



ARCTIC PROTECTED AREAS
INDICATOR REPORT
2017

Acknowledgements

The Conservation of Arctic Flora and Fauna (CAFF) and Protection of the Arctic Marine Environment (PAME) are Working Groups of the Arctic Council.

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1. Overview

The Conservation of Arctic Flora and Fauna (CAFF) and Protection of the Arctic Marine Environments (PAME) working groups of the Arctic Council developed this indicator report. It provides an overview of the status and trends of protected areas in the Arctic. The data used represents the results of the 2016 update to the Protected Areas Database submitted by each of the Arctic Council member states (Annex 1). This report uses the International Union for the Conservation of Nature (IUCN) definition for protected areas (see Box 1) which includes a wide range of Management Categories – from strict nature reserve to protection with sustainable use. Consequently, the level of protection and governance of these areas varies throughout the circumpolar region and its countries.

2. Introduction

Protected areas have long been viewed as a key element for maintaining and conserving biodiversity and the functioning habitats upon which species depend. Arctic protected areas have been established in strategically important and representative areas, helping to maintain crucial ecological and culturally significant features.

Protected areas targets

Aichi Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Aichi Target 11: By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape (CBD 2016).

The Arctic Council recognised that “the Arctic environment needs to be protected as a basis for sustainable development, prosperity, lifestyles and human well-being” (Kiruna Declaration 2013). An important step toward achieving this is to “advance the protection of large areas of ecologically important Arctic marine, terrestrial and freshwater habitats... building upon existing and on-going domestic and international processes and implementing appropriate measures for their conservation” (CAFF 2013).

The Arctic Council has a history of addressing such issues and over the last few years has: released the first Arctic Biodiversity Assessment (CAFF 2013); completed a process of identifying ecologically and culturally sensitive marine areas with regards to shipping (AMAP/CAFF/SDWG 2013); and released the Framework for a pan-Arctic Network of Marine

Protected Areas (PAME 2015), which recognizes humans and their activities as an integral part of the ecosystem.

The framework defines the network as:

“An ecologically connected, representative and effectively-managed network of protected and specially managed areas that protects and promotes the resilience of the biological diversity, ecological processes and cultural heritage of the Arctic marine environment, and the social and economic benefits they provide to present and future generations (PAME 2015).”

This Arctic Protected Areas Indicator Report, is part of the process that responds to actions identified in both the Framework for a Pan-Arctic Network of Marine Protected Areas (PAME 2015) and Actions for Biodiversity, 2013-2021: implementing the recommendations of the Arctic Biodiversity Assessment (CAFF 2015). It catalogues the extent of protected areas across the Arctic and the trends regarding protected area establishment. It helps track progress towards meeting the objectives of PAME and CAFF and supporting Aichi Biodiversity Targets 1 and 11 adopted in 2010 by Parties to the United Nations Convention on Biological Diversity (CBD). These Targets in turn contribute towards achieving relevant targets within the Sustainable Development Goals (UNEP-WCMC and IUCN 2016).

This report is based on information submitted by the Arctic Council Member States and includes:

- Arctic Protected areas (marine and terrestrial) overview
- Areas recognised under international conventions
- Marine protected areas
- Additional areas important for marine biodiversity
- Terrestrial protected areas
- Protected Areas inventory

There is no single agreed-upon definition of the Arctic; however, for the purpose of this indicator report, the CAFF boundary is used to define the geographical extent of the Arctic. This covers 32.2 million km², 57% (18.4 million km²) of which is marine and 43% (14 million km²) terrestrial (Fig. 1). It is important to note that some boreal forest is included within the CAFF boundary and is therefore included in the calculations presented in this report.

Box 1. Protected Areas definitions

A protected area as defined by the IUCN World Commission on Protected Areas, and as used in the Pan-Arctic MPA Framework is: a “clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values” (IUCN 2016). IUCN defines seven Management Categories of protected areas:

- Ia. Strict Nature Reserves:** are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphical features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values.
- Ib. Wilderness Areas:** are usually large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.
- II. National Parks:** are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational, and visitor opportunities.
- III. Natural Monument or Features:** are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.
- IV. Habitat/Species Management Areas:** aim to protect particular species or habitats and management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.
- V. Protected Landscape/Seascape:** A protected area where the interaction of people and nature over time has produced an area of distinct character with significant, ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.
- VI. Protected areas with sustainable use of natural resources:** conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems.



Figure 1: Protected areas in the Arctic classified by their IUCN Management Category, 2016.

3. Arctic Protected Areas (Marine and Terrestrial) Overview

Key messages

The extent of protected areas within the CAFF boundary (Fig. 1) has almost doubled since 1980. While progress has been made, it has not been even across ecosystems and this report does not analyse how well the suite of protected areas meet the test of being an “ecologically connected, representative, and effectively-managed network of protected and specially managed areas that protects and promotes the resilience of the biological diversity, ecological processes and cultural heritage” (PAME 2015) of the Arctic.

Currently, in 2016, 20.2% of the Arctic’s terrestrial area and 4.7% of the Arctic’s marine areas are protected (Fig. 2). Protected area coverage of the Arctic’s terrestrial ecosystems exceeds Aichi Biodiversity Target 11 which aims for at least 17% of terrestrial and inland water to be protected by 2020. The protected area coverage of marine areas currently falls short of the Aichi Target goal for 10% of coastal and marine areas to be protected by 2020.

It is important to note that the terrestrial figures include some protected areas in the boreal forest and also that the percentage of terrestrial area protected includes one very large park in Greenland (covering approximately one quarter of the entire area protected in the Arctic) that protects one type of ecosystem. While the level of terrestrial protected areas is laudable, there remain important gaps in representation and connectivity that are not reflected by the figures. Action to create new protected areas continues and work is underway to close the gaps.

While the Aichi Target does not specify exactly how the target should be applied (e.g. by country, by region, by ecosystem), using it for comparative analysis offers a useful tool to chart progress over time.

Status and Trends

The first protected areas in the Arctic were established in Sweden and the United States at the beginning of the 20th Century. The total Arctic area (marine and terrestrial) under protection remained low until the 1970s, when it began to increase significantly with additions of large areas such as the Greenland National Park. By 1980, 5.6% of the Arctic (marine and terrestrial) was classified under some degree of protection. This has steadily increased to the present when 11.4% of the Arctic (marine and terrestrial), about 3.7 million km², has protected status (Fig. 2). The nature of protection and governance of these areas varies throughout the circumpolar region, and there are varying levels of protection within countries.

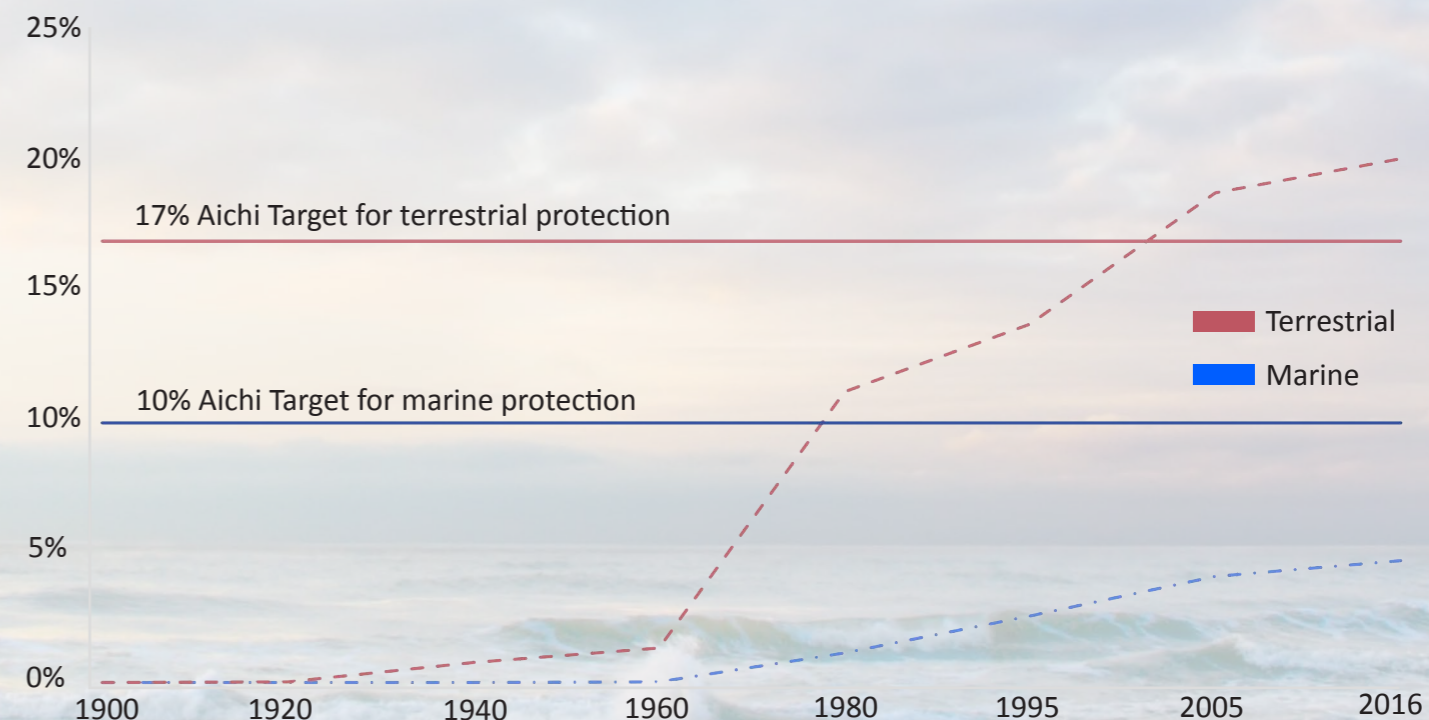


Figure 2: Trends in terrestrial and marine protected area coverage within the CAFF boundary, 1900-2016.

Over 99% of all protected areas within the CAFF boundary have been assigned an IUCN Management Category. Protected areas falling in Category V, Protected Landscape/Seascapes, cover the largest total area, while those in Category Ia, Strict Nature Reserves, cover only 7,5%. Most terrestrial protected areas fall under Categories V, Protected Landscape/Seascape, while for marine areas, Category IV is the most prevalent (see following sections for more detail). Figure 3 shows the distribution of protected areas by their IUCN Management Category in 2016.

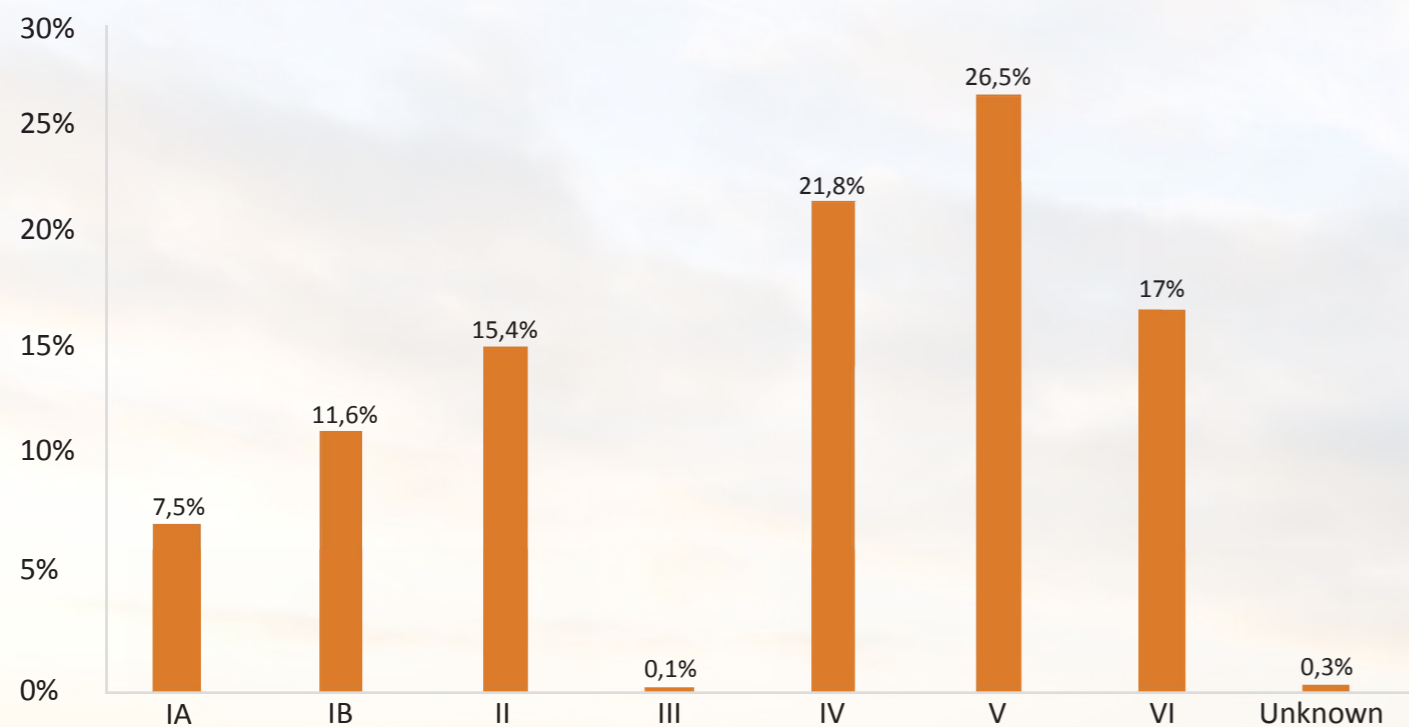


Figure 3: Distribution of protected areas (marine and terrestrial) across each of the six IUCN Management Categories, 2016.

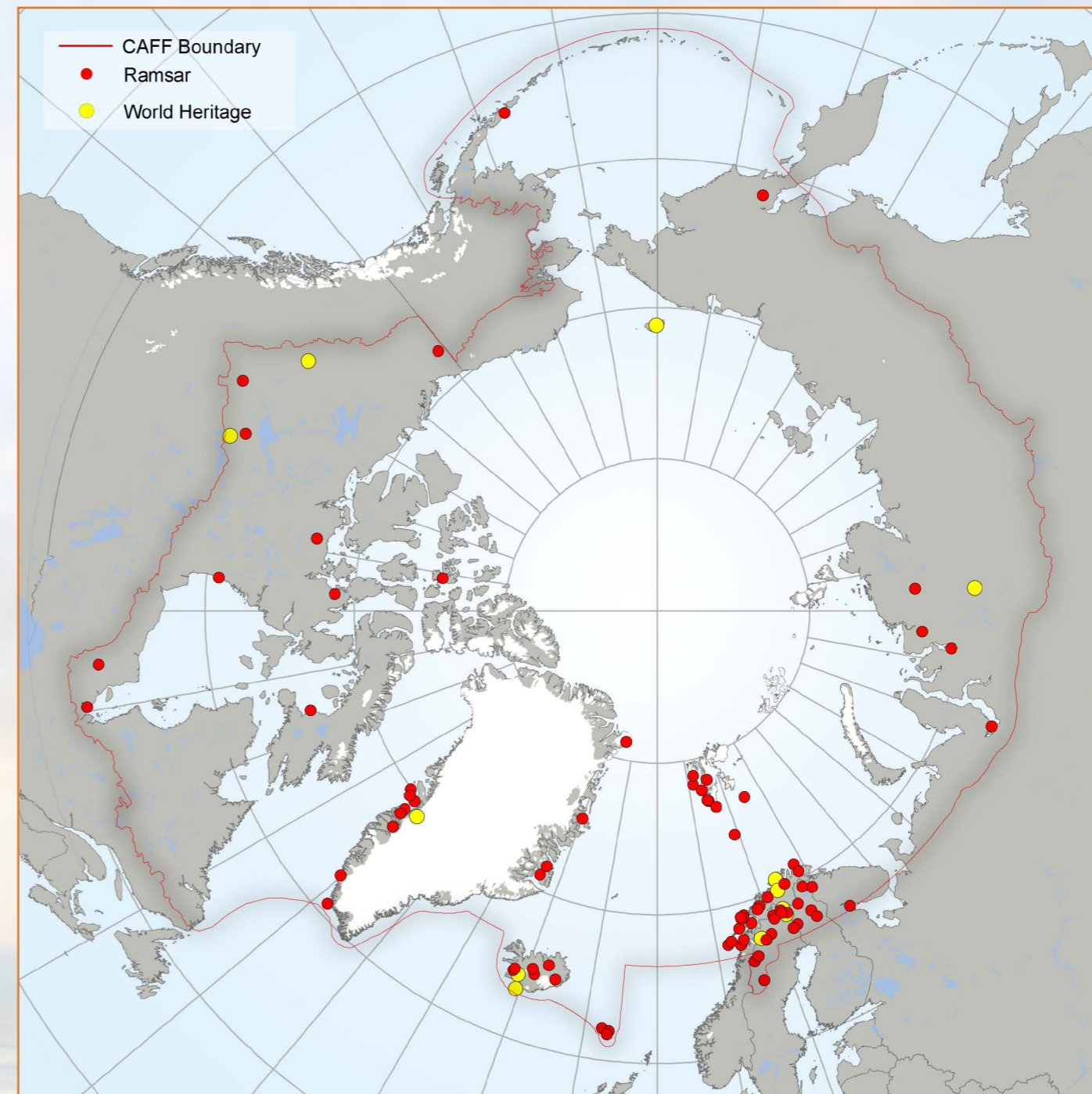


Figure 4: Distribution of Ramsar and World Heritage sites within the CAFF boundary, 2016.

4. Arctic Areas Recognised Under International Conventions

Within the CAFF boundary there are 92 areas recognised under global international conventions. These include 12 World Heritage sites³ (three of which have a marine component) and 80 Ramsar sites, which together cover 0.9% (289,931 km²) of the CAFF area (Fig. 4). Between 1985 and 2015, the total area covered by Ramsar sites⁴ almost doubled, while the total area designated as World Heritage sites increased by about 50% in the same time period (Fig. 5).

3: World Heritage Sites are cultural and/or natural sites considered to be of 'Outstanding Universal Value', which have been inscribed on the World Heritage List by the World Heritage Committee (UNESCO 2016).

4: Ramsar Sites are designated because they meet the Criteria for identifying Wetlands of International Importance. The first criterion refers to Sites containing representative, rare or unique wetland types, and the other eight cover Sites of international importance for conserving biological diversity (RAMSAR 2016).

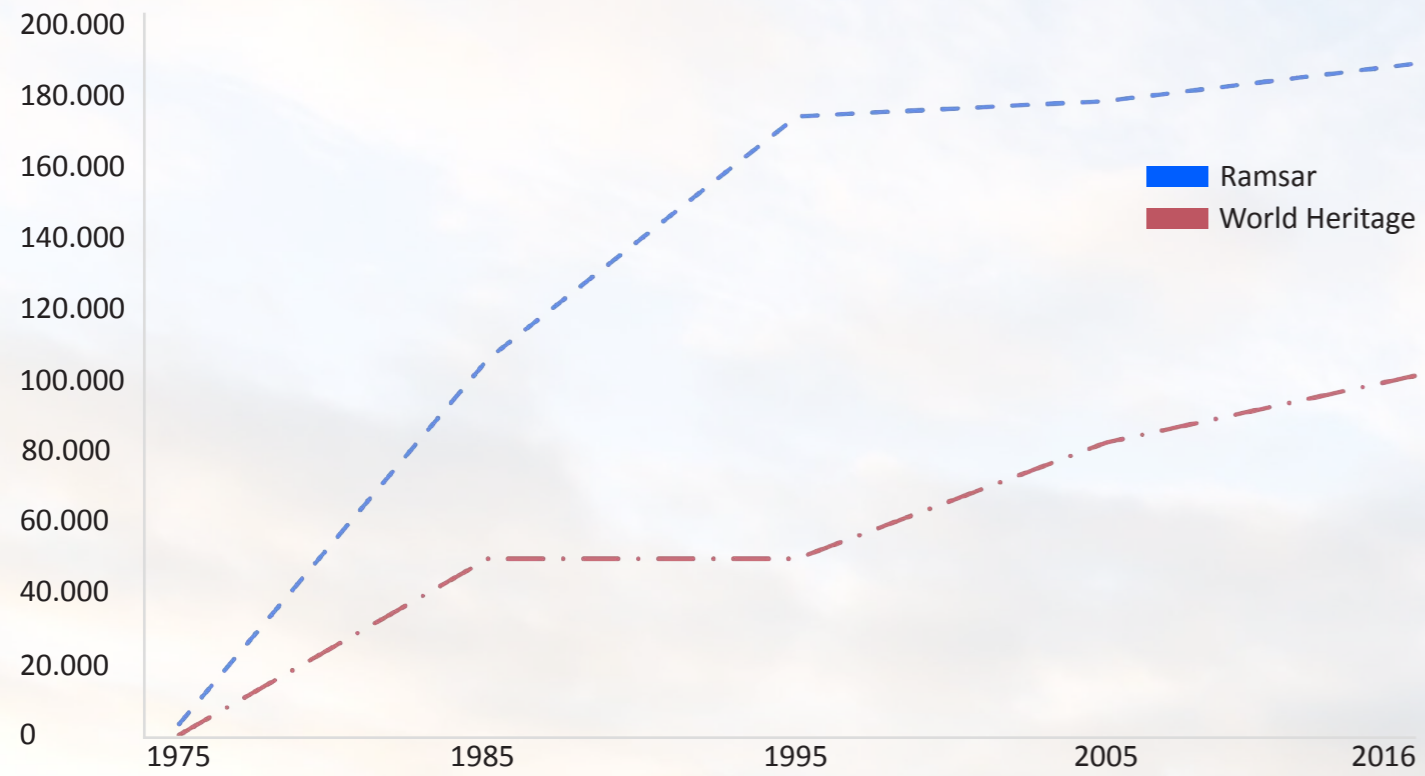


Figure 5: Growth in the total area of Ramsar and World Heritage sites within the CAFF boundary, 1974-2016. (Source: Ramsar 2016; UNESCO 2016)

5. Marine Protected Areas

The extent of protected areas in the Arctic's marine environment (Fig. 6) has almost quadrupled since 1980 (Fig. 7). In 2016, 4.7% of the Arctic marine area (860,000 km²) was protected, which, when considered at a pan-Arctic scale, falls short of the Aichi Biodiversity Target 11 goal of 10% of coastal and marine areas to be protected by 2020 (Fig. 7). The marine protected areas are dominated by several very large areas and some parts of the Arctic marine ecosystem was poorly protected in 2016.



Figure 6: Marine protected areas in the Arctic classified according to their IUCN Management Category, 2016.

All but 8% of the 334 current marine protected areas found within the CAFF Boundary have been assigned an IUCN Management Category. Protected areas falling in Category IV, Habitat/Species Management Areas, cover the largest area overall. Figure 8 shows the percentage of protected areas in each IUCN Management Category in 2016.

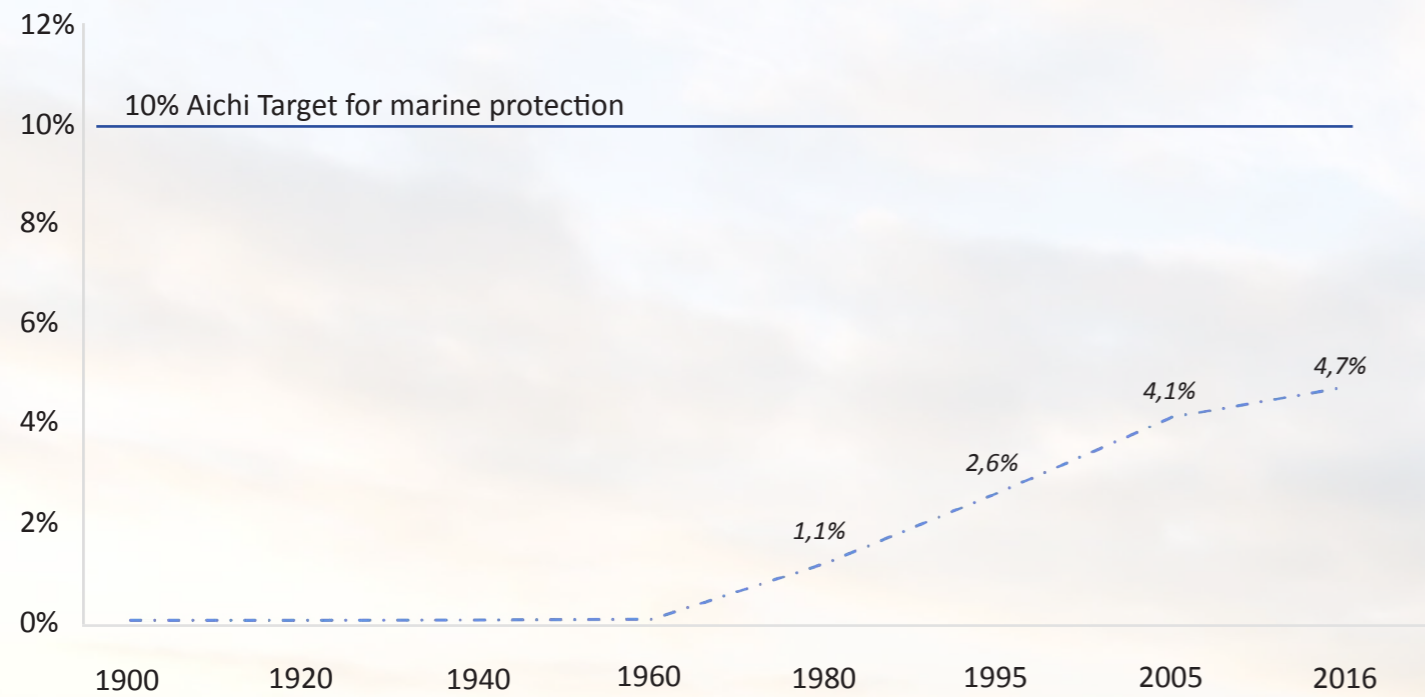


Figure 7: Trend in marine protected area coverage within the CAFF boundary, 1900-2016.

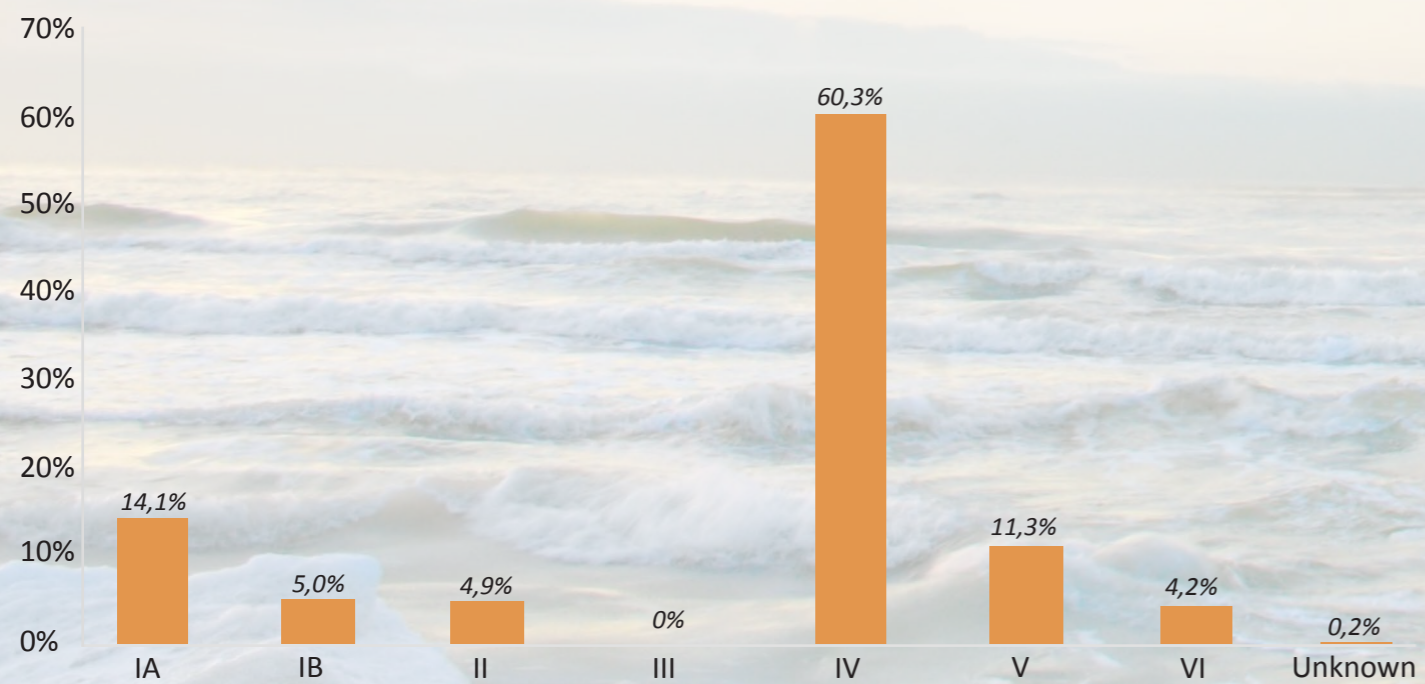


Figure 8: Distribution of marine protected areas across each of the six IUCN Management Categories, 2016.



Figure 9: EBSAs (Source: CBD 2016) and marine “areas of heightened ecological and cultural significance” (Source: AMAP/CAFF/SDWG, 2013).

6. Other Area-Based Measures Important for Arctic Marine Biodiversity

In 2013, the Arctic Council identified “Areas of heightened ecological and cultural significance” using the International Maritime Organization criteria for Particularly Sensitive Sea Areas (PSSAs), which are similar to the CBD Ecologically and Biologically Significant Areas (EBSAs) criteria. The term “areas of heightened ecological and cultural significance” comes from Recommendation IIC of the Arctic Council’s 2009 Arctic Marine Shipping Assessment:

That the Arctic states should identify areas of heightened ecological and cultural significance in light of changing climate conditions and increasing multiple marine use and, where appropriate, should encourage implementation of measures to protect these areas from the impacts of Arctic marine shipping, in coordination with all stakeholders and consistent with international law. (PAME 2009)

Through this process, 98 “areas of heightened ecological and cultural significance” were identified covering a vast area of approximately 14 million km² or 76% of the Arctic marine area (Fig. 9).

The areas were identified primarily on the basis of their ecological importance to fish, birds and/or marine mammals i.e. areas where large numbers of one or several species concentrate during particular times of the year, such as for breeding), feeding, staging or during migrations (AMAP/CAFF/SDWG, 2013). Approximately 5% of “areas of heightened ecological importance” lie within protected areas.

In 2014, a CBD regional workshop identified EBSAs for the Arctic, and confirmed that these areas fulfil the EBSA criteria (CBD 2014). These are special areas that serve to support the healthy functioning of oceans and the many services it provides. Thirteen EBSAs were identified, covering 4.2 million km², or 22.7%, of the Arctic marine area (Fig. 9). Less than 1% of EBSAs lie within protected areas. There are no PSSAs designated within the Arctic.

7. Terrestrial Protected Areas

The extent of terrestrial protected areas within the CAFF boundary (Fig. 10) has almost doubled since 1980 (Fig. 11). In 2016, 20.2% (2.8 million km²) of the terrestrial area was protected. Protected area coverage exceeds Aichi Biodiversity Target 11, which aims for at least 17% of terrestrial and inland water to be protected by 2020 (Fig. 11).

It is important to note that the terrestrial figures include some protected areas in the boreal forest and also that the percentage of terrestrial area protected includes one very large park in Greenland that protects just one type of ecosystem and covers more than one quarter of the entire area protected in the Arctic. While the level of terrestrial protected areas is laudable, a network of Arctic Protected Areas will help to identify important gaps and representation and connectivity that are not reflected.



Figure 10: Terrestrial protected areas within the CAFF boundary classified according to their IUCN Management Category, 2016.

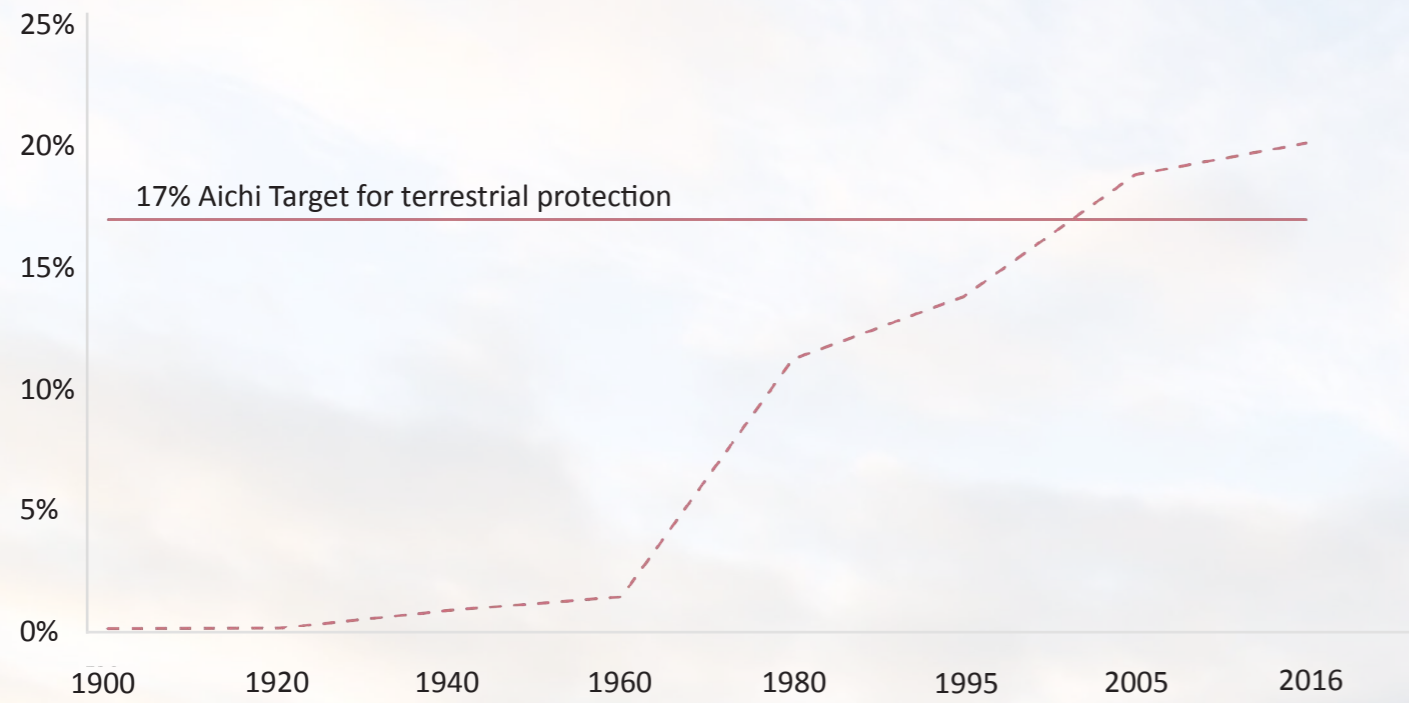


Figure 11: Trend in terrestrial protected area coverage within the CAFF boundary, 1900-2016.

Ninety-nine percent of terrestrial protected areas had been assigned an IUCN Management Category. Protected areas falling in Category V (31,1%), Protected Landscape/Seascape, cover the largest area overall, while those in Category Ia, Strict Nature Reserves, cover 5.4% of the total protected area. Figure 12 shows the distribution of protected areas across IUCN Management Categories in 2016.

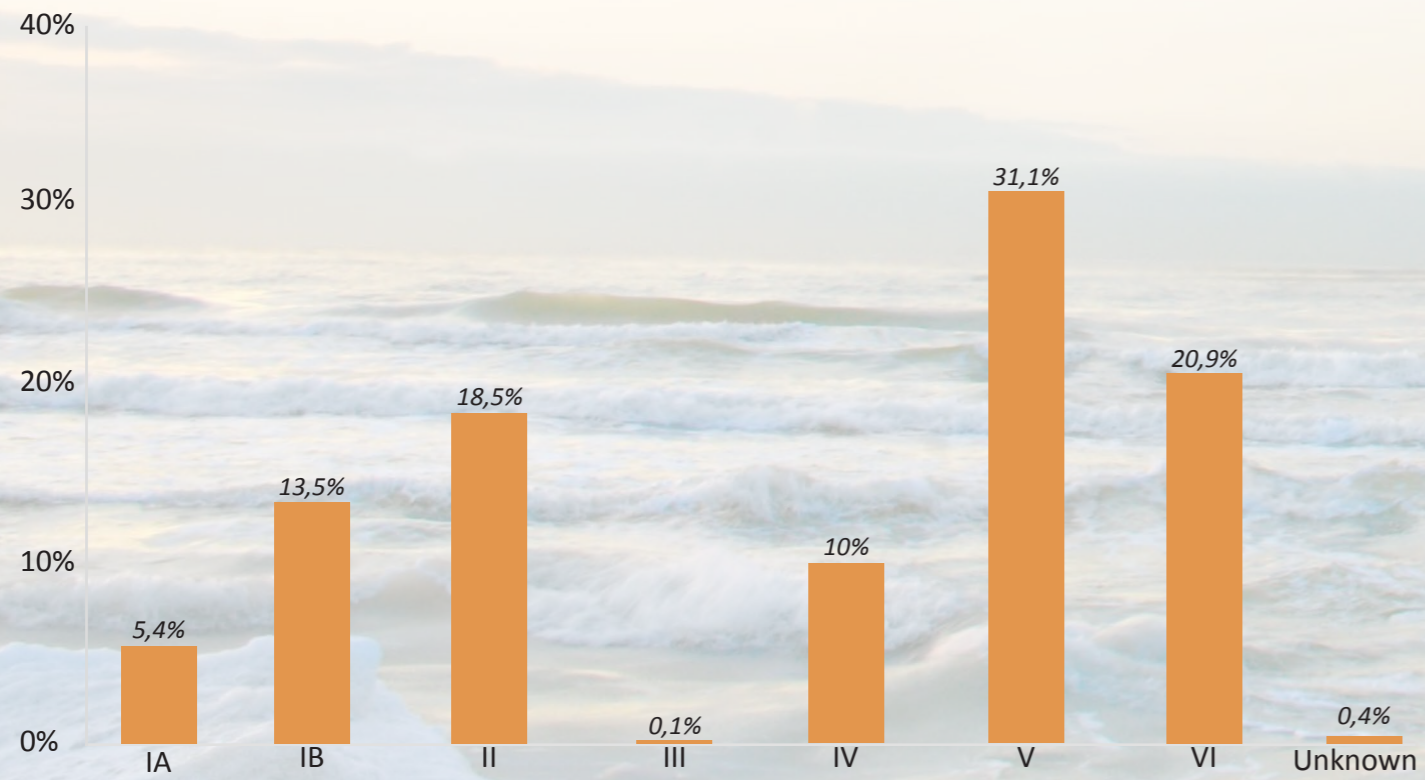


Figure 12: Percentage of terrestrial protected areas in each of the six IUCN Management Categories, 2016.



References

- AMAP/CAFF/SDWG. (2013). Identification of Arctic marine areas of heightened ecological and cultural significance: Arctic Marine Shipping Assessment (AMSA) IIC.
- Arctic Council. (2013). Kiruna Declaration. The Eight Ministerial Meeting of the Arctic Council. May 15, 2013. Kiruna, Sweden.
- CAFF. (2016). Arctic Biodiversity Data Service (ABDS), Accessed September 2016: www.abds.is.
- Biodiversity Indicators Partnership: BIP. (2016). Accessed February 2016: www.bipindicators.net.
- CAFF. (2010). Arctic Biodiversity trends 2010: selected indicators of change.
- CAFF. (2013). Arctic Biodiversity Assessment, Status and trends in Arctic biodiversity.
- CAFF. (2015). Actions for Biodiversity, 2013-2021: implementing the recommendations of the Arctic Biodiversity Assessment.
- CBD. (2012). Ecologically or Biologically Significant Marine Areas (EBSAs) Scientific collaboration among dedicated experts to better understand marine biodiversity and support country efforts to achieve the Aichi Biodiversity Targets.
- CBD. (2014). Arctic Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas (EBSAs).
- CBD. (2016). Ecologically or Biologically Significant Marine Areas (EBSAs), accessed December 2016: www.cbd.int/ebsa.
- CBD. (2016). Aichi Targets, accessed February 2016: www.cbd.int/sp/targets
- Convention on Wetlands (Ramsar) (2016). Ramsar Information service, Accessed February 2016: www.ris.ramsar.org.
- IUCN and UNEP-WCMC. (2016). The World Database on Protected Areas (WDPA), Accessed February 2016: www.ProtectedPlanet.net.
- IUCN. (2016). Accessed April 2016: https://www.iucn.org/about/work/programmes/gpap_home/pas_gpap/:
- OSPAR. (2015). 2014 Status Report on the OSPAR Network of Marine Protected Areas
- PAME. (2009). Arctic Marine Shipping Assessment.
- PAME. (2015). Framework for a Pan-Arctic Network of Marine Protected Areas.
- Skjoldal, H.R. and C. Toropova. (2010). Criteria for identifying ecologically important and vulnerable marine areas in the Arctic. Background document prepared for AMSA IIC and the IUCN 'EBSA Workshop' San Diego, November 2010.
- UNESCO. (2016). World Heritage List, accessed December 2016: <http://whc.unesco.org/en/list/>.
- UNEP-WCMC and IUCN. (2016). Protected Planet Report 2016. UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.



Conservation of Arctic Flora and Fauna



Protection of the Arctic Marine Environment



ARCTIC COUNCIL