CCAMLR

Commission for the Conservation of Antarctic Marine Living Resources
Commission pour la conservation de la faune et la flore marines de l'Antarctique
Комиссия по сохранению морских живых ресурсов Антарктики
Comisión para la Conservación de los Recursos Vivos Marinos Antárticos

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COMMISSION

EU proposal to establish the Weddell Sea MPA (WSMPA)

Delegation of the European Union and its member States

EN

CONSERVATION MEASURE 91-XX
Weddell Sea Marine Protected Area

The Commission,

Desiring to implement Articles IX.1(f) and 2(g) of the Convention, which provide that conservation measures, formulated on the basis of the best scientific evidence available, may designate the opening and closing of areas, regions or sub-regions for purposes of scientific study or conservation, including special areas for protection and scientific study;

Mindful that the objective of the Convention is the conservation of Antarctic marine living resources, where conservation includes rational use in accordance with the provisions of the Convention and the conservation principles in Article II,

Further mindful that the entire Convention Area continues to be subject to the conservation measures adopted by the Commission,

Recalling its endorsement in 2010 of the work program of the Scientific Committee to develop a representative system of Antarctic MPAs with the aim of conserving marine biodiversity in the Convention Area to further the achievement of the objective of the Convention, and the Strategic Plan for Biodiversity 2011-2020, acknowledged in the decision at the 2012 United Nations Conference on Sustainable Development and re-confirmed in 2016 in the Sustainable Development Goal 14, to conserve at least 10% of marine and coastal areas through effectively and equitably managed, ecologically representative and well-connected systems of protected areas by 2020;

Conscious of the important leadership role that CCAMLR plays internationally through its role in the conservation of Antarctic marine living resources and marine biodiversity, including through the on-going development of a representative system of CCAMLR MPAs;

Noting the agreement to progress work towards a representative system of MPAs within the Convention Area and the identification of the Weddell Sea as a priority area for conserving marine biodiversity,

Recognising the adoption of Conservation Measure 91-04, which provides a general framework for the establishment of CCAMLR MPAs, as an important contribution toward achieving a representative system of CCAMLR MPAs;

Anticipating that establishment and ongoing management of CCAMLR MPAs will benefit from the exchange of information between CCAMLR and the Antarctic Treaty Consultative Meeting,

Recalling that CCAMLR is an integral part of the Antarctic Treaty System and that Article III (1)(c) of the Antarctic Treaty provides that, to the greatest extent feasible and practicable, scientific observation and results from Antarctica shall be exchanged and made freely available;

Desiring to ensure that areas vulnerable to the effects of climate change and impacts by human activities are protected in recognition of their global and regional environmental and scientific importance;

Noting that the Weddell Sea has largely pristine ecosystems and diverse marine living resources and that it is crucial for global ocean circulation and the world's climate, and is also an ideal area for studying ecosystem effects, resilience and adaptive capacity to climate change and ocean acidification separate from the impacts of other human activities, such as fishing;

Noting the comprehensive scientific information about the environmental and ecological parameters in the Weddell Sea[1], which represent the best scientific evidence available and serve as background and support for the Weddell Sea Marine Protected Area (WSMPA);

Noting that the analysis of the scientific data identified a set of six general and twelve specific objectives for the protection of marine ecosystems, species and habitats in the Weddell Sea;

Recognising also that the establishment of zones provides a mechanism for establishing spatially explicit management regimes to achieve protection and scientific objectives while still allowing some fishing to occur in specific areas within MPAs,

[1] BP xx/2016

Recognising the importance of collaboration among all CCAMLR Members in conducting research and monitoring to achieve the objectives of the MPA and that research and monitoring form an integral part of the management of the WSMPA;

Noting that, as additional information becomes available and further scientific analysis will be undertaken and reviewed, improvements to the boundaries, objectives or management of the WSMPA may be required;

Welcoming the WSMPA as a useful tool to implement the objective and principles of the Convention in the conservation and management of the marine living resources and associated ecosystems of the Weddell Sea;

hereby adopts the following in accordance with Articles II and IX of the Convention to establish an MPA in the Weddell Sea region for the purpose of achieving the conservation of Antarctic marine living resources, where conservation includes rational use:

1. The area defined in Annex 91-XX/A is designated as the "Weddell Sea Marine Protected Area" (WSMPA) pursuant to Conservation Measure 91-04. The provisions of Conservation Measure 91-04 apply to this MPA.

2. Nothing in this conservation measure shall be interpreted or applied in a manner that prejudices the rights or obligations of any State under international law, including as reflected in the United Nations Convention on the Law of the Sea.

3. In accordance with Article II and IX of the Convention and paragraph 2 of Conservation Measure 91-04, the following general and specific objectives will assist the conservation of Antarctic marine living resources in the long term:

    (i) General Objectives

        G 1 Protection of representative examples of pelagic and benthic ecosystems, biodiversity and habitats (including the environmental and ecological conditions supporting them);

        G 2 Protection of pelagic and benthic habitats and ecosystems which are rare, unique, vulnerable, diverse and/or endemic;

        G 3 Protection of areas, environmental features and species (including populations and life history stages) on various geographical scales which

are key to the functional integrity and viability of local ecosystems and ecosystems processes;

G 4 Establishment of scientific reference areas to monitor the effects of climate change, fishing and other human activities and to study, in particular, representative, rare, unique and/or endemic examples of marine ecosystems, as well as biodiversity and habitats;

G 5 Protection of essential habitats for top predators such as marine mammals and seabirds;

G 6 Protection of essential habitats as potential refugia for, inter alia, top predators, fish and other ice-dependent species, in order to maintain and /or enhance their resilience and ability to adapt to the effects of climate change.

(ii) Specific Objectives

Pelagic conservation objectives

S 1 Protection of representative examples of pelagic and sea ice ecosystems and habitats, such as the unique, persistent open ocean areas associated with the Maud Rise submarine plateau, or the areas along the shelf ice edge in the eastern and southern part of the WSMPA with no or very low sea ice cover throughout the austral summer;

S 2 Protection of Antarctic krill (*Euphausia superba*), ice krill (*Euphausia crystallorophias*) and Antarctic silverfish (*Pleuragramma antarctica*) as key species of mid-trophic level in the Antarctic food web as well as of important areas / habitats for their life cycle, e.g. spawning/nursery areas;

S 3 Protection of essential habitats for top predators such as flying seabirds, penguins and seals;

Benthic conservation objectives

S 4 Protection of representative examples of benthic ecosystems and habitats, such as the ecologically important sponge associations on the shelf in the eastern and southern part of the WSMPA;

S 5 Protection of the integrity and life cycles of unique and diverse suspension feeding assemblages, including benthic sponge associations, and thereby

maintaining the associated benthic communities as efficient sources for recolonization;

S 6 Protection of rare and unique shallow (surface to –150 m water depth) sea floor areas with high habitat heterogeneity and species richness in order to preserve the ecologic function of these areas as "stepping stones" and sources for recolonization for associated communities and species;

S 7 Protection of spawning areas and nesting sites of demersal fish species including areas where fish have been observed exhibiting parental care;

Pelagic and/or benthic conservation objectives

S 8 Protection of high productivity areas to support key ecosystem processes and functional integrity of the ecosystems;

S 9 Protection of marine ecosystems and habitats vulnerable to the effects (including cumulative effects) of climate change, fishing and other human activities and critical to the function of local ecosystems, in order to maintain and/or enhance resilience and adaptive capacity;

S 10 Protection of Antarctic toothfish (*Dissostichus mawsoni*) as a top predator including, as far as possible, all life history stages and their habitats;

Research objectives

S 11 Provision of scientific reference areas to monitor the natural variability and long-term changes on Antarctic marine living resources and to study the effects of climate change and human activities on Antarctic ecosystems;

S 12 Provision of areas for fisheries research in the form of a dedicated Fisheries Research Zone to enhance the understanding of the fish stocks, to test and verify the stock and population hypotheses developed by CCAMLR for *Dissostichus mawsoni* in statistical area 48, and to study the effects of fishing activities.

4. In order to achieve the objectives outlined in paragraph 3 of this conservation measure in a targeted, practical and feasible way, the WSMPA comprises the following three management zones:

(i) the General Protection Zone (GPZ),

(ii) the Special Protection Zone (SPZ), and

(iii) the Fisheries Research Zone (FRZ).

5. Maps and coordinates of the management zones according to paragraph 4 of this conservation measure are provided in Annex 91-XX/A. Descriptions of these management zones and the relevant management provisions are provided in Annex 91-XX/B.

Restricted, prohibited and managed activities

6. Activities covered by this Conservation Measure are those activities undertaken by vessels specified in Conservation Measure 91-04 paragraph 6, subject to the provisions of Conservation Measure 91-04 paragraph 7.

7. The WSMPA will be managed by the Commission in accordance with the following management provisions and the management plan provisions in Annex 91-XX/B in connection with the Research and Monitoring Plan set out in Annex 91-XX/C.

8. The Commission shall not allow activities related to Antarctic marine living resources that would undermine the objectives outlined in paragraph 3 of this conservation measure to occur within the WSMPA.

9. When assessing notifications by Members for fishing and other activities related to Antarctic marine living resources in the WSMPA, the Commission may decide, on the advice of the Scientific Committee, on any additional specific research and monitoring activities to be carried out by the notifier in accordance with WSMPA objectives.

10. Except as authorized in Annex 91-XX/B, fishing activities are prohibited in the WSMPA.

11. Dumping or discharging of any waste or other matter, including fishing discards (reject and offal), and the introduction of any sewage within the WSMPA is prohibited.

12. Notwithstanding Conservation Measure 10-09, no fishing vessels may engage in transhipment[2] activities within the WSMPA, except in cases where vessels are involved in an emergency relating to safety of human life at sea or engaged in a search and rescue operation.

[2] Transhipment means the transfer of harvested marine living resources and any other goods or materials to or from fishing vessels.

Management Plan

13. The management measures and administrative arrangements for achieving the general and specific objectives of the WSMPA are specified in the WSMPA Management Plan (Annex 91-XX/B).

Research and monitoring

14. Research and monitoring to be authorised through CCAMLR within the WSMPA refers to research and monitoring activities by either fishing vessels or vessels conducting scientific research activities on Antarctic marine living resources in accordance with the relevant Conservation Measures, and shall be carried out consistent with Annex 91-XX/C, and in accordance with the objectives in paragraph 3 of this conservation measure and paragraph 5 of Conservation Measure 91-04.

15. Research and monitoring beyond the competence of CCAMLR are also encouraged within the geographical boundaries of the WSMPA. Such research and monitoring will be authorised by Members and conducted in accordance with relevant national legislation and international law, including the Protocol on Environmental Protection to the Antarctic Treaty.

16. Without prejudice to the review procedure set out in paragraphs 19 - 21 of this conservation measure, the Research and Monitoring Plan can be amended at any time by the Commission based on the advice of the Scientific Committee to ensure that it incorporates requirements for the following priority elements:

    (i) research and monitoring to advise on management of the WSMPA;

    (ii) research and monitoring appropriate for evaluating whether the objectives in paragraph 3 are being achieved; and

    (iii) research and monitoring appropriate for evaluating the effects of specific activities on the objectives in paragraph 3.

Reporting

17. Unless otherwise agreed by the Commission, every five years Members shall submit to the Secretariat, for review by the Scientific Committee, a report on their activities

conducted according to, or related to, the WSMPA Research and Monitoring Plan (Annex 91-XX/C) and the associated timeframe (Appendix 2), including any preliminary results. These reports shall be compiled by the Secretariat and provided to the Scientific Committee no later than 6 months in advance of its annual meeting in [XXXX] and every five years thereafter. The Secretariat shall make these reports available in a timely manner to Members on the CCAMLR website.

18. Notwithstanding paragraph 17 of this conservation measure, Members are encouraged to submit to the Secretariat as they become available:

    (i) data collected according or related to the MPA Research and Monitoring Plan, which shall be made available by the Secretariat to Members under normal rules and procedures for data access within CCAMLR;

    (ii) published papers or reports of relevance to the WSMPA, which shall be made available by the Secretariat in a timely manner to Members on the CCAMLR website.

Review of the WSMPA

19. Unless otherwise agreed by the Commission upon advice by the Scientific Committee, the Commission shall review this conservation measure every 10 years after its adoption. The review period shall last no longer than 2 years.

20. The review shall be based on the evaluation submitted by the Scientific Committee pursuant to paragraph 17 of Annex 91-XX/B and the reports of the Members pursuant to paragraph 19 (iii) of Annex 91-XX/B. The Commission will evaluate whether:

    (i) the objectives of the WSMPA are still relevant and being achieved;

    (ii) changes or adjustments to the provisions in this conservation measure are necessary, which may arise from new information pertinent to the design and/or management, including research and monitoring, of the WSMPA.

21. The Commission will decide whether any provisions of this conservation measure need to be changed or adjusted based on the outcome of the review. If no changes or adjustments are considered necessary, or no decisions on such changes and adjustments can be reached within the review period, the conservation measure will remain in force and unchanged.

Compliance and monitoring

22. CCAMLR Contracting Parties shall provide a copy of this conservation measure to all fishing vessels licensed to fish in the CAMLR Convention Area.

23. Members participating in the CCAMLR System of Inspection are encouraged to carry out surveillance and inspection activities within the MPA to verify compliance with this conservation measure and other applicable conservation measures.

24. For the purpose of monitoring naval traffic within the MPA, in accordance with Conservation Measure 10-04, Flag States must notify the Secretariat prior to entry of their fishing vessels into the WSMPA. The Flag State may permit or direct that such notifications be provided by the vessel directly to the Secretariat. Vessels conducting scientific research activities on Antarctic marine living resources in or transiting the area are encouraged to inform the Secretariat of their plans for intended passage through the WSMPA, and vessel details including name, Flag State, size, radio call sign and IMO number.

Cooperation with other States and Organisations

25. The Commission shall draw this conservation measure to the attention of any State that is not a Party to the CAMLR Convention, whose nationals or vessels intend to operate in the Convention Area.

26. The Commission shall communicate information about the WSMPA to the Antarctic Treaty Consultative Meeting, and shall encourage the Antarctic Treaty Consultative Meeting to take appropriate actions within its competence to contribute to the achievement of the general and specific objectives set forth in paragraph 3 of this conservation measure, particularly with regard to the designation and implementation of Antarctic Specially Protected Areas and Antarctic Specially Managed Areas in the Weddell Sea region and the management of human activities, including tourism activities.

27. Members are encouraged to work together to actively engage:

    (i) the International Maritime Organization (IMO) with regard to ship traffic, vessel safety, and environmental protection issues, and

(ii) other international Organisations,

to take complementary actions within their competence to contribute to the achievement of the objectives set forth in paragraph 3 of this conservation measure.

ANNEX 91-XX/A

Weddell Sea Marine Protected Area and Management Zone Boundaries

1. The Weddell Sea Marine Protected Area (WSMPA) is shown in Figure 1.

2. The WSMPA consists of 3 management zones as in paragraph 4 of this conservation measure.

3. The **General Protection Zone** (GPZ) is comprised of the area defined by the following boundaries (Figure 1). The description of the boundaries starts near the prime meridian and then follows clockwise:

   - Northern border 1: 64.0°S
   - Eastern border 1: 10.5°E
   - Northern border 2: 65.0°S
   - Eastern border 2: 17.0°E
   - Northern border 3: 68.75°S
   - Eastern border 3: 20.0°E
   - Southern border 1: Continental margin or shelf ice margin, respectively
   - Northern border 4: 64.0°S
   - Eastern border 4: 39.0°W
   - Southern border 2: 67.0°S
   - Western border 1: 43.0°W
   - Southern border 3: 65.25°S
   - Eastern border 5: 51°W
   - Northern border 5: 71.5°S
   - Western border 2: 20.0°W
   - Northern border 6: 68.75°S
   - Western border 3: 7.0°W
   - Northern border 7: 65.0°S
   - Western border 4: 1.0°W.

Note: As yet not indicated are the additional GPZ areas between 550 m and 2100 m water depth in the statistical subarea 48.6, which will provide reference areas for studies to advance the understanding about the ecosystem effects of longline fishing. These additional GPZ areas represent approximately XX per cent of the habitat for adult Antarctic toothfish in this statistical subarea.

4. The **Special Protection Zone** (SPZ) is comprised of in total ten areas (Figure 1).

(i) The SPZ includes nine demersal fish nesting sites with a buffer of 10 nautical miles (nm) surrounding each site.

Nesting Site No.	Latitude S	Longitude W
1	60.667	64.911
2	70.897	11.135
3	74.665	26.978
4	74.957	26.067
5	76.720	52.175
6	74.767	35.334
7	76.323	29.024
8	77.712	35.928
9	74.907	29.663

(ii) The SPZ also protects a shelf area, where particularly rich and dense sponge communities (=vulnerable marine ecosystems, VMEs) have been observed and where a rare, unique shallow (surface to –150 m water depth) sea floor area is occurring with high habitat heterogeneity and species richness. The boundaries of this shelf area are as follows:

- Northern border: 550 m isobath
- Eastern border: 10.5°W
- Southern border: continental margin and shelf ice margin, respectively
- Western border: 13.0°W.

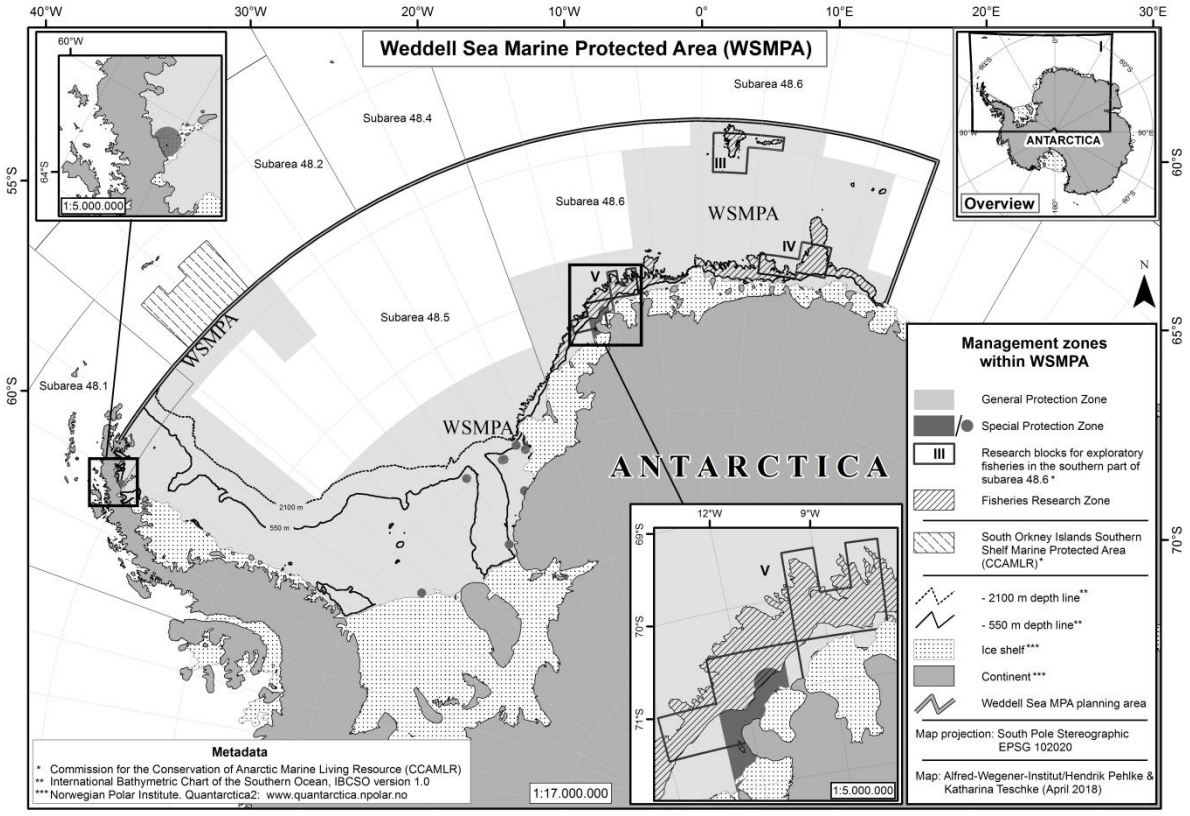
(iii) The areas and boundaries of the SPZ reflect a minimum area based on current knowledge on known and potential VMEs, nesting sites of demersal fish species, unique, rare or biodiverse and/or endemic habitats and features. If new information on locations of VMEs or such habitats and features within the WSMPA become available, notifications (for VMEs in accordance with Annex B of CM 22-06 or CM 22-07) and relevant scientific information are to be submitted to the Secretariat. The SPZ will then be amended by the Commission upon advice of the Scientific Committee by including the coordinates.

5. The **Fisheries Research Zone (FRZ)** consists of one or more areas / research blocks between 550 m and 2100 m water depth in the statistical subarea 48.6 (shown in Fig.

1). This represents approximately XX per cent of the habitat for adult Antarctic toothfish in this statistical subarea.

6. The Commission, on advice from the Scientific Committee and taking into account the objectives in paragraph 3, will identify FRZ areas / research blocks where members may conduct fishing activities as set out in paragraph 15 of Annex 91-XX/B. At the time of adoption of this conservation measure, three such research blocks (48.6_3, 48.6_4 and 48.6_5, identified by shaded boxes in Figure 1) had been agreed by CCAMLR and published in the schedule of Conservation Measures in force in the 2017/2018 season (ANNEX 41-04/A).

Figure 1. The Weddell Sea Marine Protected Area (WSMPA), including the boundaries of the General Protection Zone (light grey), the Special Protection Zone (dark grey) and the Fisheries Research Zone (shaded).



Note: As yet not indicated are the additional GPZ areas between 550 m and 2100 m water depth in the statistical subarea 48.6, which will provide reference areas for studies to advance the understanding about the ecosystem effects of longline fishing.

ANNEX 91-XX/B

Weddell Sea Marine Protected Area – Management Plan

Purpose of the Management Plan

1. The purpose of this Management Plan is to provide further details about the areas and features within the Weddell Sea Marine Protected Area (WSMPA) associated with the objectives in paragraph 3 of this conservation measure, as well as the management provisions and administrative arrangements for achieving them.

2. This Management Plan, prepared in accordance with the provisions of Conservation Measure 91-04, shall determine the management of activities within the WSMPA as required and in accordance with paragraphs 6 - 12 of this conservation measure.

Weddell Sea Marine Protected Area - Management Zones

3. The WSMPA includes three management zones designed to achieve the general and specific objectives of the WSMPA.

General Protection Zone (GPZ)

4. The General Protection Zone (consisting of the light grey areas in ANNEX 91-XX/A Figure 1), is designed to provide protection of representative examples of pelagic and benthic ecosystems, biodiversity and habitats, including key species, top predators (including the juvenile, sub-adult and adult life stages of *Dissostichus mawsoni*), and higher productivity areas, and the environmental and ecological conditions supporting them. The GPZ is also designed to increase resilience to climate change, and to support research and monitoring to increase our understanding about the Antarctic ecosystems and the effects of climate change and human activities on these ecosystems. The GPZ areas between 550 m and 2100 m water depth in the statistical subarea 48.6 provide reference areas for studies to advance the understanding about the ecosystem effects of longline fishing.

5. While contributing to the general objectives G 1, 3 and 4, the GPZ also aims at achieving the specific objectives S 1 – 4 and S 8, S 10 and S 11.

Special Protection Zone (SPZ)

6. The Special Protection Zone (consisting of the dark grey areas in ANNEX 91-XX/A Figure 1) provides enhanced protection of known and potential vulnerable marine ecosystems, unique, rare or biodiverse and/or endemic habitats and features. The SPZ also provides scientific reference areas to monitor the natural variability and long term changes on the Antarctic marine living resources, and to study effects of climate change and human activities on Antarctic ecosystems.

7. While contributing to the general objectives G 2 and 4, the SPZ also aims at achieving the specific objectives S 5-7, S 9 and S 11.

Fisheries Research Zone (FRZ)

8. The Fisheries Research Zone provides areas[3] to continue to inform the science-based management of the region's Antarctic toothfish stock (including population and life history hypotheses, biological parameters, ecological relationships, and variations in biomass and production of fish).

9. While contributing to the general objective G 4, the FRZ also aims at achieving the specific objective S 12.

Management activities

10. Fishing activities within the WSMPA are prohibited except as authorized in paragraphs 13 and 15 of this management plan.

11. Specific management provisions for the management zones are provided in paragraphs 13 (for the GPZ), 14 (for the SPZ) and 15 (for the FRZ).

12. Within the WSMPA, areas can be designated as Special Areas for Scientific Study following ice shelf retreat or collapse in accordance with the provisions and procedures set out in CM 24-04. In such Special Areas for Scientific Study, the measures set out within CM 24-04 shall replace those set out in paragraph 13 for areas in the GPZ, or paragraph 14 for areas in the SPZ, or paragraph 15 for areas in the FRZ (as applicable to the location of the Special Area) for the period of their designation. At

[3] At the time of adoption of this conservation measure, three such research blocks (48.6_3, 48.6_4 and 48.6_5, identified by shaded boxes in ANNEX 91-XX/A Figure 1) had been agreed by CCAMLR and published in the schedule of Conservation Measures in force in the 2017/2018 season (ANNEX 41-04/A).

the end of designation of any such Special Area for Scientific Study, the management provisions set out in paragraphs 13 - 15 shall apply.

13. Specific management provisions within the General Protection Zone are:

General Protection Zone	
Research fishing	(i) Directed fishing for *Dissostichus* spp. within the GPZ is prohibited except as follows. (ii) The Commission shall ensure that research fishing conducted in the GPZ is consistent with the WSMPA Research and Monitoring Plan (Annex 91-XX/C), which does not undermine the general and specific objectives of the WSMPA, and is in accordance with Conservation Measure 24-01 Annex B, with the following additional conditions: a. The catch for *Dissostichus* spp. irrespective of gear type is limited to 5 tonnes per vessel per year. b. Directed fishing for all other finfish taxa is prohibited. (iii) Directed fishing for all non-finfish taxa including krill is prohibited.
Other research on Antarctic marine living resources	(i) The use of any towed gear that interacts physically with the seafloor (e.g. beam/otter trawls, dredges, sledges) is limited to 1 square kilometer per vessel per season, subject to prior approval by the Commission. (ii) Other research within the GPZ consistent with the general and specific objectives of the WSMPA and the RMP of this conservation measure (Annex 91-XX/C) is authorised by the Commission and will be coordinated on the basis of the annual progress reports in the context of the RMP (see paragraphs 9 - 11 in Annex 91-XX/C) to ensure that the activities are mutually supportive and do not hinder or disturb each other.

14. Specific management provisions for activities within the Special Protection Zone are:

Special Protection Zone	
Research fishing	(i) Fishing activities are prohibited.
Other research on Antarctic marine living resources	(i) The use of towed gear that interacts physically with the seafloor (e.g. beam/otter trawls, dredges, sledges) is prohibited. (ii) Other research within the SPZ consistent with the general and specific objectives of the WSMPA and the RMP of this conservation measure (Annex 91-XX/C) is authorised by the Commission and will be coordinated on the basis of the annual progress reports in the context of the RMP (see paragraphs 9 - 11 in Annex 91-XX/C) to ensure that the activities are mutually supportive and do not hinder or disturb each other.

15. Specific management provisions for activities within the Fisheries Research Zone are:

	Fisheries Research Zone
Research fishing	(i) The Commission shall ensure that research fishing conducted in the FRZ is in accordance with the provisions for research fishing set out for the GPZ (paragraph 13). (ii) Directed fishing for *Dissostichus* spp. will be managed and organised by CCAMLR in

	Fisheries Research Zone
	accordance with established CCAMLR procedures and conservation measures, also considering the general and specific objectives of the WSMPA. (iii) Directed fishing for all non-finfish taxa including krill is prohibited.
Other research on Antarctic marine living resources	(i) Other research within the fished areas of the FRZ consistent with the general and specific objectives of the WSMPA and the RMP of this conservation measure (Annex 91-XX/C) is authorized by the Commission and will be coordinated on the basis of the annual progress reports in the context of the RMP (see paragraphs 9 - 11 in Annex 91-XX/C) to ensure that the activities are mutually supportive and do not hinder or disturb each other.

Management and Administrative Arrangements

16. The responsibilities of the Commission include the following pursuant to this conservation measure:

    (i) ensure that future conservation measures do not compromise the objectives of the MPA, as set forth in paragraph 3 of this conservation measure;

    (ii) manage the WSMPA, including the assessment of activities to be carried out in the WSMPA according to paragraphs 6 – 12 of this conservation measure;

    (iii) authorize Research and Monitoring activities according to paragraphs 14 - 16 of this conservation measure, including any amendment of the Research and Monitoring Plan according to paragraph 16 of this conservation measure;

    (iv) communication on the WSMPA according to paragraphs 25 - 26 of this conservation measure, inter alia, to communicate with other Organisations to promote consistency of complementary initiatives, protection measures, or activities being pursued or managed by such Organisations, with this conservation measure, as appropriate;

    (v) consider advice from SC-CAMLR and SCIC relevant to the review the WSMPA according to paragraphs 19 - 21 of this conservation measure.

17. The responsibilities of the Scientific Committee include the following pursuant to this conservation measure:

    (i) review and provide advice to the Commission regarding proposals for research and monitoring in the WSMPA, noting whether the proposed research and monitoring is consistent with Annex 91-XX/C and the objectives of the WSMPA as

identified in paragraph 3 of this conservation measure;

(ii) review reports of research and monitoring activities that have been undertaken, and advise the Commission on issues related to the operationalization of the WSMPA Management Plan and Research and Monitoring Plan;

(iii) advise the Commission on any recommended changes or adjustments, which may arise from new information pertinent to the design and/or management, including research and monitoring, of the WSMPA;

(iv) recommend research designs to optimize contributions to the toothfish tagging program by vessels fishing in the Fishery Research Zone and review any research plans submitted under Conservation Measure 41-04, *inter alia*, with a view to gathering data for testing and verifying the stock and population hypotheses for *Dissostichus mawsoni* in statistical area 48;

(v) provide recommendations and advice regarding the optimal use and equipping of fishing vessels to collect data needed to support research and monitoring being undertaken in the WSMPA;

(vi) prepare an evaluation, based on available data and at least every 10 years following the establishment of the WSMPA, to ensure that research goals and the general and specific objectives of the WSMPA are being met; and

(vii) prepare a report as a basis for each of the reviews of this conservation measure for the Commission according to paragraph 20 of this conservation measure.

18. The responsibilities of the Secretariat include the following:

(i) warehouse, manage and disseminate information and data that are pertinent to the development, management, and review of the WSMPA (e.g. data collected during research and monitoring surveys);

(ii) support Members' monitoring and compliance of activities within the WSMPA; and

(iii) provide URLs on the CCAMLR website that link to the management plans, maps, and coordinates for Antarctic Specially Protected Areas (ASPAs) and Antarctic Specially Managed Areas (ASMAs) within or adjacent to the WSMPA.

19. The responsibilities of Members include the following:

(i) when possible and practicable, participate in and cooperate in the conduct of research and monitoring consistent with activities outlined in Annex 91-XX/C;

(ii) take action as appropriate based on advice from the Scientific Committee related to paragraph 17 above;

(iii) report on activities undertaken in the WSMPA as set out in paragraphs 17 - 18 of this conservation measure and in Annex 91-XX/C, including provision of:

a. catch, effort and biological data to the Secretariat in accordance with the catch and effort reporting systems in the Conservation Measures relevant to the activity;

b. the results of those activities to the Scientific Committee for their review in accordance with the requirements in Conservation Measures relevant to those activities.

ANNEX 91-XX/C

Weddell Sea Marine Protected Area – Research and Monitoring Plan

Purpose of the Research and Monitoring Plan

1. The purpose of this Research and Monitoring Plan (RMP) is to support the implementation of the specific objectives and the review of the WSMPA. The RMP identifies and specifies the research pursuant to / consistent with the specific objectives of the WSMPA, and the monitoring in order to evaluate to which degree these specific objectives are being achieved (cf. Appendix 1). Research and monitoring provide data and information to evaluate the potentially adverse effects of specific activities and whether the management measures are being effective. Other research and monitoring activities, that are consistent with the specific objectives of the WSMPA but not explicitly outlined here, are encouraged.

Responsibilities for and participation in the implementation of the RMP

2. The responsibility for the WSMPA RMP lies with the Commission. Therefore, all Members are encouraged:

   (i) to participate in the long-term development and implementation of the WSMPA RMP;

   (ii) to undertake research and monitoring governed by CCAMLR Conservation Measures as specified in this RMP.

3. Research and monitoring proposals according to paragraphs 14 - 16 of this conservation measure to be carried out in the WSMPA should be examined and reviewed by the relevant CCAMLR Working Groups with a view to:

   (i) ensuring that the proposed research/monitoring is in accordance with and does not undermine the objectives of the WSMPA;
   (ii) establishing that the proposed research/monitoring is likely to increase our knowledge about the Antarctic marine living resources, habitats and the functioning of the ecosystems preserved by the WSMPA, including those which are used in a rational manner;
   (iii) streamlining proposals and activities into a coherent WSMPA RMP for final consideration and adoption by the Scientific Committee at its annual meeting at least one year in advance of any field work.

4. In the first 10 years after adoption of the WSMPA, CCAMLR will hold up to 4 international expert workshops to exchange information about any planned activities in the WSMPA to coordinate these activities (incl. identification of any gaps) in the implementation of the RMP and to prepare the WSMPA R&M reports and assessments (for details see timetable in Appendix 2).

5. The most important steps in the implementation of this RMP in the first 10 years after adoption of this conservation measure are outlined in Appendix 2.

Research and Monitoring relevant to the WSMPA

6. Research will be conducted within this WSMPA in order to improve our knowledge of the Antarctic marine living resources, habitats and marine ecosystems in the WSMPA, including their natural variability and the direction in which they develop in the future. Such research will also help in assessing to what extend observed changes can be attributed to climate change and/or fishing activities (or other natural or anthropogenic changes, incl. combined effects).

7. Monitoring will be conducted under this RMP in order to serve as a basis for:

   (i) assessing whether the areas protected by the WSMPA are adequate to fulfill the specific objectives and to what extent the specific objectives are being met and have been achieved;
   (ii) assessing the effectiveness and contributing to the review of the management provisions;
   (iii) evaluating the contribution of the WSMPA to Article II (3) of the Convention.

Principal issues for Research and Monitoring in the WSMPA

8. The research and monitoring activities in the WSMPA should seek to address the following questions. This guidance is not exhaustive and can be further elaborated, expanded or specified by CCAMLR, e.g. in the context of the international expert workshops foreseen in the first 10 years after adoption of this conservation measure.

   (i) Is the WSMPA conserving an adequate proportion of all benthic and pelagic ecosystems, habitats and species?

   (ii) Are the WSMPA boundaries adequate to achieve the specific objectives and does the WSMPA continue to adequately encompass the populations, features and areas included pursuant of the WSMPA objectives?

   (iii) Has the WSMPA effectively contributed to the achievement of Article II (3) of the Convention?

(iv) What is the impact of specific anthropogenic activities on the WSMPA specific objectives?

(v) Are the ecosystems, habitats or species included in the WSMPA affected by climate change and/or fishing activities (or other natural changes or other anthropogenic effects)? Are there any combined effects?

(vi) Is there further information about the ecological importance of the habitats, processes, populations, life-history stages, or other features included and protected by the WSMPA?

(vii) Does the structure and function of the marine ecosystems protected by the WSMPA, including populations or subpopulations and life cycle stages of marine organisms that occur or forage inside the WSMPA, differ from those outside the WSMPA[4]?

(viii) Can effects of research and exploratory fishing operations and/or climate change on the Antarctic marine living resources be observed in the WSMPA?

(ix) Do habitats or ecosystems where fishing is prohibited (e.g. in reference areas) differ from those in areas where fishing is allowed?

(x) Are WSMPA communities stable and resilient, especially ecosystems, habitats, populations or subpopulations and life cycle stages of key species (e.g. Antarctic krill, ice krill, Antarctic toothfish, Antarctic silverfish)?

(xi) Are the WSMPA specific objectives being achieved and are they still valid?

Progress report in the context of the RMP

9. Members should ensure that the data and results of the research and monitoring carried out by their scientists in the context of this WSMPA RMP will be submitted to the Secretariat.

10. Members involved in the WSMPA research and monitoring activities are invited to deliver an annual R&M up-date to CCAMLR through WG-EMM. These up-dates should:

(i) summarise the research and monitoring activities of the previous year and, as far as possible, the data and (preliminary) results obtained;

(ii) outline the plans, goals and arrangements for research and monitoring activities to be carried out in the next year;

(iii) recommend, if deemed necessary, actions to be taken by CCAMLR regarding the objectives, restricted and prohibited activities in the WSMPA and management of the WSMPA as set out in this conservation measure.

[4] Where research and monitoring outside the WSMPA is necessary to assess the achievement of the specific objectives within the WSMPA, this research and monitoring, including their location, have to be specified.

11. In the fourth and the ninth year after adoption of the WSMPA (see Appendix 2), the annual R&M up-dates will be combined and extended into a WSMPA report in accordance with the format agreed at SC-CAMLR-XXXI (2012), § 5.33 and Annex 6, §§ 3.71 – 3.75.

Data usage, storage and accessibility in the context of the RMP

12. The data and results obtained by the research and monitoring activities specified in this RMP will be taken into account when:

(i) preparing the WSMPA report according to paragraphs 17 and 18 of this conservation measure;

(ii) reviewing the WSMPA according to paragraphs 19 - 21 of this conservation measure;

(iii) planning and implementing the research and monitoring activities in the subsequent cycle.

13. All data resulting from research and monitoring activities will be handled in accordance with the Rules for Access and Use of CCAMLR Data and will be stored in a dedicated WSMPA Geographical Information System (WSMPA-GIS).

Appendix 1

Research[5] & Monitoring to assess the achievement of the specific objectives of the WSMPA

Pelagic conservation objectives

1. Protection of representative examples of pelagic and sea ice ecosystems and habitats, such as the unique, persistent open ocean areas associated with the Maud Rise submarine plateau, or the areas along the shelf ice edge in the eastern and southern part of the WSMPA with no or very low sea ice cover throughout the austral summer.

Parameters / indicators to assess the achievement of the above mentioned objective[6]:

- sea ice concentration and thickness (incl. polynyas) as an indicator for sea ice ecosystems and habitats and unique, persistent open ocean areas
- abiotic indicators for primary production in pelagic and open water areas
- abundance / biomass of zooplankton (meso- and macro-zooplankton, micronekton) as biotic indicator for primary production in pelagic and open water areas
- abundance / biomass of adult and larvae of Antarctic krill, ice krill and Antarctic silverfish as indicator for the distribution of mid-trophic level key pelagic species
- size of penguin colonies as indicator for production in the pelagic, open water areas they use for foraging

Location / areas / zones:

- inside and outside the WSMPA (see footnote 6 above) - indicators for sea ice ecosystems and habitats and unique, persistent open ocean areas; abiotic indicators for primary production
- selected areas of the WSMPA (e.g. around Maud Rise or in front of Filchner ice shelf) in comparison with data from outside the WSMPA; biotic indicators

Research and monitoring to assess the achievement of the above mentioned objective:

- research based on the indicators (mentioned above) on pelagic and sea ice ecosystems and habitats protected by the WSMPA to improve the knowledge of their protection and representativeness to those outside of the WSMPA (see footnote 6 above)
- improvement of models to better predict sea ice concentration and thickness, sea water temperature, salinity, dissolved oxygen, inorganic nutrients and chlorophyll-a concentration in the WSMPA

2. Protection of Antarctic krill (*Euphausia superba*), ice krill (*Euphausia crystallorophias*) and Antarctic silverfish (*Pleuragramma antarctica*) as key species of mid-trophic level in

[5] Research in accordance with paragraphs 14 -16 of this conservation measure

[6] Unless stated otherwise, the baseline for these assessments will be the data and information contained in the scientific background document for the WSMPA (*reference to be inserted*).

the Antarctic food web as well as important areas / habitats for their life cycle, e.g. spawning/nursery areas.

Parameters / indicators to assess the achievement of the above mentioned objective:

- abundance and biomass of adult and larvae of Antarctic krill, ice krill and Antarctic silverfish as indicator for the distribution of key species in the Antarctic food web

Location / areas / zones:

- selected areas of the WSMPA (e.g. around Maud Rise or in front of Filchner ice shelf)

Research and monitoring to assess the achievement of the above mentioned objective:

- in situ research into the ecology and population dynamics of Antarctic krill, ice krill and Antarctic silverfish
- life cycle analyses of Antarctic krill, ice krill and Antarctic silverfish with specific focus on identifying important areas / habitats for these species, e.g. spawning/nursery areas, and how they could be protected

3. Protection of essential habitats for top predators such as flying seabirds, penguins and seals.

Parameters / indicators to assess the achievement of the above mentioned objective:

- development of emperor (*Aptenodytes forsteri*) and Adélie (*Pygoscelis adeliae*) penguin colonies as indicator for the productiveness in their foraging areas
- development of flying seabird colonies, including changes of feeding and foraging areas
- development of seal reproduction sites on sea ice
- changes in the distribution, abundance and important feeding areas (hotspots) of seals and penguins

Location / areas / zones:

- selected areas of the WSMPA, e.g. foraging areas around penguin and flying seabird colonies or the Filchner overflow region as an important feeding area (hotspots) for seals

Research and monitoring to assess the achievement of the above mentioned objective:

- regular surveys and remote sensing observations of the flying seabird and emperor and Adélie penguin colonies protected by the WSMPA
- research, including remote sensing, aerial photography and observations of underwater-vocalisation with acoustic hydrophones into the seal populations and reproduction sites protected by the WSMPA

Benthic conservation objectives

4. Protection of representative examples of benthic ecosystems and habitats such as the ecologically important sponge associations on the shelf in the eastern and southern part of the WSMPA.

Parameters / indicators to assess the achievement of the above mentioned objective:

- distribution, composition and abundance of meio- and macrobenthic assemblages (incl. important sponge and suspension feeding communities) as an indicator to ensure that representative examples are protected by the WSMPA

Location / area / zone:

- selected areas within the WSMPA (e.g. on the eastern and southern shelf areas of the WSMPA) in comparison with selected areas outside the WSMPA (see footnote 3 above)

Research and monitoring to assess the achievement of the above mentioned objective:

- Surveys on benthic communities with quantitative, semi-quantitative and non-invasive methods, within and outside of the WSMPA

5. Protection of the integrity and life cycles of unique and diverse suspension feeding assemblages, particularly large benthic sponge associations, and thereby maintaining the associated benthic communities as efficient sources for recolonization.

Parameters / indicators to assess the achievement of the above mentioned objective:

- (1) distribution, abundance and composition of suspension feeding assemblages
- (2) distribution, abundance and composition of other meio- and macrobenthic assemblages

Location / area/ zone:

- (1) selected areas on the eastern and southern shelf areas of the WSMPA
- (2) selected areas of the WSMPA

Research and monitoring to assess the achievement of the above mentioned objective:

- Benthic surveys with quantitative, semi-quantitative or non-invasive methods
- research into recolonization sources and strategies

6. Protection of rare and unique shallow (surface to -150 m water depth) sea floor areas with high habitat heterogeneity and species richness in order to preserve the ecological function of these areas as “stepping stones” and sources for recolonization for associated communities and species.

Parameters / indicators to assess the achievement of the above mentioned objective:

- distribution, composition and abundance of macrobenthos in shallow sea floor areas in order to detect any changes in habitat heterogeneity and species turnover over time

Location / areas/ zones:

- 'Hillman' area of the Norsel bank

Research and monitoring to assess the achievement of the above mentioned objective:

- Observations (benthic surveys) with non-invasive techniques/ methods
- Research on whether and how these rare and unique shallow sea floor areas are biogeographically connected to other similar areas within and outside of the WSMPA (see footnote 6 above).

7. Protection of spawning areas and nesting sites of demersal fish species including areas where fish have been observed exhibiting parental care.

Parameters / indicators to assess the achievement of the above mentioned objective:

- location and number of spawning areas and nesting sites of demersal fish to ensure their adequate protection

Location / areas/ zones:

- selected areas of the WSMPA

Research and monitoring to assess the achievement of the above mentioned objective:

- surveys of the seafloor of the WSMPA with non-invasive systems in order to observe existing and to identify additional spawning areas and nesting sites of demersal fish

Pelagic and / or benthic conservation objectives

8. Protection of higher productivity areas to support key ecosystem processes and functional integrity of the ecosystems.

Parameters / indicators to assess the achievement of the above mentioned objective:

- sea ice concentration and thickness (incl. polynyas, sea water temperature, salinity, dissolved oxygen, inorganic nutrients and chlorophyll-a concentration) as abiotic primary production indicators to assess the development and the protection of higher productivity areas in the pelagic realm
- abundance / biomass of zooplankton (meso- and macro-zooplankton, micronekton) as biotic primary production indicator to assess the development and the protection of higher productivity areas in the pelagic realm
- abundance / biomass of adult and larvae of Antarctic krill, ice krill and Antarctic silverfish as indicator of higher productivity areas in the pelagic realm

- size and population development of colonies and foraging areas of top predators (flying seabirds, penguins and seals) as indicator to assess the development and the protection of higher productivity areas in the pelagic realm
- distribution, composition and abundance of important sponge and suspension feeding communities as an indicator to assess the development and the protection of higher productivity areas in the benthic realm
- distribution, abundance, biomass and stock size of top predators (e.g. Antarctic toothfish) as indicator to assess the development and the protection of higher productivity areas in the benthic realm

Location / areas/ zones:

- the whole WSMPA - abiotic and biotic primary production indicators
- selected areas of the WSMPA - above mentioned biological indicators

Research and monitoring to assess the achievement of the above mentioned objective:

- research based on field studies and modelling of the higher productivity areas protected by the WSMPA and the support they provide to key ecosystem processes and functional integrity of the ecosystems in the WSMPA

9. Protection of marine ecosystems and habitats vulnerable to the effects (including cumulative effects) of climate change, fishing and other human activities and critical to the function of local ecosystems, in order to maintain and/or enhance resilience and adaptive capacity.

Parameters / indicators to assess the achievement of the above mentioned objective:

- distribution of indicator species (e.g. penguins and seals as top predators; Antarctic krill, ice krill and Antarctic silverfish in the pelagic realm; Antarctic toothfish and important sponge and suspension feeding communities for the benthic realm) for marine ecosystems and habitats vulnerable to the effects (including cumulative effects) of climate change, fishing and other human activities and critical to the function of local ecosystems

Location / areas/ zones:

- Selected areas of the WSMPA, e.g. areas with benthic three-dimensional suspension feeder communities in the eastern and southern part of the WSMPA or marine areas important for the foraging and life cycle of top predators.

Research and monitoring to assess the achievement of the above mentioned objective:

- combining the results of:

  (1) research (incl. habitat suitability modelling) to further identify those marine ecosystems and habitats, which are critical to the function of local ecosystem and most vulnerable to the effects (including cumulative effects) of climate change, fishing and other human activities

  (2) research into the resilience and adaptive capacity of those marine ecosystems and habitats identified under (1)

(3) research to identify the areas protected by the WSMPA, where climate change, fishing and other human activities are expected to have the most severe effects (e.g. the Filchner overflow zone)

10. Protection of Antarctic toothfish (*Dissostichus mawsoni*) as a top predator including, as far as possible, all life history stages and their habitats.

Parameters / indicators to assess the achievement of the above mentioned objective:

- (1) distribution, abundance, biomass, proportion of mature fish and stock size of Antarctic toothfish as part of the data collection / monitoring requirements for the exploratory toothfish fisheries in the FRZ (as reference for a fished area)
- (2) dedicated data collection / monitoring for toothfish in the GPZ
- (3) distribution, abundance and biomass of early life history (larvae, pelagic juveniles) stages of Antarctic toothfish.

  All data collected will also be used to test and verify the *Dissostichus mawsoni* population and stock hypotheses developed by CCAMLR for statistical area 48.

Location / area / zone:

- (1) Fisheries Research Zone (FRZ)
- (2) within selected areas of the GPZ, which CCAMLR will identify and approve
- (3) within selected slope and shelf areas of the WSMPA
- (4) within selected areas outside the WSMPA (see footnote 3 above) in order to contribute to the testing and verification of the *Dissostichus mawsoni* population and stock hypotheses developed by CCAMLR for statistical area 48

Research and monitoring to assess the achievement of the above mentioned objective:

- research with traditional methods (e.g. longline surveys, trawls), vertical longlines and new underwater observatory methods (e.g. electronic tags) on the ecology and the population composition / dynamics of Antarctic toothfish to allow comparison of fished and unfished areas within the WSMPA
- autecological research on individual Antarctic toothfish specimens (e.g. via analyses of otoliths and/or electronic pop-up GPS tagging) to reveal their life history characteristics and identify migration routes and spawning grounds

Research objectives

11. Provision of scientific reference areas to monitor the natural variability and long-term changes on Antarctic marine living resources and to study the effects of climate change and human activities on Antarctic ecosystems.

Parameters / indicators to assess the achievement of the above mentioned objective:

- key oceanographic parameters and climate change indicators (temperature, direction and velocity of water masses will be measured in the Filchner Overflow Area as indicators to study the effects of climate change in this region of the WSMPA)

- abundance and biomass of adult and larvae of Antarctic krill, ice krill and Antarctic silverfish as indicator for the natural variability and long-term changes on key Antarctic marine living resources in the pelagic realm
- data on top predators (e.g. Antarctic toothfish) and other parameters (to be determined) within and outside the FRZ to study the effects of fishing on Antarctic ecosystems and food chains.

Location / areas/ zones:

- Areas in the GPZ and SPZ

Research and monitoring to assess the achievement of the above mentioned objective:

- in situ observation, supported by modelling, of the natural variability and long-term changes on the Antarctic marine living resources based on key oceanographic parameters and climate change indicators in the Filchner Overflow area
- comparative studies on effects of climate change and human activities on Antarctic marine living resources and the Antarctic ecosystems within and outside of the scientific reference areas and the FRZ established by/ in the WSMPA

12. Provision of areas for fisheries research in the form of a dedicated Fisheries Research Zone to enhance the understanding of the fish stocks, to test and verify the stock and population hypotheses developed by CCAMLR for *Dissostichus mawsoni* in statistical area 48, and to study the effects of fishing activities

Parameters / indicators to assess the achievement of the above mentioned objective:

- distribution, abundance, biomass, length composition and stock size of adult Antarctic toothfish as part of the data collection / monitoring requirements for the exploratory toothfish fisheries
- distribution, abundance, biomass, length composition of Antarctic toothfish life stages (eggs, juvenile, sub-adult)
- genome composition, genetic characteristics and ecophysiological adaptations of selected Antarctic toothfish specimens (all life stages)
- composition of benthic ecosystems (especially macrobenthic suspension feeders)in fished and unfished areas

Location / area/ zone:

- fished and unfished (reference) areas in the Fisheries Research Zone (FRZ) and the General Protection Zone (GPZ)
- comparative studies outside the WSMPA and in other statistical subareas of area 48

Research and monitoring to assess the achievement of the above mentioned objective:

- Fisheries-based research in accordance with Conservation Measures 41-04 as well as the Research Plan and Tagging Program described in Conservation Measure 41-01, Annex 41-01/B and Annex 41-01/C respectively
- Comparative genomic, genetic and ecophysiological analyses of Antarctic toothfish specimens (all life stages) caught inside and outside the WSMPA
- Benthic surveys, e.g. with imaging equipment

The most important steps in the operationalization of the WSMPA Research and Monitoring Plan

Appendix 2

	1 year	2 year	3 year	4 year	5 year	6 year	7 year	8 year	9 year	10 year
Jan					***POLARSTERN cruise with 20 CCAMLR experts*** for research and monitoring activities					***POLARSTERN cruise with 20 CCAMLR experts*** for research and monitoring activities
Feb	***1st CCAMLR International R&M expert WS*** - review of who is doing what, where and when in terms of research and monitoring in the context of the WSMPA			***CCAMLR to prepare 1st WSMPA report***					***CCAMLR to prepare 2nd WSMPA report***	***CCAMLR to compile info and start preparing documentation for WSMPA review***
Mar										
Apr				***2nd CCAMLR International R&M expert WS*** - review of R&M activities and of draft WSMPA report - preparation of 1st *POLARSTERN* cruise with CCAMLR experts					***3rd International CCAMLR R&M expert WS*** - review of R&M activities and of draft WSMPA report - assessment of achievement of General and Specific Objectives - planning for 2nd *POLARSTERN* cruise with CCAMLR experts to fill R&M gaps	***4th International CCAMLR R&M expert WS*** - finalisation of draft assessment report concerning achievement of General and Specific Objectives; - review of draft scientific documentation for WSMPA review
May										
Jun										

	1 year	2 year	3 year	4 year	5 year	6 year	7 year	8 year	9 year	10 year
Jul	Annual national R&M up-dates to EMM	Annual national R&M up-dates to EMM	Annual national R&M up-dates to EMM	Annual national R&M up-dates to EMM WSMPA report to EMM	Annual national R&M up-dates to EMM	Annual national R&M up-dates to EMM	Annual national R&M up-dates to EMM	Annual national R&M up-dates to EMM	Annual national R&M up-dates to EMM WSMPA report to EMM	Annual national R&M up-dates to EMM Scientific WSMPA review documentation to EMM
Aug										
Sep										
Oct	Reporting to SC-CAMLR	Reporting to SC-CAMLR	Reporting to SC-CAMLR	WSMPA report to SC-CAMLR	Reporting to SC-CAMLR	Reporting to SC-CAMLR	Reporting to SC-CAMLR	Reporting to SC-CAMLR	WSMPA report to SC-CAMLR	Scientific WSMPA review documentation to SC-CAMLR Overall WSMPA review documentation to Commission ***CCAMLR review of WSMPA***
Nov										
Dec				***POLARSTERN cruise with 20 CCAMLR experts*** for research and monitoring activities					***POLARSTERN cruise with 20 CCAMLR expert*** for research and monitoring activities	