Conservation of Antarctic Seals (CCAS, 1972) which aims to protect Southern Ocean pinnipeds. CCAS provides for the sustainable taking of Antarctic seals; however, commercial sealing activity has never returned to the region and is now largely prohibited by Annex II to the Protocol.[13]
- The Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR,1980) which has the objective of conserving Antarctic marine life. CCAMLR allows for harvesting of marine species but only in a sustainable manner that takes account of the effects of harvesting on other components of the marine ecosystem.
- The Protocol on Environmental Protection to the Antarctic Treaty (the Protocol, 1991) which designates Antarctica as a continent devoted to peace and science.[14] Five Annexes to the Protocol set out tough rules aimed at protecting the natural Antarctic environment. The Protocol also prohibits mineral resource activities for commercial purposes and requires any planned activity to be subject to an environmental impact assessment before it can proceed. A sixth annex on liability arising from environmental emergencies was adopted in 2005 but is yet to enter into force. In 2024, 42 parties to the Antarctic Treaty have ratified the Protocol.

In addition to the Consultative Parties, some states become Non-Consultative Parties through acceding to the Antarctic Treaty. As of December 2024, there are 56 member States of the Antarctic Treaty: 29 Consultative Parties and 27 acceding States.

An independent body that plays a key role in the Antarctic Treaty System as a Permanent Observer is the Scientific Committee on Antarctic Research (SCAR).[15] SCAR provides independent scientific advice to the ATS bodies through its Standing Committee on the Antarctic Treaty System (SCATS).[16] Another Permanent Observer is the Council of Managers of National Antarctic Programs (COMNAP). COOMNAP provides advice to the ATS drawn from the national Antarctic programs' experience and expertise.[17]

Other organisations can participate in meetings as Invited Experts. IUCN is an Invited Expert, as are other inter-governmental organisations such as the United Nations Environment Program, scientific organisations such as the World Meteorological Organisation, and non-governmental organisations such as the International Association of Antarctic Tour Operators (IAATO) and IUCN Member the Antarctic and Southern Ocean Coalition (ASOC).

For more than sixty years, the Antarctic Treaty has successfully met its objectives of promoting peaceful use and scientific exploration and international cooperation to that end. To date the ATS has allowed the region to remain relatively untouched, compared with more populated regions in the world; however, increasing pressures are impacting species and putting at risk the natural environmental values of the region.[18]

Other international laws also apply to Antarctica and the Southern Ocean, including environmental and shipping[19] laws, as well as laws of the sea, for example. But it is the Antarctic Treaty System that has provided relevant governance to date.

---

[12] The Convention on the Regulation of Antarctic Mineral Resource Activities was signed in 1988 but it was subsequently rejected and never entered into force.
[13] The Seals Convention has only been ratified by 16 Antarctic Treaty Parties and its implementation is opposed by some Antarctic Treaty Parties.
[14] This incorporates the Agreed Measures for the Conservation of Antarctic Fauna and Flora (1964) (entered into force in 1982).
[15] See https://scar.org/
[16] For more information on SCAR's role in the ATS, see, eg, https://scar.org/policy/sc-ats.
[17] See, eg, https://www.comnap.aq/
[18] See, eg, Hughes, K. A., Convey, P., & Turner, J. (2021). Developing resilience to climate change impacts in Antarctica: An evaluation of Antarctic Treaty System protected area policy. *Environmental Science & Policy*, *124*, 12-22.
[19] See, eg, the International Maritime Organization's International Code for Ships Operating in Polar Waters (Polar Code), and the International Convention for Prevention of Pollution from Ships (MARPOL). See, eg, https://www.imo.org/en/ourwork/safety/pages/polar-code.aspx

1.3 Pressures on the Antarctic and Southern Ocean environments

The Antarctic and Southern Ocean environments are facing challenges and threats to their functioning and existence. As with many other environmental issues worldwide, these challenges and threats are being addressed only very slowly and there are many fears that, just as with climate change, national and international action is too slow to guard against calamitous loss of biodiversity in the future.

The primary threat to Antarctic and Southern Ocean ecosystems and biodiversity is from **climate change**, and the physical, chemical, biological and ecological impacts that it is causing. Such effects include large-scale sea-ice retreat, unseasonal weather patterns affecting breeding and feeding, the increasing acidification of the Southern Ocean, and the alteration of the entire Antarctic food web.

Sea ice provides the foundation for Antarctic marine ecosystems. Sea ice seeds phytoplankton growth, which is the food at the base of the whole Antarctica and Southern Ocean food webs. It provides habitats for many species, including for the growth of krill, which is the food for many marine species, from fish to penguins to whales. Sea ice also provides breeding and resting grounds for larger animals such as penguins and seals. Unfortunately, warming sea temperatures have already seen the extent of winter sea ice drop since 2016. 2024 saw three years in a row of record low ice coverage.[20] This loss of ice has seen the loss of breeding grounds for emperor penguins, for example, and the consequent complete failure of four out of five breeding colonies with 10,000 chicks drowning when their ice shelf melted prematurely in 2022. The loss of krill habitat threatens the food supplies of other fish, penguins, and even whales who each eat tonnes of krill in a day.

The waters of Antarctica and the Southern Ocean are among the most vulnerable in the world to acidification from the absorption of carbon dioxide (CO_2) from emissions in the air.[21] This vulnerability results from the low temperatures increasing the dissolution of CO_2, from the upwellings from deeper waters, as well as the reduced amount of sunlight across the year. Acidification limits the growth of many organisms at the base of food webs, from bacteria, to phytoplankton and microalgae, to invertebrates, to fish. Animals with carbonate shells and skeletons are particularly affected. The acidity of Southern Ocean waters has already increased and is happening too fast for marine species to adapt. Unfortunately, acidification is forecast to increase considerably and more rapidly if CO_2 levels in the air are not reduced significantly. Ocean acidification threatens to destabilise the entire Antarctic and Southern Ocean marine ecosystems.

Unseasonal snowstorms have led to the breeding failure of seabirds in some regions. While species may be adapted to life in a harsh climate, unseasonal harshness can come when species are unprepared for it and be devastating to their feeding and breeding.

Overall, as climate change accelerates, temperature anomalies will increase; this will make the effects on Antarctic and Southern Ocean species and ecosystems much worse than the effects that we have already seen.

Other human activities are placing pressures on Antarctica and the Southern Ocean:

Fishing impacts and overfishing remains one of the greatest threats to marine conservation globally. Industrial fishing in the Southern Ocean provides increasing pressures on Antarctic food webs, particularly the expanding harvest of Antarctic krill. While the killing of whales and seals has become much less acceptable globally, the harvesting of the food that whales and

[20] See, ,eg https://theconversation.com/devastatingly-low-antarctic-sea-ice-may-be-the-new-abnormal-study-warns-212376

[21] See, eg, 'Effects of ocean acidification on Antarctic marine organisms: A meta-analysis', available at: https://onlinelibrary.wiley.com/doi/full/10.1002/ece3.6205

other species depend upon is growing. This has the potential to threaten the food web and thus the Southern Ocean ecosystem, especially with the likelihood of reduced krill breeding due to climate change. Fishing also damages cold water corals, coral reefs, sponge fields and seamounts, as well as fish, invertebrate, and mammal species, and can significantly harm biodiversity.

Fishing activities also ensnare other species such as birds, seals and cetaceans, sharks and rays as 'bycatch'.[22] Even though it is unintended, it is yet another pressure on vulnerable populations, especially seabirds and several endemic species of skates. Illegal, unreported and unregulated (IUU) fishing is also recognized as a grave threat to marine ecosystems.

Fishing vessels in the Southern Ocean are mainly outside the requirements set for other vessels by the International Maritime Organisation (IMO). Not all CCAMLR members have ratified the Cape Town Agreement 2012 to Enhance Fishing Safety, which has yet to enter into force.

Human visits introduce **non-native species** that can become invasive. Non-native species have already been found in Antarctica and it can be expected that these will increase as the waters warm and other species migrate toward the poles. Unfortunately, some will gain toeholds on the continent and in its surrounding waters and displace the existing and unique species.

Diseases not previously seen in the region can also be spread both by human activities and naturally by other species. In September 2023, Highly Pathogenic Avian Influenza H5N1 clade 2.3.4.4b (HPAI) was found in Antarctica for the first time ever, having come down to the Antarctic peninsula via migrating birds.[23] This has had a devastating impact on bird and mammal populations elsewhere in the world, including in nearby southern Argentina.[24] Bird deaths have already been reported in Antarctica and there are fears for vast increases in future numbers. As the climate warms, Antarctic and Southern Ocean species will become exposed to - and die from - more diseases that they have never faced before.

Tourism[25] in Antarctica has expanded rapidly. As mentioned above, tourist visitor numbers to Antarctica reached 122,072 in the 2023-24 season (78,848 of which went onto land), and are projected to increase.[26] Such visits increase the risks for the introduction of new species and diseases, as well as pressures from the infrastructure needed to support such numbers. The Polar Code vessel requirements developed by the IMO are designed to increase the safety of tourist vessels. Most tourism occurs via IAATO vessels, and IAATO has rules and procedures designed to keep tourist activity within environmental limits. However, membership of IAATO is voluntary and not all tour operators are members; not all tourist vessels are flagged to Antarctic Treaty parties; and tourists are able to visit Antarctica without operators. An increasing diversity of tourism activities are reaching areas and colonies that were previously not visited.[27]

The increasing tourism comes on top of the ongoing expansion of national Antarctic science programmes and their infrastructure. The environmental impacts of such human activities are cumulative.

Antarctica is particularly sensitive to **pollution**, primarily as the colder temperatures mean that any pollutants take longer to break down naturally, in addition to rough weather and a lack of

[22] See, eg, Faure, J., Gasco, N., Bonillo, C., Munaron, J. M., Cherel, Y., & Péron, C. (2023). Feeding ecology of two deep-sea skates bycaught on demersal longlines off Kerguelen Islands, southern Indian Ocean (p. 103980). Deep Sea Research Part I: Oceanographic Research Papers.
[23] See, e,g *Updated Biological Risk Assessment and Recommendations for Highly Pathogenicity Avian Influenza in Antarctica*, Prepared by Meagan Dewar, Antonio Alcami, Michelle Wille, on behalf of the SCAR Antarctic Wildlife Health Network (16 December 2024); available at: https://scar.org/scar-news/life-sciences/awhn-news/hpai-update-bulletin-dec-2024
[24] See, eg, https://buenosairesherald.com/society/bird-flu-kills-over-1300-baby-elephant-seals-in-chubut
[25] https://www.iucn.org/resources/issues-brief/impacts-tourism-antarctica
[26] See, eg, IAATO's report to the ATCM-46 (May 2024). See also https://geographical.co.uk/science-environment/tourism-numbers-in-antarctica-have-risen-to-over-100000-per-year
[27] See, eg, Yousra Makanse (2024) Contextualising Antarctic tourism diversification: tourism management implications from multinational policy debates, The Polar Journal, 14:1, 270-313, DOI: 10.1080/2154896X.2024.2342113.

human presence meaning that response and clean-up is more difficult and less likely. Even though Antarctica is uninhabited (except for those staying at the scientific bases), pollution is still a threat to biodiversity there. MARPOL permits ships to discharge grey water into Antarctic waters. Scientists and tourists used to dispose of food waste and sewage at sea and on land, and sewage is still disposed of into the ocean from some research bases in accordance with the limited provisions of the Protocol. Chemical pollution has been found to come from this waste, including introduced bacteria and endocrine disruptors that affect many species within the areas of the discharges. Many bases also have historical, 'legacy' pollution in the form of metals, fuels, and plastics that have simply been discarded, especially when bases have been closed.[28] While today such materials must be removed, old ones remain from a time when removal was not mandatory.

Oil spills are an increasing risk as shipping activity increases, from both tourism and shipping. Any spills have significant negative effects, due to the long length of time that the oil persists in the environment, the lack of abilities to respond easily, and the large numbers of sea life that can be affected.

Other pollution can arrive in the region via the sea or the air. For example, pollutants from fossil fuels, chlorofluorocarbons (CFCs), lead, and other highly toxic persistent organic pollutants (POPs) have long been found in Antarctica.[29] Black carbon from shipping in the region is increasingly being seen as a concern, particularly because the dark colour absorbs heat; when it lands on ice and snow it can both raise the surrounding temperature and melt it faster, causing a loss of the snow and ice.[30] Discarded fishing gear and other litter from human activities have caused deaths to birds, seals and other sea life that get entangled in it. Microplastics have now also been found in Antarctic snow,[31] wildlife[32] and sediments,[33] which can carry toxins and affect organisms that ingest it. Darker, airborne microplastics can also have the same warming effect on snow and ice as other airborne pollution such as black carbon.

Possible future pressures include an increasing interest in **biological prospecting** and applications for patents for commercial exploitation of genetic material. A range of Antarctic organisms is being targeted, including the ecologically important Southern Ocean krill.

1.4 What is needed to maintain ecosystem integrity and diversity

There are many measures needed to address the pressures identified above.

In relation to **climate change**, the primary measure needed for protection of Antarctica and the Southern Ocean is the reduction of greenhouse gases (GHGs) in the atmosphere. Unfortunately, the gases already emitted are like a blanket wrapping the earth, and we are continuing to warm up underneath the blanket. Temperatures will continue to rise even if there were no more additional emissions. Goals such as having net zero emissions by 2050 will not save Antarctic and Southern Ocean ecosystems and species. Calamitous adverse effects are already being suffered in Antarctica and the Southern Ocean, with an average temperature rise of 1.5C in 2024, and they

[28] See, eg, https://www.nature.com/articles/d41586-023-02740-0 ;
[29] See, e,g https://intlpollution.commons.gc.cuny.edu/antarctic-pollution-issues/
[30] See, eg, Cordero et al, 'Black carbon footprint of human presence in Antarctica' Nature Commun. 2022; 13: 984; Published online 2022 Feb 22. doi: 10.1038/s41467-022-28560-w ; available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8863810/
[31] See eg https://www.smithsonianmag.com/smart-news/in-a-first-microplastics-are-found-in-fresh-antarctic-snow-180980264/
[32] S Bhattacharjee et al, "Do microplastics accumulate in penguin internal organs? Evidence from Svenner island, Antarctica," 951 *Science of The Total Environment*, 175361 (Nov 2024), ISSN 0048-9697, https://doi.org/10.1016/j.scitotenv.2024.175361.
[33] See, eg, Waller, C. L., et al (2017). Microplastics in the Antarctic marine system: an emerging area of research. *Science of the total environment*, *598*, 220-227; Munari, C. et al. (2017). Microplastics in the sediments of terra nova bay (ross sea, Antarctica). *Marine pollution bulletin*, *122*(1-2), 161-165; Reed, S., Clark, M., Thompson, R., & Hughes, K. A. (2018). Microplastics in marine sediments near Rothera research station, Antarctica. *Marine pollution bulletin*, *133*, 460-463.

will get worse without a reversal of the current and projected temperature rises. GHGs will need to be reduced from current levels, not merely held steady with net zero emissions. Moreover, this should be undertaken rapidly, to avoid further ice losses. Decarbonisation will likely need to be attained by 2040, and CO2 concentrations lowered to 350 ppm (from the current level of approximately 420 ppm).

There is a need to develop adaptive management approaches to address and reduce the effects of climate change on marine living resources. Concrete adaptive actions will need to be taken, such as identifying climate change refugia for species and protecting sites of special interest for ecosystems and species.

Antarctic Treaty and CCAMLR parties are currently grappling with how to include the implications of climate change in their management considerations. These needs have already been identified by CCAMLR;[34] action is thus needed to maintain the focus and encourage action to fill the need. Not all countries see CCAMLR or the ATS as having an important role in climate action.

Conversely, the role of the Southern Ocean needs to be a focus of any attempts to discuss the current science relevant to Antarctica as well as its impact on the rest of the globe. It is absolutely critical to look in detail at the biogeochemical cycles in the Southern Ocean and their impacts on food webs, for example, not only in order to figure out what Antarctic species will need in order to survive in a climate changed future, but what the impact such changes in Antarctica and the Southern Ocean will have on global climate and ocean circulation systems and more distant ecosystems.[35]

Area-based protections:

Area-based protections under the Environmental Protocol are an important way to reduce human-induced pressures on ecosystems and wildlife. There is a need to increase protection through establishing a representative network of protected areas on land and sea.

There are well-established procedures already in place to designate Antarctic Specially Protected Areas (ASPAs) on land. Yet less than 4% of the Continent's ice-free areas is formally protected and the current list of ASPAs lacks a network approach. Further, particular values identified in the Environmental Protocol to the Antarctic Treaty are poorly represented in the current system of ASPAs. More work needs to be done to identify such protected areas, including research to expand the representativeness of the current protected areas, and ones that create species-based area protections.[36]

In Antarctica and the Southern Ocean, one of the most important such area-based protections are marine protected areas (MPAs). The Environmental Protocol to the Antarctic Treaty (through its Annex V) and CCAMLR (through Article IX-2(g)) provide mechanisms to create MPAs on the high seas. To date CCAMLR has established two MPAs including the large-scale Ross Sea Region MPA. But other candidate MPAs in the Antarctic Peninsula, Weddell Sea (Phase 1) and East Antarctica have failed to secure approval.

More MPAs need to be established in order to better protect species and ecosystems from the various pressures identified above, especially to provide a buffer for the future impacts of climate change. It is assumed that this would occur under the ATS and CCAMLR mechanisms, but there are calls for the use of other mechanisms if protection is not forthcoming.[37]

---

[34] See, e,g report from Meeting 42, Oct 2023.

[35] See, eg, IPCC, Special Report on the Ocean and Cryosphere in a Changing Climate (2019); available at: https://www.ipcc.ch/srocc/

[36] LM Phillips, RI Leihy, SL Chown, "Improving species-based area protection in Antarctica", 36:4 *Conservation Biology*, Aug 2022, e13885; https://doi.org/10.1111/cobi.13885 . It is noted that species-based protections can be achieved by area-based protections; the Snow Hill Emperor penguin colony is an example.

[37] Such as, for example, under the Agreement under the United Nations Convention on the Law of the Sea on the

CCAMLR has also adopted conservation measures designed to avoid adverse impacts from bottom fisheries on some benthic Vulnerable Marine Ecosystems (VMEs).[38] Yet there is still much research yet to do to identify VMEs, and not all proposals to adopt conservation measures for proposed VMEs are able to secure consensus.[39]

It is likely that additional area-based tools need to be developed and adopted in order to better provide for the needs of species and ecosystems, including in response to climate change.[40]

Species-based protections:

The Protocol on Environmental Protection to the Antarctic Treaty provides for the designation of Specially Protected Species. The risk of extinction of a species is assessed using the IUCN criteria used for the Red List of Threatened Species.[41] Currently only one seal species is designated as specially protected by the Antarctic Treaty Parties,[42] and discussions on designating other species, including the Emperor penguin, have failed to reach consensus or to otherwise progress. The status of many species of Antarctic microfauna and flora have yet to be assessed for the IUCN Red List of Threatened Species. Urgent work is needed to better assess and update the protection needs of species, especially in the face of climate change.

The IUCN Red List of Ecosystems "measures the relative risks of ecosystem collapse for terrestrial, freshwater and marine ecosystems at subnational, national, regional and global scales".[43] Antarctic and Southern Ocean ecosystems need to be assessed for inclusion on this Red List.

Research:
More extensive and consistent research is needed into monitoring the state of Antarctic and Southern Ocean ecosystems and species, identifying the effects of different pressures, and identifying what protection measures may be appropriate.

Greater funding and collaboration between states and organisations is needed for such research.

Addressing other human-induced pressures:

While there is a range of human-induced pressures, the most critical to address are currently those from fishing and tourism. Management of legal Antarctic **fisheries** through CCAMLR is supposed to be based on an ecosystem-wide approach to fisheries and, while almost universally recognized as one of the most-successful implementation systems of an ecosystem approach, there are many issues and problems with the CCAMLR system in practice. A particular concern relates to the spatial distribution of the growing krill fishery which has reached almost 500,000 tonnes each year in the South Atlantic, not least in the context of potential climate-change related impacts on the species. Fisheries for both Patagonian and Antarctic toothfish (*Dissostichus*

Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (A/CONF.232/2023/4 , 19 June 2023). For more information, see below n 54.

[38] See, eg, Jones, CD. Lockhart, SJ. Detecting Vulnerable Marine Ecosystems in the Southern Ocean using research trawls and underwater imagery, *Marine Policy*, 35:5, 2011, 732-736. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0308597X11000285 See also Gros, C. et al, Identifying vulnerable marine ecosystems: an image-based vulnerability index for the Southern Ocean seafloor, *ICES Journal of Marine Science*, 2023, 80:4, pp 972–986, DOI: 10.1093/icesjms/fsad021

[39] CCAMLR's program of work includes VME identification and management at Medium and Low priorities for 2025. See, eg, Report of the 43rd Meeting of the Scientific Committee for the Conservation of Antarctic Marine Living Resources, 14-18 October 2024 (SC-CAMLR-43), at p341, p489.

[40] It is noted that it is also possible to designate geological and geomorphological area-based protections; it might be possible to use these to protect nature for its own sake as well as for natural landscape values.

[41] *Guidelines for CEP Consideration of Proposals for New and Revised Designations of Antarctic Specially Protected Species under Annex II of the Protocol* (ATCM XXVIII Final Report, para. 82); available at: https://www.ats.aq/devAS/Meetings/Measure/390

[42] *Ommatophoca rossii*, Ross Seal. See Appendix A to Annex II to the Protocol on Environmental Protection to the Antarctic Treaty.

[43] https://www.iucn.org/resources/conservation-tool/iucn-red-list-ecosystems

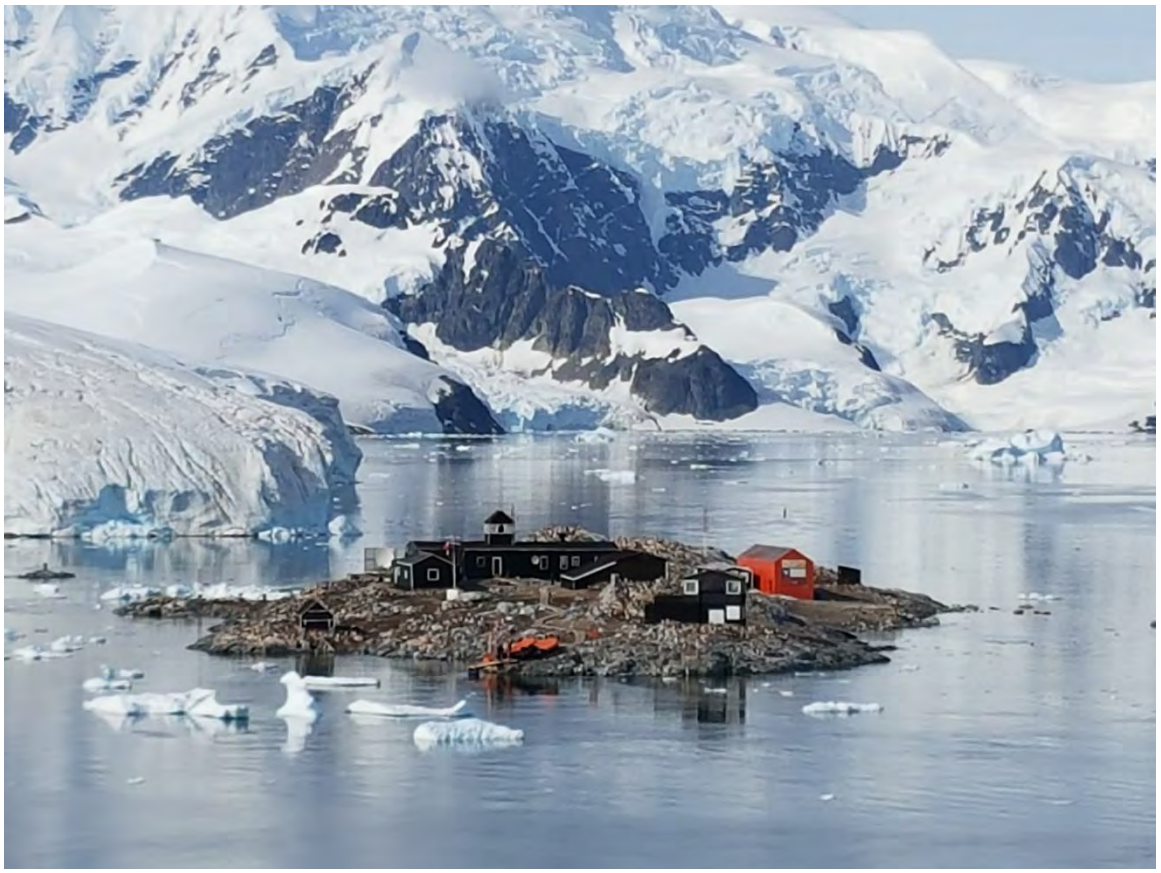
eleginoides and *Dissostichus mawsoni*) are also having large impacts on the populations of these species and downstream consequence on other species from bycatch.[44]

There is a need for fisheries measures to reset the relation between conservation and use within the CCAMLR, through strengthening the requirements for approving fisheries measures, based on the precautionary principle. There is also a need to maintain precaution and increase scientific revisions for the management of all fisheries within CCAMLR. Catch limits will need to be decreased in order to support species and ecosystems, especially in a climate-changed future. Bycatch prevention needs to be improved.

Stricter regulations for shipping and **tourism** activities need to be adopted to better manage, constrain or minimise their ecological impact. It is noted that Antarctic Treaty Parties recently established a Tourism Working Group with a mandate "to develop a comprehensive and consistent framework for the regulation of Antarctic tourism and other non-governmental activities".[45]

Other measures that could usefully be adopted include stronger measures to clean up legacy pollution, and stringent evaluations of any new activities before they can go ahead in such a sensitive and vulnerable environment.

In terms of governance of the area by the different Treaty bodies and their members, decision-making tools need to be fit for rapidly-changing and uncertain futures. This will best be achieved through the use of better spatial and scenario planning tools, and through the adoption of precaution as a decision-making tool in favour of the protection of nature. Overall, conservation efforts and measures need to be urgently improved, to match the pace and scale of change that species and ecosystems face.



[44] See, eg, Moore, B., & Parker, S. (2021). Catches and data available on bycatch species from the toothfish fishery in the Ross Sea region (subarea 88.1 and SSRUs 88.2A–B) through 2020–2021. In CCAMLR document WG-FSA-2021/32. Commission for the Conservation of Antarctic Marine Living Resources.

[45] Decision 5 (2024): Development of a Framework for the Regulation of Tourism and Other Non-Governmental Activities in Antarctica. See *Final Report of the Forty-sixth Antarctic Treaty Consultative Meeting*, Kochi, India, 21-30 May 2024.

2 IUCN: Organisational analysis and existing relevant work

The IUCN is a union of more than 1400 member bodies from over 160 countries, as well as expert commissions and a central secretariat.[46] It is an Inter-Governmental Organisation (IGO) as per the term used by the United Nations, despite technically being composed of government and non-governmental members. These members include states and government agencies at national and subnational levels, large and small national and international non-governmental organisations, Indigenous Peoples' organisations, and scientific and academic institutions.

The IUCN governing Council is made up of members who are democratically elected every four years by IUCN members, based on regional groupings, along with the Chairs of the IUCN Commissions. The IUCN Secretariat is made up of approximately 1,000 employees in more than 50 countries; the Secretariat is managed by the Director-General, who is appointed by the Council. The expert Commissions are voluntary bodies of more than 17,000 individual expert members in total, who become members based on their academic, scientific, technical, legal, or practical expertise. The Commissions are supported in part by the IUCN budget, with workplans approved by the Council. Chairpersons of the Commissions are elected by members every four years.

The different constituencies of IUCN (Members, Commissions, Secretariat and Council) have played an important role in Antarctic and Southern Ocean science, governance and discussion of the issues over the years. Indeed, the IUCN has had a long engagement with the Antarctic Treaty System going back to 1960, when members adopted their first resolution on Antarctic flora and fauna.[47] IUCN is in a prime position to contribute to contemporary challenges that the Antarctic Treaty and CCAMLR parties are facing, and arguably has a special responsibility to do so, given the importance of the issues and IUCN's expertise and niche in this area.

2.1 IUCN Members and Commissions

Of the 58 state Parties to the Antarctic Treaty (as at the end of 2024), 30 are also State Members of IUCN. These State Members include 10 out of the original 12 Antarctic Treaty Parties,[48] and 11 out of the 17 other Consultative Parties.[49] All of these IUCN members conduct research in Antarctica and the Southern Ocean and most have done so for many years. It is also notable that IUCN members who are also Antarctic Treaty parties span a range of geopolitical groupings and are united by a commitment to conservation as well as peace in Antarctica.[50]

There is a long history of IUCN member interest in and involvement with Antarctic matters, both directly and with IUCN delegations, Commissions,[51] and/or the Secretariat. IUCN Members have consistently endorsed resolutions on conservation and sustainable development issues related to Antarctica at General Assemblies and World Conservation Congresses. There were 22 such resolutions and recommendations from 1960 to 2020.[52]

There are hundreds of IUCN Members located within Antarctic Treaty party states: Government Agencies, International NGOs, National NGOs, Affiliates, Indigenous People's Organisations, and Subnational Governments, many of which have an interest in or engage with Antarctic issues.

---

[46] See https://iucn.org/our-union.

[47] GA 7.6, Antarctic fauna and flora - Warsaw 1960: https://portals.iucn.org/library/node/43456. See Appendix 1 of this document for a list of all past resolutions.

[48] Australia, Belgium, France, Japan, New Zealand, Norway, South Africa, the Russian Federation, (formerly the USSR), the UK and the USA.

[49] China, Ecuador, Finland, Germany, India, Italy, the Netherlands, Peru, Republic of Korea, Spain, and Sweden.

[50] The 9 other Antarctic Treaty (non-consultative) parties who are IUCN members are: Canada, Denmark, Guatemala, Iceland, Malaysia, Monaco, Portugal, Switzerland, United Arab Emirates.

[51] See Appendix 4 to this Strategy.

[52] See Appendix 1: IUCN Resolutions and Recommendations on Antarctica and the Southern Ocean.

Many of the IUCN NGO members are active on Antarctic issues. Notable Members of IUCN with significant and active Antarctic programmes include ASOC, WWF and the Pew Charitable Trusts; ASOC is the only environmental NGO observer in the Antarctic Treaty System. Other existing IUCN Members have a long-standing interest in, commitment to, and engagement in Antarctic conservation including WWF, Environment and Conservation Organisations of New Zealand, Royal Forest and Bird Protection Society (New Zealand), Australian Conservation Foundation, Friends of the Earth, and several South American and other groups. Some IUCN National Committees have been advocating for more work on Antarctic conservation since the early 1980s.[53] Some NGO members attend ATS meetings as members of state delegations, even if they do not have ATS observer or expert status of their own. There are also many IUCN member organisations that engaged with Antarctic matters in the past, that could likely be convinced to do so again.

IUCN Commissions include a number of experts on Antarctic matters within specialist groups and task forces, such as the Penguin Specialist Group (Species Survival Commission, SSC), Cetacean Specialist Group (SSC), High Seas and the BBNJ Agreement[54] (High Seas Specialist Group), Antarctic Tourism (through TAPAS - Tourism and Protected Areas Specialist Group) and marine protected areas through the marine theme of the World Commission on Protected Areas (WCPA). A new Working Group on Antarctica and the Southern Ocean is being established within the WCPA.

Other fisheries, oceans and climate change experts relevant to Antarctica and the Southern Ocean are represented within the WCPA, the Commission on Ecosystem Management (CEM), the Climate Crisis Commission (CCC), and the World Commission on Environmental Law (WCEL). The WCEL Mandate explicitly addresses Antarctic Polar governance and the WCEL Ocean Law Specialist Group experts work on area-based protections in law, including MPAs and marine spatial planning, and on fisheries law, the BBNJ Agreement, and climate change law related to the marine environment, including in the polar regions.

Commission experts have attended Antarctic Treaty system meetings as part of IUCN delegations and contributed extensively to the understanding of the issues being discussed and to the furthering of the IUCN Strategy.

2.2 IUCN Secretariat

The IUCN has historically been active on Antarctic and Southern Ocean issues, and has advocated for its conservation since 1980.[55] In 1991, it published A Strategy for Antarctic Conservation.[56] The IUCN Secretariat, currently through the Ocean Team, in collaboration with the experts across the different Commissions (above, 2.1), maintains some activity with respect to Antarctica.[57] IUCN sent delegations to both ATS and CCAMLR meetings in 2023 and 2024, made up of Secretariat staff and/or Commission experts. However, it is noted that regular participation (virtual and/or in-person) to ATCM and CCAMLR meetings has been difficult to accommodate over the last twenty years, due to a lack of resourcing and prioritisation. Notably, IUCN has submitted Information Papers to

[53] See, eg, New Zealand National Committee of IUCN Members, *Position paper on Antarctica* (Wellington, 1981); https://portals.iucn.org/library/node/6657

[54] The Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, above n 37, is officially shortened to the 'BBNJ Agreement'. It was adopted on 19 June 2023 by the Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction convened under the auspices of the United Nations. The BBNJ Agreement becomes the third implementing agreement to the United Nations Convention on the Law of the Sea but is yet to enter into force. See https://www.un.org/bbnjagreement/en

[55] See, eg, IUCN, *World Conservation Strategy: Living Resource Conservation for Sustainable Development* (1980), at pp58-59; https://doi.org/10.2305/IUCN.CH.1980.9.en; available at https://portals.iucn.org/library/node/6424

[56] IUCN, *A Strategy for Antarctic Conservation* (1991), ISBN: 978-2-8317-0009-0; available at https://portals.iucn.org/library/node/6032

[57] The Conserved and Protected Areas Team of the IUCN Centre for Conservation Action has also participated in this Antarctic work.

ATCM and the Scientific Committee meetings of CCAMLR, primarily to inform Parties of IUCN efforts in the Antarctic and Southern Ocean regions.

IUCN has also raised Antarctic issues and used Antarctic examples in other fora (for example, to promote the establishment within an Antarctic context of marine protected areas within the Antarctic Treaty Area and also on the high seas outside of the Southern Ocean). Funding for Antarctica work has been difficult to obtain, which has restricted what the Secretariat can achieve.

2.3 Council

The Council's governance role includes the development of policy and strategy on Antarctica and the Southern Ocean; this may be in response to Congress decisions, or to develop new policy for approval by members. Through its Programme and Policy Committee the Council has guided this policy and strategy over its history. For example, in 1981 the Council called for the preparation of a conservation strategy for Antarctica and the Southern Ocean, in response to the then growing awareness.[58] In 2009 it helped develop and approved the Strategy for IUCN's Programme and Policy on Antarctic Issues.[59] Most recently, in May 2023, the IUCN Council established the Taskforce on Antarctica and the Southern Ocean to revise and update the 2009 Strategy.[60] This draft Strategy document is the work of this Taskforce.

The Chair and members of the Taskforce have been part of delegations to the Antarctic Treaty bodies, and contributed to IUCN work on biodiversity protection in Antarctica and the Southern Ocean outside those bodies, such as with the One Planet Polar Summit (Paris, Nov 2023).[61]

2.4 Relevant existing work of IUCN

The IUCN has extensive expertise, tools and a history of work relevant to addressing the threats faced in Antarctica and the Southern Ocean. Some of these aspects focus specifically on Antarctica and the Southern Ocean; others are not specific but can provide relevant assistance. Most importantly, the key mission of IUCN is to retain and restore ecosystems, and to conserve and recover species. It has a long history in addressing these goals, and in safeguarding important biodiversity areas on land and in the oceans.

The focus in the following description is on the work of the Secretariat and Commissions more than of the members themselves. It is very clear that some members – such as the Antarctic Treaty and CCAMLR consultative parties and ASOC – have extensive experience and have undertaken extensive work on issues relevant to nature conservation in the areas under discussion. However, as this Strategy is focused on what the IUCN as a whole might do, the following description focuses on core IUCN work.

Protected areas

IUCN has decades of experience in the selection, designation and implementation of protected areas. In 1980 the IUCN (in conjunction with UNEP and WWF) identified the whole of Antarctica as an important bioregion to protect, with 'high priority'.[62] The IUCN World Commission on Protected Areas (WCPA) has been producing Best Practice Guidelines on Protected and Conserved Areas since 1998, and is the global authority in guidelines for practitioners and managers of protected

[58] See, eg, the 1980 and 1981 publications above notes 53 & 55, and Resolution GA 15/20, 'Antarctica environment and the Southern Ocean - Christchurch 1981', linked in Appendix 1, below.
[59] At the 72nd Meeting of Council on 2-4 February 2009.
[60] Decision C109/28.
[61] For information on this Summit, see https://oneplanetsummit.fr/en/events-16/one-planet-polar-summit-284
[62] IUCN, *World Conservation Strategy*, above n 54, at p 70.

areas and other forms of area-based conservation.[63] Particularly through the WCPA, IUCN brings extensive global experience to any work towards an effective network of Antarctic protected areas, not least to assist with enhancing climate change resilience of species and ecosystems.

One area-based tool supported by IUCN is the establishment of Key Biodiversity Areas (KBAs).[64] Key Biodiversity Areas are "sites of global importance to the planet's overall health and the persistence of biodiversity".

> "The KBA Programme supports the identification, mapping, monitoring and conservation of KBAs to help safeguard the most critical sites for nature on our planet – from rainforests to reefs, mountains to marshes, deserts to grasslands and to the deepest parts of the oceans."

The current work undertaken by the IUCN KBA partnership does not (yet) include Antarctica and the Southern Ocean. There are independent and separate efforts underway on identifying Antarctic and Southern Ocean KBAs being undertaken by SCAR, IUCN and ASOC.

Wildlife corridors

Wildlife corridors are a spatial protection tool but a corridor is defined by the movements of species, more than being an area with fixed, unchanging boundaries. The IUCN WCPA established the Connectivity Conservation Specialist Group (CCSG) in 2016.[65] In 2020 the CCSG published formal Guidelines for conserving species connectivity through ecological networks and corridors.[66] Especially given their potential to be effective in the face of climate change, wildlife corridors could be an important tool for species conservation in Antarctica and the Southern Ocean. It is significant that IUCN has established the global standard and thus its authority and expertise on this topic.

Marine Protected Areas

IUCN has significant expertise in supporting the establishment and implementation of MPAs and MPA networks and has developed extensive technical guidance relevant to MPAs and their effectiveness.[67]

A tool that the IUCN has supported is the identification of Important Marine Mammals Areas (IMMAs). Thirteen IMMAs have been identified in the Southern Ocean, due to the work led by the IUCN Task Force on Marine Mammal Protected Areas (the joint work of SSC and WCPA). IMMAs result from an independent, scientific, expert process that can help inform where to put protection for marine life. They focus simply on identifying the relevant science without explicitly talking about establishing MPAs or their potential rules and restrictions, thereby avoiding political debate over MPAs.

Another relevant IUCN tool is the identification of Important Shark and Ray Areas (ISRAs).[68] ISRAs are "discrete, three-dimensional portions of habitat, important for one or more shark species, that are delineated and have the potential to be managed for conservation". Similar to the IMMA process, all areas recognized as ISRAs undergo a rigorous peer review process to ensure the best available science is used in their delineation. Eight areas have already been delineated in the Southern Ocean

---

[63] The WCPA Best Practice Guidelines (BPG) are located at this link: https://iucn.org/our-union/commissions/world-commission-protected-areas/our-work/wcpa-publications/iucn-wcpa-good.

[64] See: https://www.keybiodiversityareas.org/working-with-kbas/programme/partnership

[65] See https://conservationcorridor.org/ccsg/

[66] *IUCN Guidelines for Conserving Connectivity through Ecological Networks and Corridors*, 2020. WCPA Best Practice Protected Area Guidelines Series, No 30. Available at: https://portals.iucn.org/library/sites/library/files/documents/PAG-030-En.pdf

[67] The WCPA Best Practice Guidelines (BPG) are located at this link: https://iucn.org/our-union/commissions/world-commission-protected-areas/our-work/wcpa-publications/iucn-wcpa-good. 'Guidelines for Marine Protected Areas' were produced as early as 1999 (BPG No 3); in 2017 Guidelines for the design and management for Large-Scale Marine Protected Areas were added (BPG No 26). The current *Guidelines for applying the IUCN protected area management categories to marine protected areas: second edition* was released in 2019 (BPG No 19). See also BPG No 21.

[68] See https://sharkrayareas.org/

as ISRAs.[69] There are at least another five such areas of interest in this region but they have not been delineated due to insufficient accessible data.[70]

The Southern Ocean has not been assessed against the Convention on Biological Diversity criteria for Ecologically or Biologically Significant Areas (EBSAs).

The FAO Deepwater guidelines set criteria for the protection of vulnerable marine ecosystems (VMEs) including seamounts; a limited number of VMEs have been protected by CCAMLR.

The BBNJ Agreement[71] and its criteria for protected areas (Annex 1) is highly relevant to the high seas part of the CCAMLR area. WCEL experts have been involved in the negotiation and interpretation of these provisions.

Protected Species

Antarctic Treaty System already uses the IUCN Red List of Threatened Species criteria to guide species protection status for species in Antarctica and the Southern Ocean.[72] IUCN has significant expertise to be able to assist the better protection of Antarctica and the Southern Ocean species. IUCN, through its Global Species Program, Species Survival Commission and partner networks, brings global expertise to discussions on designation of specially protected species and to the development and implementation of pragmatic management plans for designated species.

Ecosystems protection

CCAMLR uses an *ecosystem-based management* approach to the regulation of fisheries in the Southern Ocean. Article II(3)(b) of the Convention defines one of the conservation principles as "maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources and the restoration of depleted populations". Further, one of the functions of the Commission is to take into account the impacts of fishing on the wider ecosystems.[73] CCAMLR established an ecosystem monitoring program as early as 1989, and is frequently referred to as a "pioneer" in the adoption of an ecosystem approach.[74]

IUCN is ideally-positioned to assist with the identification of Antarctic and Southern Ocean ecosystems and their conservation status, and to assist with implementation of the ecosystem approach. IUCN has been developing guidance for the adoption and implementation of ecosystem approaches to conservation for more than 20 years.[75] The IUCN Red List of Ecosystems[76] identifies different ecosystems worldwide and their conservation status. While this Red List of Ecosystems Database does not yet contain information on Antarctica or the Southern Ocean, it is proposed that this become a priority to establish.

---

[69] See, eg, https://sharkrayareas.org/download/polar-waters-regional-compendium-of-important-shark-and-ray-areas/. They include the Ross Sea Slope, the Crozet Islands, Eastern Del Cano, Kerguelen Islands Shelf, South Sandwich Islands, Eastern Kerguelen Slope, Heard Island & McDonald Islands, and the Elan Bank.

[70] These include the Prince Edward Islands (South Africa), the Amundsen Sea Slope (Antarctica), Anvers Island Shelf Break (Antarctica), South Shetland (Antarctica), and South Georgia and Shag Rocks (South Georgia and the Southern Sandwich Islands).

[71] See above note 54.

[72] See above note 41.

[73] See, eg, Art IX(2)(i).

[74] See, eg, A Fabra, V Gascon, "International Ocean Governance in the 21st Century: Perspectives from the IUCN Commission on Environmental Law's Specialist Group on Oceans, Coasts and Coral Reefs*", International Journal of Marine and Coastal Law*, 23:3 (2008), 567-598.

[75] See IUCN's Ecosystem Management Series of publications at iucn.org; incl. G Shepherd, *The ecosystem approach: five steps to implementation* (IUCN Commission on Ecosystem Management, 2004), available at https://portals.iucn.org/library/node/8608.

[76] See: www.iucnrle.org

Fisheries

IUCN's engagement with Antarctica has served to support and strengthen the ecosystem-based management approach of CCAMLR which includes climate change considerations and the management of bycatch.

IUCN is a partner in the Nature Crime Alliance (as are ASOC and several other IUCN Members); as part of this partnership IUCN can help bring attention to illegal fishing in the Southern Ocean. IUCN's presence in Antarctic fora can help maintain the strategies necessary to curtail IUU fishing in the Southern Ocean, while also drawing lessons from CCAMLR's management and control schemes for use in other fora.

Invasive Species

The Protocol on Environmental Protection to the Antarctic Treaty includes a prohibition on the introduction of any species of animal or plant not native to the Antarctic Treaty Area without a permit. IUCN was instrumental in getting this issue of invasive species on the agenda of the ATCM. The issue of non-native species is now a priority for the ATS Committee for Environmental Protection, which continues to review risks and prevention and response measures.

IUCN can play a key role in facilitating and providing knowledge and know-how to the discussions on this issue. The IUCN Species Survival Commission's Invasive Species Specialist Group plays a leadership role through its Invasive Species Initiative and the Global Invasive Species Programme.[77]

Climate Change

In 2022 the IUCN established an expert Climate Crisis Commission, to ensure a focus on nature-positive climate solutions (among other aspects).[78] With its role as a voice for nature, IUCN is in the best position to ensure that a focus on species and ecosystems is maintained in international discussions. The impacts of climate change in Antarctica on humans globally is typically given the greatest attention, such as in discussions of Antarctic ice melt raising sea levels globally. IUCN's mandate and authority can and should ensure that species protection remains a focus. IUCN's global network approach allows information and expertise exchanges between Antarctica and the rest of the world. IUCN is in a position to make a significant contribution to ensure climate change (including ocean acidification) is taken as an urgent issue into the ATCM and the CCAMLR discussions while linking these discussions to the broader climate change debates in the UNFCCC or the CBD.

Tourism

IUCN works to achieve equitable and effective governance of natural resources at all levels to benefit people and nature. IUCN's increasing activities and past experience with the tourism industry can be applied to inform and facilitate the discussions on tourism in Antarctica and help to build a consensus on the issue. The WCPA Tourism and Protected Areas Specialist Group has already developed guidelines for tourism within protected areas, which can apply to Antarctica.[79] Experts from this Specialist Group are already taking part in the discussions of the Antarctic Treaty Tourism Working Group.

[77] See https://iucn.org/our-union/commissions/group/iucn-ssc-invasive-species-specialist-group
[78] See https://iucn.org/our-union/commissions/climate-crisis-commission
[79] See, eg, *Tourism and visitor management in protected areas: guidelines for sustainability* (2018), available at https://iucn.org/our-union/commissions/world-commission-protected-areas/our-work/specialist-groups-and-task-forces-4

Summary

In summary, issues identified in sections 1.3 and 1.4 above that the IUCN has demonstrated experience and expertise in that it could utilise for the benefit of Antarctic and Southern Ocean nature conservation include:

1. area-based conservation measures, including KBAs, MPAs and OECMs, IMMAs, ISRAs, EBSAs, and VMEs;
2. species protections, including defining and assessing species threat status categories and appropriate measures to address threats to different species;
3. invasive species management;
4. ecosystem protection tools and their application, including ecosystem-based management tools;
5. fisheries management tools;
6. tourism management tools;
7. legal measures relevant to oceans and Antarctic and Southern Ocean governance tools, including the application of precautionary approaches and of other relevant international laws;
8. being the voice for nature in climate change response discussions.

3 Organisational Strategy

The Strategy for IUCN's policy and programme on Antarctica and the Southern Ocean must address the threats and pressures on the region, summarised above in section 1.3, while also identifying the particular role(s) that IUCN can appropriately play and which ones it can lead. It is not a strategy to address all threats at once, nor is it wise to try and do everything without prioritisation. This Strategy will thus outline a method for prioritising work that best aligns with the need, the opportunity, and IUCN's niche and ability to add value to any campaign and to achieve its goals. This section addresses how the IUCN can build on its existing work (identified above in 2.4) and strengths to address future priorities and thereby contribute to - and justify - work to address the identified threats to nature conservation in Antarctica and the Southern Ocean.

3.1 IUCN's Niche and Strengths

IUCN starts with the assumption that nature conservation is important both in its own right and because it underpins human well-being now and in the future. To achieve its mission, IUCN as a Union engages with its members and with constituencies beyond the nature conservation community, including those engaged in development, politics and the private sector. Antarctica is a special case in that a large area has been set aside by Treaty as a nature reserve dedicated to peace and science. In contrast, the living resources of the Southern Ocean that surrounds Antarctica can legally be exploited via fishing activities.

IUCN's strengths include the following.

1. IUCN provides credible, trusted knowledge
2. IUCN convenes and builds partnerships for action
3. IUCN has a global-to-local and local-to-global reach
4. IUCN influences practices and set standards
5. IUCN has the status of an Invited Expert within the ATS (as discussed above,1.2), and is one of only three conservation organisations to hold this status. IUCN is seen to bring experience and expertise in conservation management to the ATS.[80]
6. IUCN is made up of its members that includes Antarctic Treaty and CCAMLR parties, as well as many other organisations within those countries. IUCN has the unique ability to convene these groups and leverage influence and impact for global priorities such as on Antarctica and the Southern Ocean.

These features make IUCN distinct from other inter-governmental or non-governmental organisations, groups and bodies in the conservation and sustainability arena. They enable the Union to demonstrate leadership and to ensure it has strategic influence at many levels.[81]

Utilising these strengths, IUCN's actions in Antarctica can support a more effective response to emerging conservation and natural resource management issues by:

1. being a respected and influential technical and scientific voice for nature in the Antarctic and Southern Ocean;

[80] There is another category for Observers; these are Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Scientific Committee on Antarctic Research (SCAR) and the Council of Managers of National Antarctic Programs (COMNAP).
[81] See: https://portals.iucn.org/library/sites/library/files/documents/2023-018-En.pdf

2. utilising existing expertise such as on species and area-based protections while also improving the ability to produce, synthesise and support the use of Antarctica-relevant cutting-edge knowledge, know-how and tools that could assist the management and conservation of Antarctic and Southern Ocean ecosystems and species; engaging and/or coordinating the substantive research on Antarctic conservation issues of concern, noting the extensive relevant expertise among its members across the Union;

3. working as a Union, utilising the strengths of the Secretariat staff, Commission experts and Members together to achieve nature conservation in Antarctica and the Southern Ocean;

4. increasing the capacity of Members, Commission members, partners and the Secretariat to network and connect their actions at the local level with policy advocacy in support of conserving the Antarctic environment and upholding Antarctica as a Nature Reserve devoted to peace and science;

5. actively participating in the CCAMLR and Antarctic Treaty bodies' meetings in order to assist the parties, and advocate for conservation action based on the precautionary principle, utilising IUCN's above strengths;

6. convening inter-sessional meetings of relevant Treaty parties and other organisations in order to focus on conservation issues that IUCN has the expertise to assist with and advise on;

7. connecting nature conservation issues and achievements to wider societal objectives such as peace, science and cooperation;

8. extending the Union's reach to new partners and promoting innovative solutions to conservation and natural resource management challenges that are unique to Antarctica and the Southern Ocean.

It is noted that some IUCN members and commission experts have maintained a greater engagement and a wider and deeper focus on Antarctic and Southern Ocean nature conservation than the IUCN Secretariat or Council have over the years. Such members include many of the Antarctic Treaty and CCAMLR parties – particularly the consultative party members - as well as the NGO members ASOC, WWF and Pew Charitable Trust. Some commission experts specialise in Antarctic and Southern Ocean nature conservation; they also have a long history of attending official Treaty meetings. The strengths of these members need to be recognised and utilised in any IUCN programmatic actions; this is envisaged as being entailed as part of the 8 actions identified above, and development of the Action Plan identified below.

***Challenges*:**

One challenge is that Antarctica and the Southern Ocean are not part of any region within IUCN. They are thus not a focus of regional offices, nor of any Secretariat division or centre, and have not been a separate part of the Secretariat's work programme in at least the past ten years. The closest is that Southern Ocean issues come within the purview of the Secretariat's Ocean Team. As a result, ASO issues have been addressed only where they overlap with other work priorities (such as ocean conservation, protected areas, or priority species protections). The challenge of prioritisation and focus on Antarctic and Southern Ocean issues is something that needs to be remedied if these issues are to be addressed in the future. The Taskforce *suggests* that development and implementation of this overarching Strategy will be the best current way to address this.

The other significant challenge is funding. IUCN relies on donations; income is currently not self-generated.[82] A lot of effort goes into obtaining funds for IUCN work and there is never enough. For example, the Red List on Threatened Species is a key IUCN knowledge product and element of the IUCN public image and identity, yet not even the Red List has enough funds for its work and it relies

[82] There are some income-generation efforts, such as the trial of the IUCN Academy training programmes.

largely on volunteer experts for assessments.

The lack of funding is both a cause and effect of the first challenge, the lack of focus and prioritisation. Approximately 85% of IUCN funding is via specific projects, and expertise gets hired specifically for these projects. If these projects are not on ASO then the Secretariat does not gain the relevant expertise on ASO issues. This in turn makes it more difficult to bid for relevant funding, whether core or project-based. It is noted that there is significant expertise on ASO within the Commissions and IUCN's members, as discussed above (in Section 2).

The Taskforce *recommends* that IUCN needs to identify ASO as a separate and focused part of the Secretariat's work programme. For this it will need to employ relevant expertise and devote more funding to this area, both as core funding and fundraising attention. In the short term, it should liaise with members and Commissions who have this expertise and should restart engagement in the ATS, based on its niche and strengths, as discussed above. This should be started with an appropriate – and likely relatively modest - amount of core funding necessary to achieve this. In the longer term, fundraising should be directed at growing a larger, specific program. It is this overarching vision that guides the following suggested priorities and goals.

3.2 Future IUCN strategic vision and work priorities

The IUCN is in the process of preparing and adopting a 20-year vision for its future work as the voice for nature. This 20-year vision is intended to establish an overarching framework of policy goals to guide the development of the work programme; then they will both in turn guide the development of more focused strategies for each year's and each quadrennium's work.

The IUCN work programme is adopted every four years by members at the World Conservation Congress. Each work programme identifies the priorities over the next four-year term. The next four-year work program is expected to be adopted at the World Conservation Congress to be held in October 2025, to run from the beginning of 2026 to the end of 2029. The work of the Commissions also runs on a four-year timescale, beginning with the election of Commission Chairs and approval of their mandate at each Congress.

Budgets are set annually, and priorities for each year's work and its associated spending is set toward the end of the previous year. The budget is prepared by the Secretariat and approved by Council. However, the Council Committees – particularly the Programme and Policy Committee and the Finance and Audit Committee – play a role in monitoring the current year's activities and spending, and they assist with the development of plans for the next year's ones.

It is sensible to approach the development of a policy and work program for Antarctica and the Southern Ocean with the same kind of structure:

- at the top, guiding level are the policies and goals that might be expected to run for 10 or 20 years, as part of the overarching 20-year vision;
- at the next level are the priorities for the work to be undertaken over the next four years, as part of the quadrennial work programme;
- at the end of each year, priorities are decided for the focus of next year's work and its budget.

3.2.1 Proposed longer-term vision and goals

A draft IUCN 20-year Strategic Vision has been prepared and is in the process of being considered for adoption in October 2025, at the World Conservation Congress.[83] It notes the urgency of the need for transformational change in order to respond to the interlinked global crises of biodiversity

[83] *Unite for Nature on the path to 2045: A 20-year Strategic Vision for the Union*, Draft for May Council meeting (23 April 2025); created pursuant to Congress Decision 147 (Marseilles, 2021).

loss and climate change. IUCN needs to utilise its core strengths, such as its science and knowledge power, its wide reach, and its trusted voice for nature. Yet it also needs to innovate and transform in order to be able to undertake the work needed at the scale and in the timeframe required.

Core areas of priority focus are still species and ecosystem conservation and restoration, on land and within oceans. Antarctica and the Southern Ocean are key to achieving goals for all of these priorities. For example, it is not possible to properly address ocean health or the ocean-climate nexus without addressing the Southern Ocean. As with the 4-year work programme discussed below, a key part of the vision is the 'One Union' approach, uniting for nature all the different components of the IUCN: Members, Commissions, and the Secretariat.

The following proposed vision statement and goals build on the IUCN past and existing work and strengths, as well as the future conservation needs for Antarctica and the Southern Ocean.

The Taskforce's proposed vision statement for IUCN's work on Antarctica and the Southern Ocean is:

IUCN will work to protect biodiversity in Antarctica and the Southern Ocean, using its networks, expertise and role as an independent expert observer to the Antarctic treaties, to advance science-based diplomacy, precautionary decision-making and international cooperation over the nature reserve for peace and science.

10 important goals particular to the IUCN vision for Antarctica and the Southern Ocean are:

1- **Antarctic exceptionalism**: Emphasise the special nature of Antarctica and the Southern Ocean in a way that both requires and inspires humankind to protect and care for it:
   a. recognise that the Antarctic ecosystems are exceptionally unique with significance to humankind;
   b. recognise that Antarctica and the Southern Ocean are awe-inspiring;
   c. recognise that Antarctica is the common heritage of humankind and a nature reserve devoted to peace and science;
   d. recognise that the exceptionally unique Antarctic ecosystems require significant limits to be placed on human activity there;
   e. recognise that exploitation of nature in Antarctica and the Southern Ocean may not be appropriate scientifically or ethically due to its exceptionalism, especially where exploitation is for only short-term economic benefit.

2- **Recapture the Antarctic spirit:** Improve international cooperation within the Antarctic Treaty system:
   a. the current situation – 'business as usual' - cannot continue or else plants, animals, and fungi will die, and whole species of them will disappear; ecosystems will collapse while we are tiptoeing around the edge, particularly around the edge of geopolitics. We need to change the debate, and influence the politics and decision-making.
   b. help reduce the divide between East and West in the politics over Antarctica and the Southern Ocean, and help parties find common goals and work together on them; for example, help reset the scene to enable parties to cross the divide;
   c. promote the concept that consensus requires active negotiation between parties, rather than seeing consensus as indicating a state of affairs that enables single

states to veto measures that other states agree to, for example;

d. emphasise the successful history of peaceful use, scientific exploration and international cooperation, whereby political differences are put aside.

3- Guardianship responsibilities:

a. promote the guardianship and stewardship responsibilities of humans rather than any rights over Antarctica;
b. advocate for the interests of other species and ecosystems and their inherent right to exist; advocate for more limits on human activities that don't uphold the interests of all humankind;
c. advocate for alternative sources to meet human needs where human activities and/or exploitation in Antarctica threaten ecological sustainability;
d. promote the guardianship responsibilities extending to the rest of the world, given the important role that Antarctica and the Southern Ocean play in the world's climate and ocean systems.

4- Conservation mechanisms:

a. explore and support new innovative approaches for the conservation of Antarctica and the Southern Ocean species and ecosystems, within and outside the Antarctic Treaty System;
b. promote the use of the wide range of existing area-based protections, on land, ice, and in the Southern Ocean, promote new sites to strengthen the protected areas network, while continuing to review the effectiveness of spatial protection measures and to advocate for new area-based conservation tools;[84]
c. promote the adoption of species-based protections and associated action plans, including providing evidence in support;
d. promote protection of habitat for breeding and feeding, even where species might move between different areas; note that whales and seabirds in particular can travel long distances and need protection over their whole range;
e. promote application of a precautionary approach for all exploited species, in particular krill, and promote continued investment in research, especially among fishing States, to inform spatially appropriate catch limits and measures to avoid impacts on dependent predator species (including penguins and marine mammals) and to avoid impacts on the wider ecosystem.
f. promote the protection of geological or geomorphological heritage sites;
g. recognise the urgency of improving Antarctic and the Southern Ocean conservation and protective measures.

5- Climate change:

a. Recognise that the changing state and condition of Antarctic and Southern Ocean ecosystems has profound implications for global climate and oceanic circulation systems;
b. Promote the integration of climate change (including ocean acidification) information in every decision about Antarctica and the Southern Ocean including in non-ASO fora;
c. promote the connection between national, regional and international climate discussions and implications of any decisions for Antarctica and the Southern Ocean;
d. promote the connection between the effects of climate change in Antarctica and the Southern Ocean with effects felt elsewhere around the globe, including in non-ASO fora;
e. promote the use of future climate predictions to assess risks to species and ecosystems in Antarctica and the Southern Ocean;

[84] See discussion in section 2.4, above.

f. promote the adoption of precautionary measures to enable species and ecosystems to be more resilient to the climate impacts that we cannot control;
g. develop a policy on geo-engineering in Antarctica and the Southern Ocean (as well as globally), that factors in the effects on ecosystems and species.

6- Tourism:

a. advocate for strong, comprehensive, effective, and enforceable regulation of tourism in Antarctica based on the principle that visiting Antarctica is a privilege not a right, with clear land-based limits on both activities and numbers of tourists, and adoption of precautionary measures that protect biodiversity in a changing climate;
b. advocate for a tourism governance framework containing an effective system of compliance, monitoring and enforcement and which accounts for regional differences in environmental sensitivities and tourism pressures.

7- Additional issues:

Particular substantive ASO issues will arise as priorities for IUCN at different times. The IUCN will revise its priorities for work on Antarctica and the Southern Ocean regularly, so as to continue to relevant and effective and better accommodate emerging or increasing risks. Priority issues will be reviewed at least for the quadrennial work plans, if not also reviewed each year. At present, particular additional issues include:

a. Advocate for ongoing review and strengthening of environmental impact assessment procedures and their oversight, including of cumulative effects;
b. promote consistent implementation of biosecurity measures among all Antarctic operators, regular risk assessments of pathways and vectors for the introduction of non-native species, and regular monitoring for non-native species establishments;
c. advocate for marine and terrestrial spatial planning;
d. advocate for stronger compliance, monitoring and enforcement throughout the Antarctic Treaty System;
e. advocate for stronger pollution controls, including in relation to ballast water, both within Antarctic and Southern Ocean fora and in other fora such as the International Maritime Organization;
f. advocate for stronger restrictions on economic activities in Antarctica and the Southern Ocean.

8- Methods of working – 'science diplomacy':

a. IUCN will work with its members and with the Antarctic Treaty System, including with Treaty Parties and relevant bodies such as SCAR, to promote a clear understanding of the relevant scientific and technical aspects on matters where IUCN has expertise, and on implications of this science for Antarctic and Southern Ocean policy and action;
b. IUCN will submit papers to the Antarctic Treaty Consultative Meetings and meetings of the Commission for the Conservation of Antarctic Marine Living resources (CCAMLR) utilising their expertise on matters consistent with this Strategy, policy goals and the current work programme;
c. IUCN will prepare position papers ahead of these meetings, send delegations to these meetings, and be involved in the discussions in order to be of assistance to the parties to these meetings;
d. IUCN will convene intersessional meetings between Treaty parties and other relevant organisations on topics where it can utilise its niche and strengths to achieve the policy and programme goals;
e. IUCN will work with and assist its members to achieve the policy and programme

goals, both in the context of Antarctic Treaty and CCAMLR meetings, as well as in other relevant fora.

9- Other methods of working:

a. The different elements of the Union will work together, in line with this Strategy, with the Secretariat providing coordination support to Members and the Commissions, in order to support each other's work and bring the most effective information and skills to the parties.
b. There needs to be a body within the Union established to coordinate this work;
c. There should at least initially be an oversight body made up of ASO experts;
d. The creation of inter-Commission working and specialist groups is encouraged, in order to address the various threats to Antarctica and the Southern Ocean in a more coordinated manner.

10- Funding:

a. The Antarctic Treaty System bodies make decisions for the regulation, management and protection of Antarctica and the Southern Ocean. IUCN's engagement with these Treaty bodies should be considered core business, and thus part of core funding; this includes relevant advocacy and attending meetings, particularly the Antarctic Treaty Consultative Meetings and meetings of CCAMLR.
b. Additional activities will need funds raised, such as for convening and wider intersessional advocacy. The details of this strategy are to be developed as part of the internal Action Plan.
c. Financial support should be provided to any oversight body.

3.2.2 4-year work programme, 2026-2029

The elements of the proposed work programme that are relevant to Antarctica and the Southern Ocean are identified below; for more detail on the work identified please see the Draft Programme document.[85]

IUCN sphere of action, influence and interest:[86]

- Shaping and influencing evidence-based policies, laws and governance at an international level in Antarctica.
- Generating, managing and disseminating state of the art knowledge and tools to inform and guide conservation efforts and addressing the drivers of biodiversity decline and loss.
- Strategic communications and awareness building – increasing public understanding and engagement in Antarctic and Southern Ocean.

IUCN catalytic roles:[87]

- Convening and networking – bringing together a wide range of Antarctic actors of dialogue, discussion, and debate to identify, agree and address the necessary long-term transformational changes.
- Knowledge science and data: Guiding conservation in Antarctic and Southern Ocean with robust sciences, data, and multi-disciplinary evidence.

Planned impacts:[88]

- Impact 1: Biodiversity (ecosystem, species and genetic diversity) has been

[85] IUCN, *Nature 2030: One nature, One future - Draft IUCN Programme 2026-2029* (24 April 2025). This is yet to be adopted by members, but is expected to be adopted at the World Conservation Congress, October 2025.
[86] *Nature 2030*, at p 18.
[87] *Nature 2030*, at p 19.
[88] *Nature 2030*, at pp 21-22.

effectively conserved, protected and restored in Antarctic and Southern Ocean. Protection of biodiversity in Antarctic will implement the Kunming-Montreal Biodiversity Framework in 20% of the Planet.

- Impact 2: Effective conservation of biodiversity and ecosystem services in Antarctica and Southern Ocean has contributed significantly to addressing the biodiversity and climate nexus, including through nature-based solutions. Conservation in Antarctica and the Southern Ocean is a key element to averting risks on nature of climate responses.

- Impact 3: Equitable, legitimate, legal and sustainable use of nature and natural resources have contributed to both nature conservation and a just, equitable and sustainable society. Antarctica and the Southern Ocean is an important area to rebuild or maintain natural capital.

Conservation of nature at scale:[89]

The effective protection, conservation and restoration of terrestrial and marine key biodiversity areas, other areas important for biodiversity, ecosystems and species has been achieved in Antarctic and Southern Ocean. Legal and policy frameworks for protection, regulation, mitigation and restoration of areas important for biodiversity are urgently required. Species and ecosystems need a representative system of MPAs. Stronger, more effective, and equitable governance at multiple levels is needed to address the threats, protect biodiversity, and safeguard the biogeochemical processes that regulate the climate at a global scale. There is a need for marine spatial planning, for fisheries to be sustainable, and to address the systematic threats and stressors on species and ecosystems.

Global transformations[90] and **Composite outputs**:[91]
The IUCN will work toward global transformations to assist Antarctic and Southern Ocean conservation. IUCN contributions will include:

- Recognising, respecting and promoting the rights, agency and stewardship of environmental defenders
- Promoting gender equality in conservation
- Fostering culture and youth engagement
- Assessing the status of biodiversity
- Enhancing effective and equitable protected and conserved areas
- Conserving the outstanding universal value of natural world Heritage
- Protection and recovery of threatened species
- Conserving and restoring terrestrial ecosystems
- Conserving the ocean, including beyond national jurisdiction
- Preventing and reducing the spread and impact of invasive alien species
- Preventing and reducing nature crime
- Advancing nature conservation foresight
- Promoting One Health: towards improved human, wildlife and ecosystem health
- Re-aligning economic and financial systems and decisions with nature
- Fostering sustainable food systems
- Integrating nature into scaled-up global climate policy and action
- Scaling up Nature-based Solutions
- Establishing biodiversity metrics for a nature-positive transition

The earlier discussion in this Strategy of the issues facing Antarctic and Southern Ocean

[89] *Nature 2030*, at pp 23-24.
[90] *Nature 2030*, at pp 26-32.
[91] *Nature 2030*, at pp 32-50.

conservation highlighted the myriad of actions and approaches needed. All of the above contributions will be necessary to address the direct and indirect impacts on Antarctic and Southern Ocean biodiversity. IUCN can be the voice for nature in international discussions of policy and action, bringing science to diplomacy, on topics from One Health to climate change, from financial systems to morals and philosophy.

Method: How will the Union deliver this work[92]

The Union will use its strengths working as a Union according to the principles of the One Programme Charter. The Secretariat will cooperate with Members, the Commissions, Knowledge Product partners, and National and Regional committees, especially in the provision of science and other knowledge for diplomacy. It will need to establish new partnerships and develop new sources of funding for this work. As per the IUCN's theory of change,[93] the IUCN at all levels (Members, Commissions, Secretariat) aims to be the trusted partner for governments, the private sector and others to fulfil their global and national commitments to nature. It fosters a culture of environmental stewardship and inspires all actors to adopt sustainable practices that benefit both people and the planet.

IUCN Antarctic and Southern Ocean work over the next 5 years:

IUCN's work over the next five years aims to integrate three aspects: the issues that need to be addressed for biodiversity conservation in Antarctica and the Southern Ocean, IUCN's niche and strengths, and IUCN's work Programme for 2026-29.

Key biodiversity issues in the Antarctic region where IUCN could best provide guidance, in line both with IUCN demonstrated experience and expertise (identified in section 2.4 above) and with the proposed 4-year Programme outlined above, are:

1. strengthening and expanding protected areas, particularly marine protected areas but also land-based protected areas for species and ecosystems conservation;
2. inputs to the ATCM Tourism Working Group that is developing a tourism management framework;
3. strengthening the implementation of the specially protected species provisions of Annex II to the Protocol, such as through the submission of relevant species status assessments and management response proposals;
4. strengthening and updating the coverage of the Red List to more species and ecosystems in Antarctica and the Southern Ocean, including marine and terrestrial fauna and flora that have not yet been assessed against the Red List criteria;[94]
5. advising on processes and procedures to support impactful state of the environment reporting;
6. climate-smart spatial planning;
7. invasive species management, such as invasive species monitoring, reporting protocols and risk assessments (for habitats at risk, for species posing the greatest risk of establishment, and routes and vectors of introduction, especially in the marine environment);
8. legal aspects relevant to the above matters, including the application of precautionary approaches and of other relevant international laws.

IUCN will build on its previous and existing work, including by:

- coordinating expert research on the key biodiversity needs, including regional planning and strategies;

[92] *Nature 2030*, at pp 50-52.
[93] *Nature 2030*, Annex 1, at pp 69-71.
[94] Note that this was discussed and addressed at the CCAMLR meeting in October 2024, with a commitment from IUCN to revise some fish assessments, and from the CCAMLR secretariat to try to work more closely with species experts who conduct such assessments and who need information from CCAMLR that is not publicly available.

- providing advice and expertise from the various IUCN entities;
- actively engaging in ATCM and CCAMLR annual and intersessional meetings;
- providing expertise at the science–policy interface for decision-makers, using a range of fora and methods;
- convening stakeholder events (including workshops and seminars) for policy development, diplomacy and international cooperation; and
- collaborating with IUCN partners and members, including Treaty parties and the Antarctic and Southern Ocean Coalition in particular, in the development of a long-term regional strategy to protect polar biodiversity.

3.2.3 2025 priorities

For 2025, Council has agreed to the following work on Antarctica and the Southern Ocean:[95]

> "in 2025 IUCN, as part of its Antarctic work, will submit papers to both the Antarctic Treaty consultative meeting and Commission for the Conservation of Antarctic Marine Living resources (CCAMLR) on several key topics including:
>
> 1. Bringing stronger tourism management to the continent (ATCM)
> 2. supporting the establishment of sub-Antarctica MPAs and
> 3. highlighting species status information in the context of fishing and climate change.
>
> We will also ensure that protecting Southern Ocean biodiversity is part of the agenda at UNOC3.

In order to undertake this work:

- the IUCN Secretariat will provide support for the meeting papers, any policy position papers, and delegations to the Antarctic Treaty and CCAMLR meetings;
- delegations will be composed of experts in the topics under discussion and/or the subject of any papers submitted;
- the Secretariat will coordinate and provide support for participation at UNOC3.

The Taskforce plans to host a Forum event at the IUCN World Conservation Congress in Abu Dhabi (October 2025) on this Strategy and Antarctica and the Southern Ocean biodiversity conservation issues.

Additional work in 2025 will need to include fundraising for future IUCN work in line with this Strategy.

The Taskforce will continue to meet to finalise this Strategy and provide guidance to the Secretariat in its implementation.

3.3. Strategies and action plan:

Different elements will contribute to a set of strategies developed in order to implement the 10 identified goals above (in 3.2.1) and to achieve the priorities over 2025, the next year quadrennium, and beyond. This Strategy document does not set out all the necessary actions, which need to be determined annually, and will depend partly in staffing and budget. An action plan will need to be developed addressing at least staffing and roles, delegations, funding and organisational structure.

3.3.1 Coordination

To better enable the implementation of this Strategy, dedicated staff should be appointed, from a dedicated budget, to coordinate and undertake the work in this Strategy. They would ideally be part

[95] It is noted that the IUCN Ocean Team has a separate project on the BBNJ Agreement, and may be able to undertake some work on the synergies between that High Seas Treaty and the Antarctic Treaty and CCAMLR regimes, but this is not part of the 2025 Antarctic work agreed to by Council.

of the Secretariat so as to be able to take advantage of the strengths that the IUCN brings to this work. Finalising these details is part of the development of the Action Plan.

In terms of coordinating the implementation of this Strategy on Antarctica and the Southern Ocean, it would be helpful and sensible to have a person or group of persons who can:

- work across the whole Union, and coordinate an Antarctic IUCN network of IUCN Members (including states), Commission members, and Secretariat staff;
- monitor the issues that will be arising at international meetings and identify which ones IUCN could be addressing;
- monitor and/or receive advice on Antarctic issues that arise outside of international meetings that need to be inserted into the meetings;
- coordinate relevant experts in addressing issues, such as via preparation of meeting papers, position statements before meetings including responses to meeting papers from other Parties, and potential interventions at meetings;
- coordinate delegations for attending regular and intersessional meetings of Treaty bodies;
- act as the official IUCN contact person for each Treaty's administrative body;
- liaise with IUCN staff to ensure internal coordination on Antarctic and Southern Ocean issues;
- coordinate – or at least assist the coordination of - IUCN fundraising efforts for Antarctic and Southern Ocean work.

3.3.2 Delegations to meetings

Goal 8 above (in 3.2.1) outlines the aims for IUCN to send an expert delegation to each Antarctic and CCAMLR treaty body meeting each year and prepare papers for such meetings, as well as intersessionally. As suggested in relation to the coordination role, it will require liaison with IUCN Members, Treaty Parties and/or relevant Observers and Invited Experts. Further details about coordination, delegations, their activities, and meeting papers need to be developed as part of the proposed Action Plan.

It should be considered whether other similar meetings warrant IUCN attendance and participation, such as the meetings of the Parties to the Agreement on Conservation of Albatrosses and Petrels. IUCN should also prepare briefing papers on Antarctic and Southern Ocean issues for other relevant international fora, and to assist IUCN delegations to these other meetings.[96]

3.3.3 New institutional structures/organisation

Because Antarctica and most of the Southern Ocean are outside of the IUCN regional structure, one issue is whether any new institutional structures should be established in order to progress conservation work in Antarctic and Southern Ocean.

The Taskforce considers that it is *not* appropriate to add Antarctica to an existing IUCN region. One of the aspects of its exceptionalism is that Antarctica is beyond national jurisdiction, as is most of the Southern Ocean (with the exception of some states' EEZs). Further, members who are interested and involved in Antarctic and Southern Ocean matters do not reside only in one region; IUCN's engagement on Antarctic and Southern Ocean matters has been of wide interest to state and NGO members.

[96] For example, speaking notes and PowerPoint slides about the work of the Taskforce and about Antarctic and Southern Ocean conservation issues have been provided by the Chair to other Taskforce members to use, such as at the Convention on Biological Diversity COP-16 in Cali, Nov 2024.

It is proposed that for 2025 and for the next 4-year work programme, the current Taskforce should be continued, including to work on the Action Plan and policy. This will provide helpful continuity as the Taskforce members work on the issues and attend Treaty meetings. The current Taskforce is not a large body but it already helpfully brings together key Secretariat staff, Councillors, Commission experts, and member representatives. It helps get around the fact that the Antarctic and Southern Ocean does not fit well into the IUCN regional structure, and that in-depth expertise on Antarctic and Southern Ocean issues and the Antarctic Treaty System does not yet lie within the Secretariat.

The challenge with any coordination or substantive role resting with the Taskforce is that it is a voluntary body. Progress on the Strategy will be faster and stronger with dedicated funding and thus fundraising efforts. It is noted that the Antarctic Advisory Committee that was established pursuant to the 2009 Policy was hampered by a lack of funding for its work. This historical body is discussed in Appendix 2. A detailed budget and fundraising strategy needs to be part of the Action Plan.

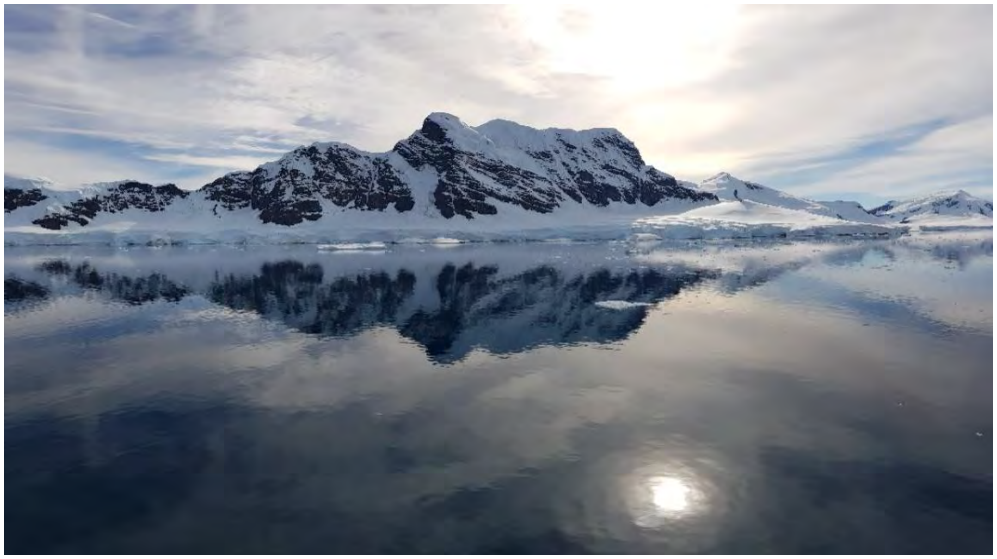
4 Proposed next steps for the Taskforce

Council approved the draft Strategy prepared by the Taskforce, at its 112th meeting.[97] The next task for the Taskforce, as approved by Council, is developing a plan for implementation – an Action Plan - in conjunction with the Director-General. This is in progress and is expected be submitted to Council's Programme and Policy Committee before the World Conservation Congress. It is anticipated that the Taskforce will facilitate a learning event at the 2025 World Conservation Congress.

***

"*I watched the sky for a long time, concluding that such beauty was reserved for distant treacherous places, and that nature has a good reason for exacting her own special sacrifices from those determined to witness them*."
Admiral Richard E Byrd, 1938

"…*There must be an intangible something that draws one back to the wild wastes of Antarctica*"
Sir Ernest Shackleton, *Endurance* expedition, April 24, 1915



****

[97] Council decision C112/11 (30 January 2025). The final text of the proposed 4-year work programme and the draft 20-year vision documents used in this report was incorporated afterwards, once that was finalised.

APPENDIX 1:
IUCN RESOLUTIONS AND RECOMMENDATIONS
ON ANTARCTICA AND THE SOUTHERN OCEAN

Resolution names, in reverse date order, links to the full text, and a brief summary of its content:

WCC 7.107, Reducing the impact of fisheries on marine biodiversity - Marseilles 2020: https://portals.iucn.org/library/node/49246

- Recommends a taskforce to reconcile conservation efforts and fisheries, and encourages authorities to carry out various actions relating to marine biodiversity conservation mandates, reporting mechanisms, protected areas, and fisheries management, practices and incentives. The scope of the recommended taskforce includes Antarctica and the Southern Ocean.

WCC 6.032, Achieving representative systems of protected areas in Antarctica and the Southern Ocean - Hawaii 2016: https://portals.iucn.org/library/node/46449

- Encourages strengthened support of the Antarctic Treaty System and CCAMLR to fulfil the commitment to Antarctica as a nature reserve. Encourages CCAMLR parties to approve marine protected areas and urges parties to the Protocol on Environmental Protection to designate Antarctic Specially Protected Areas.

WCC-2012-06,6 Antarctica and the Southern Ocean: https://portals.iucn.org/library/node/44033

- Encourages the establishment of marine reserves and improved ecosystem monitoring; calls for marine living resources management plans to consider climate change; urges minimisation of marine debris; supports the creation of an Antarctic vessels Polar Code; calls for addressing unregulated toothfish fishing and other bio-prospecting issues; urges all Parties to the Protocol on Environmental Protection to act on Antarctic issues; and encourages intersessional organisational work.

WCC 4.034, IUCN's engagement on Antarctica and the Southern Ocean - Barcelona 2008: https://portals.iucn.org/library/node/44184

- Calls for the reactivation of the IUCN Antarctic Advisory Committee, establishment of an Antarctic Network, and appropriate IUCN representation at Antarctic meetings. Encourages collaboration on updating and implementing Antarctic strategies, promotion of Antarctic conservation and protection, and assistance of the Antarctic Treaty System to develop a network of marine protected areas.

WCC 4.118, Antarctica and the Southern Ocean - Barcelona 2008: https://portals.iucn.org/library/node/44268

- Urges parties to address a number of issues relating to the Antarctic including protected areas, pollution, bio prospecting, tourism and fisheries. Encourages the protection of albatrosses, petrels and whales, and calls for development of multiple protocols for vessels operating in the Antarctic.

WCC 3.036, Antarctica and the Southern Ocean – Bangkok 2004: https://portals.iucn.org/library/node/44322

- Encourages action on protected areas, tourism regimes and bioprospecting. Calls on the implementation of measures relating to albatross and petrel, toothfish, long-line fishing and krill fisheries. Advises on resource allocation for various IUCN projects and policy areas for focus.

WCC 2.75, Southern Hemisphere albatross and petrel conservation - Amman 2000: https://portals.iucn.org/library/node/44590

- Urges members to identify the status of Southern Hemisphere albatross and petrel in their area and initiate conservation efforts. Requests special action from Range States and members undertaking fishing within specified areas.

WCC 2.66, Pirate fishing and seabird mortality from longlining in the Southern Ocean and adjacent waters: https://portals.iucn.org/library/node/44581

- Urges combatting pirate fishing for toothfish in the Southern Ocean. Calls on the reduction of seabird mortality resulting from longline fishing. Encourages specific protections for Patagonian Toothfish, Southern Ocean albatrosses and petrels. Calls for progress reports from members.

WCC 2.54, Antarctica and the Southern Ocean - Amman, 2000: https://portals.iucn.org/library/node/44569

- Urges parties to ratify and implement the Protocol on Environmental Protection. Encourages the establishment of a permanent Secretariat and enhancement of inspection provisions. Recommends the implementation of various ecosystem/species protections, advises on resource allocation for various IUCN projects, and outlines policy areas for focus.

WCC 1.110, Antarctica and the Southern Ocean - Montreal, 1996: https://portals.iucn.org/library/node/44514

- Calls upon Japan and Russia to ratify the Protocol on Environmental Protection and urges all states to implement the Protocol. Lists priorities for parties active in Antarctica and outlines a number of measures for ecosystem protection. Advises on resource allocation for various IUCN projects and policy areas for focus.

GA 19.96, Antarctica and the Southern Ocean - Buenos Aires, 1994: https://portals.iucn.org/library/node/43965

- Calls upon all parties to ratify and implement the Protocol on Environmental Protection and encourages the establishment of organisational structures to aid implementation. Lists priorities for organisations active in Antarctica and calls for a permanent ban on all mineral activity in Antarctica. Requests various upcoming projects within available resources.

GA 19.95, Improved Protection for Wildlife in Sub-Antarctic Island Ecosystems - Buenos Aires, 1994: https://portals.iucn.org/library/node/43964

- Strongly recommends the full protection of the Sub-Antarctic Islands and the adoption of measures to ensure ecosystem conservation. Requests an IUCN conservation strategy for the Sub-Antarctic Islands, and assistance with management plans for individual islands or groups.

GA 18.76, The Sub-Antarctic Islands of Australia - Perth, 1990: https://portals.iucn.org/library/node/43869

- Calls on both the Tasmanian State Government and the Australian Government to act for the Sub-Antarctic Islands of Australia, including: controlling introduced species, nomination for World Heritage listing, a conservative approach to tourism, undertaking species research, and monitoring activities in adjacent marine areas.

GA 18.75, Antarctica - Perth, 1990: https://portals.iucn.org/library/node/43868

- Recommends a comprehensive environmental protection regime for Antarctica, including details on mineral activity and the insertion of provisions from related agreements, and pledges IUCN's full support and assistance in this development. Encourages sub-Antarctic islands for nomination for World Heritage listing.

GA 18.74, The Antarctic Conservation Strategy - Perth, 1990: https://portals.iucn.org/library/node/43867

- Welcomes the Antarctic Conservation Strategy text submitted to the General Assembly, while requesting revisions based on outlined considerations. Request all IUCN members to advance the Strategy proposals, and endorses a continuing initiative to promote general Antarctic conservation.

GA 17.52, Antarctica - San Jose, 1988: https://portals.iucn.org/library/node/43781

- Recommends a number of actions across a range of areas including: the Antarctic Conservation Strategy, environmental impact assessments, various protective arrangements, environmental data, waste disposal, tourism, CCAMLR, CCAS, mineral activity, compliance, and the ATS - IUCN relationship.

GA 17.53, The Antarctic: minerals activity - San Jose, 1988: https://portals.iucn.org/library/node/43782

- Recommends that the Antarctic Conservation Strategy prohibit Antarctic mineral extraction. Recommends consideration of the likely effects of minerals activity on the Antarctic environment and the desirability of a prohibition. Urges research on which to base any decision, restraint from mineral activity before a framework is in place, and to refrain from undertaking mineral activities in Antarctica on conversation grounds.

GA 16/38, Airstrip at Pointe Geologie, Antarctica - Madrid 1984: https://portals.iucn.org/library/node/43724

- Calls upon the French Government to study alternatives, and their relative environmental impacts, to the Pointe Geologic airfield project and to take into account the findings of the French Academy of Science. Encourages considering protection of Pointe Geologic from

further construction and encourages Treaty Parties to share resources in order to minimise impacts of such facilities on ecosystems.

GA 16/8, Antarctica - Madrid, 1984: https://portals.iucn.org/library/node/43694

- Recommends a number of actions across various areas, including general principles for Treaty Consultative Parties, communication and consultation, membership, research and conservation, CCLMAR, Antarctic minerals, and conservation measures.

GA 16/9, Antarctica II - Madrid, 1984: https://portals.iucn.org/library/node/43695

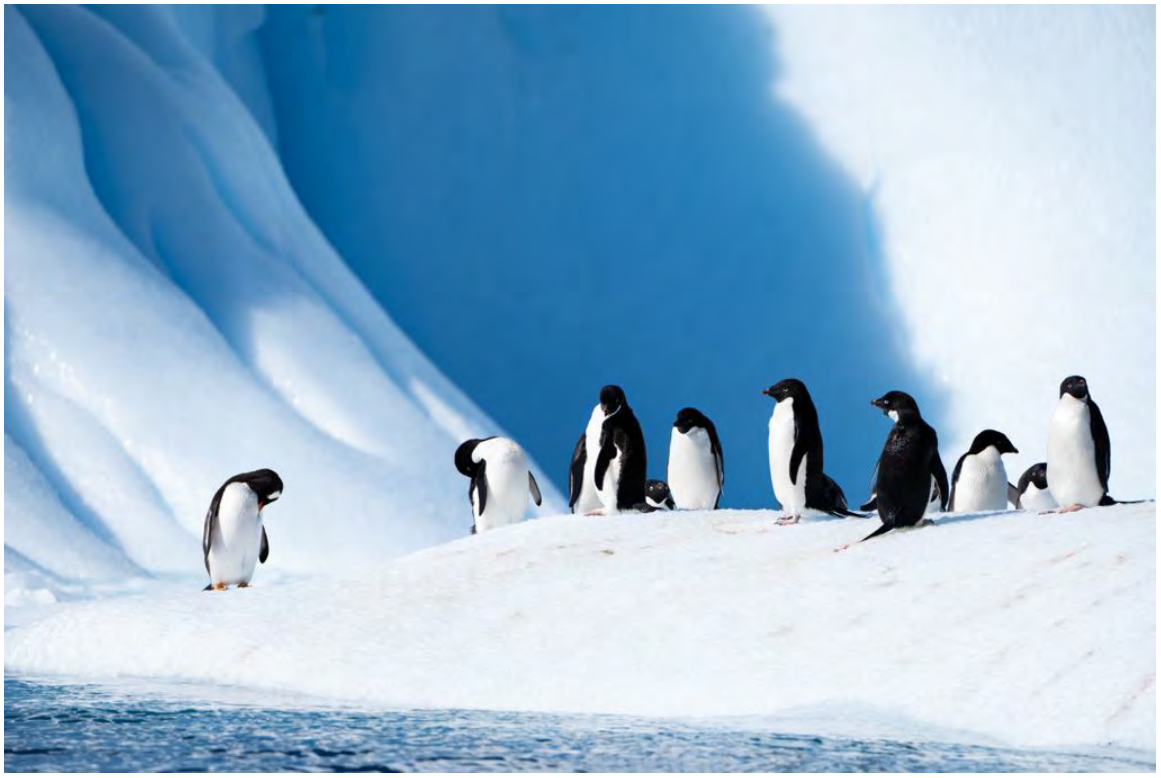
- Requests the implementation of Resolution 16/8, particularly: representation at relevant meetings, environmental monitoring, reporting to membership, preparation for a conservation strategy, fostering scientific research, education materials, investigating designation of Antarctica, protected areas, and locating funds for implementation.

GA 15/20, Antarctica environment and the Southern Ocean - Christchurch 1981: https://portals.iucn.org/library/node/43677

- Recommends that Antarctic Treaty Consultative Parties enhance the status of the Antarctic environment. Encourages increased communication, membership, and coordinated research and conservation. Are multiple recommendations relating to strengthening protections under CCAMLR and cautions against mineral activity.

GA 7.6, Antarctic fauna and flora - Warsaw 1960: https://portals.iucn.org/library/node/43456

- Supports proposed measures to maintain fauna and protect areas for the conservation of fauna and its natural environment. Supports the Special Committee for Antarctic Research preparing regulations to protect Antarctic fauna and flora and their habitat.



APPENDIX 2:
Historical Development of IUCN Policy on Antarctica

IUCN has had a long involvement with Antarctic conservation activities.

The World Conservation Strategy developed by IUCN during the 1980s identified as a high priority delineating all of Antarctica as a protected area. The IUCN also felt the need to develop a regional policy for Antarctica. The then IUCN Commission on National Parks and Protected Areas (CNPPA), at its 29th Working Session held at Wairakei, New Zealand, in August 1987 produced a publication entitled conserving the Natural Heritage of the Antarctic Realm.

In 1989, the Director General established a working group including representation from the Scientific Committee on Antarctic Research (SCAR) and from NGOs such as the World Wide Fund For Nature (WWF) and ASOC to respond to the General Assembly's call for the preparation of a strategy for Antarctic conservation. The resulting document *Strategy for Antarctic Conservation* was published in 1991, after revision in the light of the discussions held at the General Assembly.

SCAR worked closely with IUCN on joint workshops and publications on Sub-Antarctic Island Conservation (1992), Antarctic education (1993), and development of the Antarctic Conservation Strategy (1991).

The IUCN established an Antarctic Advisory Committee in 1994–1996 to support IUCN involvement in the Antarctic, sub-Antarctic islands and Southern Ocean issues. The IUCN Antarctic Advisory Committee was formed by 12 members appointed in their personal capacity, from diverse professional backgrounds, with the chair appointed by the IUCN Director-General.

This Committee undertook considerable early activities, including efforts focusing on ATCMs and CCAMLR meetings. However, by 2004 the Committee had reportedly not been able to achieve its full potential, due mainly to a lack of resources.

As conservation and environmental management are dynamic and developing fields, the policies embodied in the Strategy were updated from 2004. SCAR contacted IUCN to pursue this as a joint effort. In 2004, the IUCN DG tasked the Chair of IUCN's Antarctic Advisory Committee with liaising with SCAR on this matter. There was an initial Discussion and Drafting Workshop in May 2005 in Stellenbosch, South Africa. Resolution WCC 4.034 then made this work a priority.

In Feb 2009 the Strategy for IUCN's Programme and Policy on Antarctic and Southern Ocean Issues was approved by the 72nd Meeting of Council.

The IUCN Antarctic Advisory Committee was strengthened as part of the Strategy and resolution (CGR 4.034). The IUCN Membership as a whole, via Resolution 4.034, felt strongly that the Advisory Committee should be a focal point for IUCN's Antarctic work, and that it needed to be strengthened and given adequate resources.

Despite considerable early activities, and ongoing efforts focusing on ATCMs and CCAMLR meetings, the Committee was not able to achieve its full potential. Despite the 2009 Strategy then strengthening the role of the Antarctic Advisory Committee, the Committee ceased to operate, reportedly due to inadequate funding.

In May 2023, the 109th Council meeting established a Taskforce of the Council's Policy and Programmes Committee to revise and update the 2009 Strategy.

APPENDIX 3:
Relevant international environmental instruments

Other relevant environmental instruments for Antarctica and the Southern Ocean include, but are not limited to:

- The Convention on Migratory Species' Agreement on the Conservation of Albatrosses and Petrels (ACAP, 2001)[98]
- The International Whaling Commission's establishment of the Southern Ocean Whale Sanctuary in 1994[99]
- The International Maritime Organization, (including the International Convention on the Protection of Pollution from Ships, 1973 and Protocol 1978 (Marpol)), whose regulations apply to many activities in the Antarctic, and which have established the Southern Ocean as a specially sensitive area.[100]
- International Maritime Organization's International Code for Ships Operating in Polar Waters (Polar Code, 2017)[101]
- The Vienna Convention for the Protection of the Ozone Layer[102] and, its Montreal Protocol on Substances that Deplete the Ozone Layer (1987)[103]
- The Convention on Biological Diversity (1992)
- The UN Framework Convention on Climate Change (1992)
- The UN Convention on the Law of the Sea (1982)
- The Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Agreement). Adopted 19 June 2023; not yet in force.[104]
- The 1995 United Nations Fish Stocks Agreement[105]
- WTO Agreement on Fisheries Subsidies, 2022[106]

[98] See https://acap.aq/
[99] See https://iwc.int/management-and-conservation/sanctuaries
[100] See https://www.imo.org/
[101] See https://www.imo.org/en/ourwork/safety/pages/polar-code.aspx
[102] See https://ozone.unep.org/treaties/vienna-convention
[103] See https://ozone.unep.org/treaties/montreal-protocol
[104] See https://www.un.org/bbnjagreement/
[105] See https://www.un.org/oceancapacity/UNFSA
[106] See https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm

APPENDIX 4:
IUCN Commissions current mandates

Some IUCN Commissions have a specific mention of polar regions, Antarctica and/or the Southern Ocean in their current mandate.

- World Commission on Protected Areas (WCPA)
  One of the objectives defined in the WCPA mandate [2021-2024] is to:

  > 3. Advocate for management of all lands, freshwater and seas, including polar regions and areas beyond national jurisdiction, that support the conservation of biodiversity and the role of protected areas and OECMs in contributing to the achievement of Sustainable Development Goals (SDGs) especially SDG 3 Good Health and Well-Being; SDG 13 Climate Action; SDG 14 Life below Water and SDG 15 Life on Land

- World Commission on Environmental Law (WCEL)
  Priorities stated in the WCEL mandate [2021-2025] include:

  > 5. (2) cross-cutting themes such as environmental ethics, environmental human rights, indigenous peoples, protected areas, Arctic and Antarctic polar governance, compliance and enforcement of environmental laws, sound environmental adjudication, access to justice in environmental matters, protection of whistle-blowers and environmental defenders, environmental justice, and national and international financial institutions, and requests made by the World Conservation Congress.