



CCAMLR

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**Fulfilling CCAMLR's commitment to create a representative system  
of Marine Protected Areas**

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Submitted by ASOC



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# Fulfilling CCAMLR's commitment to create a representative system of Marine Protected Areas

Submitted by ASOC<sup>1</sup>

## Abstract

The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) first committed to adopting a representative network of marine protected areas (MPAs) in 2009. This paper summarises CCAMLR's progress in fulfilling this commitment to date. Following recent progress with adoption and entry into force of the Ross Sea MPA, ASOC calls on CCAMLR to make swift progress towards adopting a Southern Ocean representative system of MPAs by 2020. ASOC recommends that this year CCAMLR:

- Adopts the East Antarctica MPA proposal including the MacRobertson, Drygalski and D'Urville Sea-Mertz areas.
- Adopts the Weddell Sea MPA, keeping the boundaries intact so that the MPA contains the ecological boundaries of the Weddell Sea Gyre, as previously supported by SC-CAMLR and WG-EMM.
- Takes further steps towards the adoption of the Domain 1 MPA, including the adoption of no-take zones in all critical areas to ensure conservation objectives are met.
- Continues to develop and implement research and monitoring plans for current MPAs.

## Overview

For more than a decade CCAMLR has been working towards the adoption of a representative system of marine protected areas (MPAs) in the CCAMLR Area (Table 1). In this time the evidence of the effectiveness of MPAs in conserving biodiversity and managing fisheries, including in the face of climate change, has grown.<sup>2</sup> Furthermore, while a single MPA or no-take marine reserve can protect areas of local importance, a representative system has the potential to ensure greater resilience at a regional scale, such as in the case of Southern Ocean.

Upon completing a bioregionalization analysis of the Southern Ocean, CCAMLR developed priority areas and subsequent MPA Planning Domains to guide the adoption of a representative system of marine spatial protection across the Convention Area (Appendix 1).

The adoption of the Ross Sea region MPA in 2016 thrust CCAMLR and its Members into the vanguard of ocean protection globally, with considerable international media attention. Since then, the momentum for further ocean protection has only grown. CCAMLR is considering MPA proposals for East Antarctica, the Weddell Sea region, and the Antarctic Peninsula (Domain 1). In this paper, ASOC reviews developments to date and calls on CCAMLR Members to realise their 2009 commitment by designating further MPAs in 2018 and by securing the bulk of the network by 2020.

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<sup>1</sup> Lead author Ricardo Roura with contributions from Claire Christian, Sarah Davie, Ryan Dolan, Chris Johnson, Ricardo Roura, Mike Walker, Rodolfo Werner and Bob Zuur.

<sup>2</sup> E.g., Gaines, S.D and others 2010. 'Designing marine reserve systems for both conservation and fisheries management', *Proceedings of the National Academy of Sciences*, 107: 18286-93; Lubchenco, J. and K. Grorud-Colvert. 2015. 'Making waves: The science and politics of ocean protection', *Science*, 350: 382-83.

## Current MPA proposals

### *East Antarctica MPA proposal*

In 2012, Australia, the European Union and France presented a formal proposal for seven MPAs in the East Antarctic constituting an overall system of marine protection in Domain 7. Since then, further evidence has made the case for protection of this region more compelling.<sup>3</sup>

During the last six years of Commission negotiations, the proposal has been reduced both in the number of areas and in longitudinal scope.

The EAMPA proposal submitted in 2017 (CCAMLR XXXVI/17) comprises three areas (MacRobertson, Drygalski and D'Urville Sea-Mertz). With respect to earlier proposals (e.g. 2015, 2016) it adds extra protection to deep inner shelf depressions contained in relatively shallow areas (<550m) in the continental platform.<sup>4</sup> It also proposes D'Urville Sea-Mertz as a krill no-take zone. While the EAMPA proposal did not secure consensus in 2017, a large majority of Members supported the proposal. The proposal submitted this year (CCAMLR XXXVII/24) contains the same conservation measure as 2017.

Although these MPAs are designed to be “multiple-use”, ASOC believes areas with high vulnerability should be designated as no-take. This includes known and suspected Vulnerable Marine Ecosystems (VMEs) and locations adjacent to vulnerable penguin colonies. For example, the D'Urville Sea-Mertz area, which has recently experienced unusual and extreme weather events correlating with penguin breeding failure, should be designated as no-take.<sup>5</sup>

ASOC supports the current EAMPA proposal (CCAMLR XXXVII/24), as it offers stronger protection to safeguard populations of Antarctic krill and the predator species that depend on it for survival. ASOC urges CCAMLR to designate this proposal in 2018, including MacRobertson, Drygalski and D'Urville Sea-Mertz, without any further delay.

### *Weddell Sea MPA proposal*

The Weddell Sea is among the most intact marine ecosystems in the Southern Ocean, home to a vast array of wildlife and exceptional biodiversity.

In 2012, with the support of SC-CAMLR, Germany offered to take the lead on planning for a Weddell Sea MPA.<sup>6</sup> The MPA planning boundaries encompassed the full Weddell Gyre ecosystem, spanning Domains 3 and parts of Domain 4. Notably, since 2013, WG-EMM<sup>7</sup> and SC-CAMLR<sup>8</sup> supported

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<sup>3</sup> E.g., Raymond, Ben, and others (2015). 'Important marine habitat off east Antarctica revealed by two decades of multi-species predator tracking', *Ecography*, 38: 121-29.

<sup>4</sup> CM 22-08 (2009) already prohibits fishing for *Dissostichus spp.* in depths shallower than 550 m in exploratory fisheries.

<sup>5</sup> Ropert-Coudert Yan and others, (2014): A complete breeding failure in an Adélie penguin colony correlates with unusual and extreme environmental events. *Ecography* 37: 001–003. and Ropert-Coudert Y and others (2018): Two Recent Massive Breeding Failures in an Adélie Penguin Colony Call for the Creation of a Marine Protected Area in D'Urville Sea/Mertz. *Frontiers in Marine Science* 5:264. DOI: 10.3389/fmars.2018.00264.

<sup>6</sup> SC-CAMLR 2012 Report, para 5.28.

<sup>7</sup> “The Working Group noted that MPA planning was originally focused on 11 priority areas identified by WG-EMM on the basis of the results from workshops in 2006 and 2007, but was replaced by 9 planning domains resulting from the MPA Workshop in 2011 (paragraph 3.2). The new scheme divided the Weddell Gyre ecosystem into two separate planning domains, therefore creating some unintended confusion. 3.6 The Working Group recognized that the biogeography of ecological communities may span domain boundaries. This is the case in the Weddell Sea, where a single topographic and ecological entity on the eastern Weddell Sea shelf spans the boundaries between Domains 3 and 4.” (WG-EMM Report 2013, para 3.5 and 3.6).

<sup>8</sup> “The Scientific Committee welcomed the progress report on the scientific data compilation and analyses carried out by Germany in support of the development of a CCAMLR MPA in the Weddell Sea. The paper described the boundaries of the planning area, which in addition to MPA Planning Domain 3, includes the

combining Domain 3 with the southern parts of Domain 4 to encompass the ecological boundary of the Weddell Gyre. In 2013, WG-EMM particularly noted that splitting the Weddell Sea region into Domains 3 and 4 divided the Weddell Gyre ecosystem.

MPA boundaries were presented to SC-CAMLR and CCAMLR in 2016 (by Germany and the EU) and were designed to align with protecting areas of highest conservation value. Marxan modelling underpinning the proposal was based on an extensive variety of ecological (e.g., toothfish habitat, sponges distribution, seabird foraging areas) and environmental parameters (e.g., depth, habitat, ice concentration).

In 2016, SC-CAMLR agreed that the science underpinning the MPA proposal was “the best science currently available,” and “that it provides the necessary foundation for MPA planning in this region,” and “encouraged continuation of this work.”<sup>9</sup>

The revised WSMMPA proposal, which adds areas in the west that lie to the east of the Antarctic Peninsula, should be adopted by CCAMLR in 2018. ASOC supports the boundaries of the current WSMMPA proposal (CCAMLR XXXVII/29); see also SC-CAMLR-XXXVI/BG/28), keeping its limits intact so that the MPA contains the ecological boundaries of the Weddell Sea Gyre, as previously supported by SC-CAMLR and WG-EMM. ASOC opposes any reduction in the precautionary nature of the proposed General Protection Zone, including opening additional areas to fishing or omitting them from the proposal. ASOC supports proposals to include reference areas within the important 550m to 2000m depth range in subarea 48.6 to monitor the impact of fishing and protect habitat not included elsewhere in the GPZ.

#### *Antarctic Peninsula – DIMPA proposal*

The Antarctic Peninsula is significant not only for its outstanding environmental and other intrinsic values, but also for being the region of Antarctica with the most anthropogenic activity, including research, fishing, tourism, and associated shipping and other logistic activities. The Antarctic Peninsula region is also significantly affected by the impact of climate change, experiencing significant warming.<sup>10</sup>

In 2017 Argentina and Chile presented to SC-CAMLR a preliminary proposal for an MPA in Domain 1 (DIMPA). The proponents invited the creation of a Group of Experts including participation of interested CCAMLR nations and observers to contribute to the MPA design. SC-CAMLR was positive about the progress made on this proposal, with many Members making supportive statements.

The Group of Experts was active during 2018, with important contributions from some Members that resulted in a proposal for the Domain 1 MPA that has been submitted by Argentina and Chile to this CCAMLR meeting (CCAMLR-XXXVII/31). Members are encouraged to participate in the Group of Experts.

In addition, in July 2018 a large segment of the krill fishing industry under ARK (Association of Responsible Krill harvesting companies) explicitly endorsed the adoption of MPAs and agreed on voluntary closure of key areas covering approximately 74,000 km<sup>2</sup>.<sup>11</sup> Although not part of the formal DIMPA process, ASOC welcomes this initiative as a useful complementary step which should stimulate CCAMLR to adopt this MPA. Similarly, ASOC supports ongoing efforts to harmonize the development of ecosystem-based management measures for the krill fishery with the recently proposed DIMPA. However, ASOC opposes any efforts to delay the development and designation of the MPA in favour of pursuing new fisheries management measures.

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southern parts of Planning Domain 4 to 20°E. The extension of the planning area ensures that the specific oceanographic/ecological conditions and biological communities of the Weddell Gyre system as a whole can be considered as one entity in the data compilation and analyses”. (SC-CAMLR 2013, para 5.23).

<sup>9</sup> SC-CAMLR 2016 report, para 5.17.

<sup>10</sup> See ASOC paper CCAMLR XXXVII/BG/26 on climate change also submitted to this meeting.

<sup>11</sup> "ARK commits to voluntary restrictions in the Antarctic Peninsula to ensure long- term sustainability of krill fisheries", <http://www.ark-krill.org/index.cfm/7/News>, accessed 24 August 2018.

ASOC supports large-scale, science-based, no-take MPAs in Domain 1 to achieve conservation outcomes. No-take areas should include buffer zones in coastal and other areas critical for foraging predators and in areas in the southern part of the Peninsula believed to be critical for krill spawning. Other no-take zones should be included as required to ensure that all of the objectives of the MPA can be achieved. The primary goal of effective MPAs is to achieve conservation outcomes. Its design should meet this goal rather than seek to accommodate current or future fishing.

## **Conclusion and Recommendations**

ASOC strongly commends CCAMLR for making steps towards a representative network of MPAs with the adoption of the South Orkney Islands Southern Shelf and the Ross Sea region MPAs. However, progress in adopting a network has been too slow and substantial work remains.

The entry into force of the Ross Sea MPA, with a limited duration of 35 years, starts a countdown period for CCAMLR. MPAs should be adopted and implemented in the remaining planning domains as soon as possible so that a representative system of MPAs is in place for a sufficiently long period to accrue meaningful benefits for conservation, research and climate change resilience across the Southern Ocean in accordance with the objectives of CM 91-04.

For this CCAMLR meeting, ASOC recommends that CCAMLR, with the constructive engagement of its Members:

- Adopts the EAMPA proposal in 2018 including MacRobertson, Drygalski and D'Urville Sea-Mertz areas.
- Adopts the WSMPA in 2018, keeping the boundaries intact so that the MPA contains the ecological boundaries of the Weddell Sea Gyre, as previously supported by SC-CAMLR and WG-EMM, rather than geographic meridians.
- Takes further steps towards the adoption of the D1MPA, including the adoption of no-take zones in all critical areas to ensure conservation objectives are met.
- Continues to develop and implement research and monitoring plans for current MPAs.

**Table 1. CCAMLR MPA milestones**

<b>Year</b>	<b>Milestone</b>
2002	Recognition of WSSD commitment, added agenda item for MPAs
2005	First CCAMLR MPA workshop (WS-MPA-05)
2007	CCAMLR Southern Ocean Bioregionalisation Workshop (WS-BSO-07)
2009	Adoption of South Orkney Islands Southern Shelf MPA (CM 91-03) Commitment to a network of Southern Ocean MPAs
2011	Second CCAMLR MPA Workshop (WS-MPA-11) Adoption of a framework for establishing CCAMLR MPAs (CM 91-04)
2012	CCAMLR circumpolar gap analysis MPA technical workshop Proposals for East Antarctic and Ross Sea MPAs first presented to CCAMLR (first discussed by SC-CAMLR in 2010, 2011 respectively)
2013	Special CCAMLR and SC-CAMLR intersessional meetings
2016	Adoption of Ross Sea region MPA (CM 91-05) Proposal for the Weddell Sea MPA first presented to SC-CAMLR
2017	Ross Sea region MPA Research and Monitoring Plan Workshop (WS-RMP-17) Progress report for the D1MPA first presented to SC-CAMLR Ross Sea region MPA entry into force
2018	Workshop on Spatial Management (WG-SM-18)

**Appendix 1. CCAMLR planning domains and marine protected areas (MPAs) in the Southern Ocean.** Adopted MPAs represented by thick black line and proposed MPAs represented by hashed lines. Weddell Sea MPA boundaries reflect those used in the 2016 proposal and do not include some areas added to the GPZ in CCAMLR-XXXVII/29, submitted to this year's meeting.

