

## Annex R

### Report of the Working Group on Whale Sanctuaries

**Members:** Parsons (Convenor), Almeida, Bell, Bjørge, Brierley, de la Mare, DeMaster, Double, Fortuna, Goodman, Hielscher, Iñiguez, Leaper, Lundquist, Matsuoka, Morita, Moronuki, Reyes, Rodriguez Fonseca, Rojas-Bracho, Rose, Suarez, Suydam, Terai, Walløe, Weinrich.

#### 1. INTRODUCTORY ITEMS

##### 1.1 Introductory remarks

Parsons welcomed members to the Working Group.

##### 1.2 Election of Chair

Parsons was elected Chair.

##### 1.3 Appointment of Rapporteur

Rose was appointed rapporteur.

##### 1.4 Adoption of Agenda

The adopted Agenda is given as Appendix 1.

##### 1.5 Review of available documents

One document was available for the sub-committee to review: SC/67b/SAN01.

#### 2. NEW SANCTUARY PROPOSALS

There were no new sanctuary proposals submitted to the Committee this year.

#### 3. REVIEW OF THE SOUTHERN OCEAN SANCTUARY MANAGEMENT PLAN

SC/67b/SAN01 is a draft Southern Ocean Sanctuary Management Plan (Plan). The Schedule amendment establishing the Southern Ocean Sanctuary (SOS) requires the Sanctuary to be reviewed at succeeding ten-year intervals, unless otherwise revised by the Commission. The first review of the SOS took place in 2004 and the second review was completed in 2016. In 2014 the Commission adopted the following eight objectives:

- (1) Contribute to the rehabilitation of a marine ecosystem damaged by the over-exploitation of whales and allow for the restoration of a complex of whale species and populations.
- (2) Secure a long-term satisfactory habitat for cetaceans and other marine life.
- (3) In combination with the Indian Ocean Sanctuary, fully protect at least one population of each of the great whales throughout its migratory range and life-cycle, i.e. on feeding and breeding grounds, to provide for their long-term conservation.
- (4) Provide a reference area to allow for the collection of information on levels and trends on unexploited and recovering whale populations.
- (5) Allow for the monitoring of the recovery of ecosystems without their being disturbed by further commercial whaling
- (6) Allow for coordinated research on the effects of environmental change on whale stocks.
- (7) Allow for the Comprehensive Assessment of the effects of setting zero catch limits on whale stocks.

- (8) Allow for application of the Revised Management Procedure (RMP) to be phased in over limited geographic ranges and species.

The Commission also provided Terms of Reference for the review to be undertaken by the Scientific and Conservation Committees. The Scientific Committee review made the following recommendations (IWC, 2017):

- Each SOS objective should be linked to an appropriate performance measure.
- Appropriate performance measures for the SOS should be developed. These should link the objectives of the SOS with field monitoring programmes.
- Performance measures for some scientific objectives could draw on existing mechanisms, such as the In-Depth Assessment process.
- The Scientific Committee could provide suggestions for appropriate performance measures in relation to the scientific objectives of the SOS to the Commission in future, should the Commission request it.
- Outputs from existing and planned research programmes should be incorporated into the development of a management plan for the SOS and subsequent monitoring programmes.
- A Management Plan for the SOS should be developed to clearly outline the broad strategies and specific actions needed to achieve SOS objectives. This information could be collated, based on the Committee's recent relevant activities.
- Review criteria in the Management Plan should be linked to performance measures.
- The Management Plan should be refined periodically.

These recommendations were taken into account in developing this draft Plan. However, it was noted that, while the draft Plan does contain performance measures, it does not contain criteria for its own review.

The purpose of the Plan is twofold: (1) to inform the Commission and public about the sanctuary objectives and actions planned for the next ten years; and (2) to propose strategies toward the achievement of the SOS's goals using the best means available and provide clear performance measures for each proposed action.

The Plan is designed to guide the mitigation of threats faced by whales and the assessment of their recovery for the next ten years in the SOS. The operative part of the Plan is a Research and Action Plan that involves assessing and addressing threats and research on the recovery of whale populations and their habitats. The Research and Action Plan is structured based on the Commission's agreed objectives for the SOS. Each objective is linked directly to a measurable objective, action or approach and performance measure.

There was considerable discussion in the working group about the policy and scientific aspects of the draft Plan. It was clarified that this *is* a draft and the Committee is meant only to review, comment and potentially offer advice to the Commission on the scientific dimensions of the plan. Given this, the Working Group **agreed** to append the draft Plan (SC/67b/SAN01, now Appendix 2), with Objectives 1 and 8 (relating to policy) and the chapeau of Objective 5 redacted,

to clarify that the Committee did not address these elements of the Plan.

A statement from the Government of Japan regarding its position on the SOS and this draft Management Plan is attached as Appendix 3.

The Working Group also discussed the potential contributions that data and results from the Japanese scientific whaling programme in the Southern Ocean (NEWREP-A) could make to the objectives and goals of the Plan. The working group **agreed** to amend SC/67b/SAN01 (see Appendix 2) to refer to NEWREP-A under Objectives 4-6.

The draft Plan recommends making it a standing agenda item of the Committee to report progress on the Plan to the Commission's biennial meetings. It was clarified that, given the working group is not convened at every Committee annual meeting, this should be more a standing directive, to cross-reference relevant deliberations, recommendations, and advice from the various sub-committees and working groups to the Plan's objectives. These relevant discussions should be highlighted in each year's Committee report for the Commission, to allow the latter to monitor and measure progress on the scientific aspects of the Plan.

*Attention: SC, C-A*

*In its discussions of the draft Management Plan for the Southern Ocean Sanctuary (SOS), the Working Group recommended the inclusion of a new standing item on the agendas of all of the Committee's relevant sub-committees and working groups: 'new information relevant to the SOS Management Plan'. This will assist the Commission in monitoring and measuring progress on the scientific objectives of the Plan.*

It was noted that Objectives 2-7 and the Plan's related measurable objectives, approach/actions and performance measures are highly relevant to the work of the Committee. After discussion, it was **agreed** that it would be appropriate to add language referring to the IMO Polar Code for shipping, best placed under Objective 2 (see Appendix 2). In response to comments regarding the lack of specificity of some performance measures under this and some other

objectives, it was noted that there is no way to ensure outcomes of overly specific performance measures (such as a target population number) in a management plan of this nature. Therefore, performance measures that monitor progress and determine, in a binary manner (yes/no), whether progress is being made on an objective, or an objective has been reached, are more durable and practical.

*Attention: C-A, CC*

*The Working Group endorsed the measurable objectives, approach/actions and performance measures of Objectives 2 through 7 of the draft Southern Ocean Sanctuary (SOS) Management Plan, attached to Annex R as Appendix 2. These measurable objectives, approach/actions and performance measures are related to science and therefore within the remit of the Scientific Committee.*

#### 4. RESPONSES TO REQUESTS FROM THE COMMISSION ON SCIENTIFIC ASPECTS OF SANCTUARIES

There was no new information on this agenda item.

#### 5. WORK PLAN AND BUDGET

##### 5.1 Work plan for 2019-2020

The Working Group **agreed** that the two-year work plan would include considering new information related to the Southern Ocean Sanctuary Management Plan and providing responses to requests from the Commission on scientific aspects of sanctuaries (Table 1).

##### 5.2 Budget requests for 2019-2020

There were no budgetary implications for the work plan, so no budget requests were considered.

#### 6. ADOPTION OF REPORT

The report was adopted at 19:01hrs on 30 April 2018.

#### REFERENCE

International Whaling Commission. 2017. Report of the Scientific Committee. *J. Cetacean Res. Manage. (Suppl.)* 18:1-109.

Table 1

Work plan for SAN.

Topic	Intersessional 2018/19	2019 Annual Meeting (SC/68a)	Intersessional 2019/20	2020 Annual Meeting
Consider new information related to the Southern Ocean Sanctuary Management Plan	-	Cross-reference relevant information from other sub-committees and working groups	-	Cross-reference relevant information from other sub-committees and working groups
Provide responses to requests from the Commission on scientific aspects of sanctuaries	-	Review and advise in report	-	Review and advise in report

## Appendix 1

### AGENDA

1. Introductory items
  - 1.1 Introductory remarks
  - 1.2 Election of Chair
  - 1.3 Appointment of Rapporteur
  - 1.4 Adoption of Agenda
  - 1.5 Review of available documents
2. New Sanctuary proposals
3. Review of the Southern Ocean Sanctuary Management Plan
4. Responses to requests from the Commission on scientific aspects of sanctuaries
5. Work plan and budget
  - 5.1 Work plan for 2019-2020
  - 5.2 Budget requests for 2019-2020
6. Adoption of Report

## Appendix 2

### DRAFT SOUTHERN OCEAN SANCTUARY MANAGEMENT PLAN

William de la Mare<sup>1</sup>, Taylor Dearie<sup>1</sup>, Hilary Anderson<sup>2</sup>, John McKinlay<sup>1</sup>, Elanor Bell<sup>1</sup> and Michael Double<sup>1</sup>

At the decadal reviews of the Southern Ocean Sanctuary (SOS) in 2004 and 2016, the Scientific Committee recommended that the SOS should have a management plan that linked objectives to measurable or identifiable outcomes. This recommendation was endorsed by the Commission. In order to progress this recommendation, the authors have developed a draft management plan for consideration by the Scientific and Conservation Committees.

#### Introduction

The Southern Ocean Sanctuary, established under paragraph 7(b) of the Schedule to the International Convention for the Regulation of Whaling (the Convention), was adopted in 1994. It covers the waters of the Southern Ocean around Antarctica (see Fig. 1). The exact geographic coordinates for the Southern Ocean Sanctuary are given in paragraph 7(b) of the Schedule to the Convention.

The northern boundary of the Southern Ocean Sanctuary partially coincides with the southern boundary of the Indian Ocean Sanctuary. The Indian Ocean Sanctuary covers the whole of the Indian Ocean South to 55°S. The combined effects of the two sanctuaries is to provide a high level of protection from future commercial whaling by member states of the International Whaling Commission for the populations of great whales that breed in the Indian Ocean.

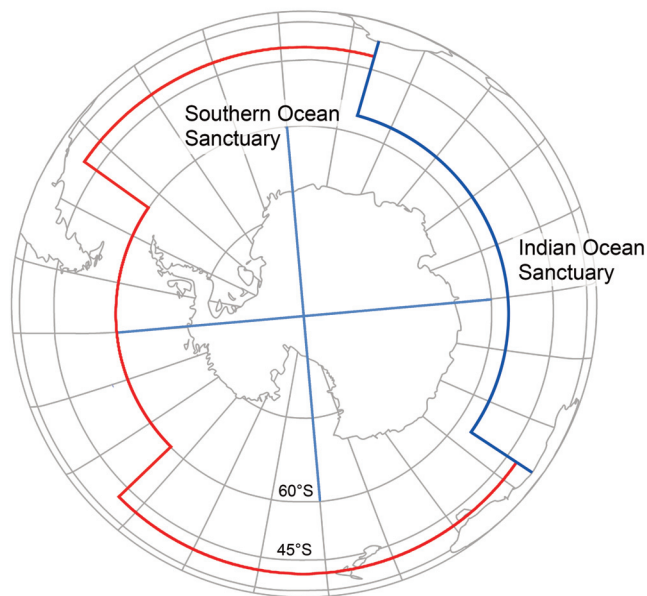


Fig. 1. Boundary of the Southern Ocean Sanctuary. The southern boundary of the Indian Ocean Sanctuary coincides with the northern boundary of the Southern Ocean Sanctuary. Factory ship whaling is forbidden in southern hemisphere waters North of 40°S.

#### Objectives of the Southern Ocean Sanctuary

The Southern Ocean Sanctuary proposal, put forward by France, stated that the primary purpose of the Sanctuary is to 'contribute to the rehabilitation of the Antarctic marine ecosystem by reinforcing and complementing other measures

for the conservation of whales and the regulation of whaling, in particular by the protection of all Southern Hemisphere species and populations of baleen whales and the sperm whales on the feeding grounds' (IWC/44/19).

In 2014 the Commission adopted the following objectives for the Southern Ocean Sanctuary:

- (1) Contribute to the rehabilitation of a marine ecosystem damaged by the over-exploitation of whales and allow for the restoration of a complex of whale species and populations.
- (2) Secure a long-term satisfactory habitat for cetaceans and other marine life.
- (3) In combination with the Indian Ocean Sanctuary, fully protect at least one population of each of the great whales throughout its migratory range and life-cycle, i.e. on feeding and breeding grounds, to provide for their long-term conservation.
- (4) Provide a reference area to allow for the collection of information on levels and trends on unexploited and recovering whale populations.
- (5) Allow for the monitoring of the recovery of ecosystems without their being disturbed by further commercial whaling.
- (6) Allow for coordinated research on the effects of environmental change on whale stocks.
- (7) Allow for the Comprehensive Assessment of the effects of setting zero catch limits on whale stocks.
- (8) Allow for application of the Revised Management Procedure (RMP) to be phased in over limited geographic ranges and species.

#### Review of the Southern Ocean Sanctuary and recent recommendations

The Schedule amendment establishing the Southern Ocean Sanctuary (SOS) requires the Sanctuary to be reviewed at succeeding ten-year intervals, unless otherwise revised by the Commission. The first review of the Sanctuary took place in 2004 and the second review was completed in 2016. In 2014 the Commission adopted the objectives given above and provided terms of reference for the review to be undertaken by the Scientific and Conservation Committees. The Scientific Committee in its review (IWC, 2017) made the following recommendations:

- Each SOS objective should be linked to an appropriate performance measure.
- Appropriate performance measures for the SOS should be developed. These should link the objectives of the SOS with field monitoring programmes.
- Performance measures for some scientific objectives could draw on existing mechanisms, such as the In-Depth assessment process.
- The SC could provide suggestions for appropriate performance measures in relation to the scientific objectives of the SOS to the Commission in future, should the Commission request it.
- Outputs from existing and planned research programmes should be incorporated into the development of a management plan for the SOS and subsequent monitoring programmes.
- A management plan for the SOS should be developed to clearly outline the broad strategies and specific actions

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needed to achieve Sanctuary objectives. This information could be collated, based on the SC's recent relevant activities.

These recommendations were taken into account in drafting the management plan.

### **Purpose of the Southern Ocean Sanctuary Management Plan**

The purpose of this Management Plan is twofold: (1) to inform the Commission and public about the Sanctuary objectives and actions planned for the next ten years, and (2) to propose strategies toward the achievement of the Sanctuary's goals using the best means available and point out clear performance measures for each proposed action.

### **Structure and scope of the Southern Ocean Sanctuary Management Plan**

This Plan is designed to guide the mitigation of threats faced by whales and the assessment of their recovery for the next ten years in the Southern Ocean Sanctuary. The operative part of this Plan is the Research and Action Plan. The Research and Action Plan is key to achieving the objectives of the Southern Ocean Sanctuary concerning: (1) the assessing and addressing of threats; and (2) the research on the recovery of whale populations and their habitats.

The Research and Action Plan is structured around the Commission's agreed objectives for the Southern Ocean Sanctuary. Each objective is linked directly to a measurable objective, action or approach and performance measure.

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#### *Commission objectives*

The objectives given above describe in general terms the desired outcomes of the Southern Ocean Sanctuary concerning the conservation and management of whales.

#### *Measurable objectives*

A measurable objective is one that can be objectively assessed based on outcomes that can be expressed quantitatively or can be assessed against defined criteria that allow a statement of whether or not it has been achieved. The Commission's general objectives are deemed to be met when the measurable objectives are met.

#### *Approach/Action*

An Approach/Action outlines how the measurable objectives will be progressed. Actions are activities developed and implemented to contribute to achieving the measurable objectives.

#### *Performance measure*

A performance measure is a direct measure consequent to a measurable objective that allows for a judgement to be made about progress towards meeting it.

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The Research and Action Plan takes into account a number of threats faced by whale populations both inside the Southern Ocean Sanctuary, in the adjacent Indian Ocean Sanctuary and other waters in the Southern Hemisphere. These threats include by-catch and entanglement, vessel collisions, effects on whale habitat of climate change and ocean acidification, marine pollution, competition with fisheries and marine noise. The Commission has made considerable progress in its efforts to address these threats globally. This management plan provides for this progress to be evaluated in the specific context of the Southern and Indian Ocean sanctuaries.

### **Coverage of the Management Plan**

This Management Plan focuses on all great whale species that were subject to commercial whaling within the area

subsequently covered by the Southern Ocean Sanctuary<sup>3</sup>. The species covered by the Management Plan are listed below and a summary of the state of knowledge on these species as of 2014 is given in Adjunct A. Any reference in this plan to 'all species' means all stocks of the species listed below that spend at least part of the year in the Sanctuary.

- Blue whale
- Pygmy blue whale
- Fin whale
- Sei whale
- Antarctic minke whale
- Common minke whale
- Humpback whale
- Southern right whale
- Sperm whale
- Killer whale

### **Implementation of the Management Plan**

The implementation of this Management Plan will require cooperation and coordination among national and international government agencies, as well as private organisations and individuals. The Management Plan is designed to provide guidance for researchers and policy makers to facilitate policy development and research within an ecosystem context, particularly through information exchange and the coordination of research.

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#### *Role of Scientific and Conservation Committees*

The Scientific and Conservation Committees should include standing agenda items to report progress to the Commission's biennial meetings. This will ensure monitoring of progress of the plan and that the Commission, public, researchers and other interested parties are apprised of progress and will enable resource gaps to be identified and will improve communication among researchers, stakeholders and the general public. The Committees in light of developments may make recommendations to amend approaches/actions and performance criteria.

### **Communicating the Management Plan**

The Secretariat with the assistance of the Scientific and Conservation Committees will compile and maintain a contact list of intergovernmental organisations, range states and members of the IWC, NGOs, polar programmes, scientists and SORP project investigators. This list will be used both to provide and to seek information relevant to the implementation of this plan. The Secretariat will establish a web page informing the public about the SOS and maintain an appropriate digest of matters relating to the progress of the management plan.

### **Duration of the Management Plan**

The Sanctuary Management Plan should be reviewed and refined every ten years to account for ecological, oceanographic and other possible changes in an adaptive fashion.

### **Performance and limitations of the Management Plan**

A fundamental aspect of the SOS Management Plan is to enable regular and continuing performance evaluation. Regular evaluation of progress is required in order to identify aspects that can be improved or that require more attention. Given that the recovery of severely depleted populations will take many decades, it is not realistic to suppose that the Commission's objectives will all be met in the ten-year life of this Management Plan. Consequently, the measurable

<sup>3</sup> Specifically, paragraph 7b states 'This prohibition applies irrespective of the conservation status of baleen and toothed whale stocks in this Sanctuary, as may from time to time be determined by the Commission'.

objectives are framed in terms of whether progress is in the appropriate direction. The success of the actions proposed by this Management Plan is closely linked to the availability of budget, secretariat support and logistic/research support from a range of agencies. Many of the actions that will

contribute to the overall success of the Plan fall outside the regulatory competence of the IWC. In such cases the actions required of the IWC are to inform other agencies about steps that they might take to improve the conservation and management of whales and their habitats.

**The Research and Action Plan**

*Objective 1: Contribute to the rehabilitation of a marine ecosystem damaged by the overexploitation of whales and allow for the restoration of a complex of whale species and populations.*

Measurable objective	Approach/Actions	Performance measure
<i>Deferred to Commission discussions</i>		

*Objective 2: Secure a long-term satisfactory habitat for cetaceans and other marine life.*

This objective is interpreted in the context of the Southern Ocean Sanctuary on its own, and hence deals primarily with threats to the species on their feeding grounds in the Southern Ocean.

Measurable objective	Approach/Action	Performance measure
Encourage complementary actions from international agencies.	Liaise/transmit information about whales and their habitat with relevant organisations. Receive information from relevant organisations on actions to mitigate environmental threats. Collaborate with IMO on development of the Polar Code for shipping.	IWC designated Observers have engaged and reported on key meetings: at CEP, CCAMLR, IMO, FAO, and UNEP <sup>1</sup> . Secretariat transmits recommendations from the IWC to relevant organisations and seeks information about any consequent actions taken.
Encourage the sustainable management of krill fisheries by CCAMLR consistent with its ecosystem approach.	Receive information from CCAMLR about krill, status of krill predators, measured by CEMP. Transmit information about whales and their habitat to CCAMLR.	Collaboration between the respective scientific committees to examine interactions between krill and dependant species.

<sup>1</sup>See Adjunct B for a list of acronyms.

*Objective 3: In combination with the Indian Ocean Sanctuary, fully protect at least one population of each of the great whales throughout its migratory range and life-cycle, i.e. on feeding and breeding grounds, to provide for their long-term conservation.*

Measurable objective	Approach/Action	Performance measure
Encourage Contracting Governments, range States, particularly in the Indian Ocean, IGOs and NGOs to address threats identified by the IWC.	Liaise/transmit information about whales and threats with relevant organisations including range states, regional fisheries management organisations, IGOs and NGOs. Receive information from relevant organisations on actions to mitigate environmental threats.	IWC designated Observers have engaged and reported on key meetings of IMO, FAO, and UNEP. Observers have also reported on meetings of regional bodies that consider marine conservation and management. Secretariat has transmitted recommendations from the IWC to relevant organisations and sought information about any consequent actions taken.
Contribute to a reduction in whale-vessel collision rates.	(a) Initiate/promote a broad and long-term programme to evaluate the degree of overlapping between vessel routes and the distribution of whale populations. (b) Estimate rates of whale-vessel strikes and identify areas of higher risk. (c) Evaluate and propose mitigation actions if appropriate. (d) Contribute data to the IWC vessel-strike database.	Information provided to IGOs and range states on best practice to reduce risks of whale-vessel collisions. Actions taken to reduce risks of whale-vessel collisions.
Reduce mortality due to entanglements in fishing gear.	(a) Study overlap between fisheries and the distribution of whale populations. (b) Promote cooperation with fishing industry and other stakeholders in order to minimise entanglements. (c) Develop and promote best practice plans to mitigate entanglements. (d) Promote capacity building under the IWC disentanglement programme.	Information provided to IGOs, RFMOs and range states on best practice to mitigate whale entanglements.
Identify significant feeding and breeding grounds for important populations of great whales in SOS.	Improve and deploy satellite tracking and remote sensing methods for identifying whale migration routes. Collaborate with relevant research programmes to improve remote sensing to measure the distribution, production and abundance of krill.	Improved information on whale distributions and migration routes. Improved information about krill distributions. Improved information on whale foraging behaviour.

With respect to commercial whaling this objective is also attained by maintaining the existing legal protections and management measures for the combined Southern and Indian Ocean sanctuaries, and in this sense this objective has the same measurable objective and actions as set out under Objective 1.

This objective is additionally interpreted here as actions that could be taken to mitigate other threats to at least one population of each species that occur across their full migratory ranges covered by the combined SOS and Indian Ocean Sanctuary areas. Of course these actions are relevant to all ocean areas adjoining the SOS.

*Objective 4: Provide a reference area to allow for the collection of information on levels and trends on unexploited and recovering whale populations.*

In practical terms some of the information on recovering populations is most efficiently collected outside the Southern Ocean Sanctuary, particularly in the case of populations that migrate or breed near coasts.

Measurable Objective	Approach/Action	Performance measure
Continue baleen whale abundance research. Continue to develop acoustic methods for measuring trends for some species.	Develop cost-feasible methods for estimating the abundance of baleen whales in the Southern Ocean Sanctuary. Take account of information provided under NEWREP-A.	Information about methods, abundance and trends in abundance continues to accrue.

*Objective 5: Allow for the monitoring of the recovery of ecosystems without their being disturbed by further commercial whaling. Explanatory text deferred to Commission discussions.*

Measurable objective	Approach/Action	Performance measure
Support ecosystem monitoring programmes.	Develop and maintain collaborations through SORP, CCAMLR, SCAR, SCOR, SOOS, NEWREP-A.	IWC provides information that contributes to the implementation and analyses of ecosystem monitoring programmes.

*Objective 6: Allow for the coordinated research on the effects of environmental change on whale stocks.*

Measurable Objective	Approach/Action	Performance measure
Contribute to long term strategic research programmes to gather relevant information about environmental change and its effects on whale stocks. Contribute to the development methods for predicting the environmental effects on whale prey, such as Antarctic krill.	Develop and maintain collaborations through SORP, CCAMLR, SCAR, SCOR, SOOS, NEWREP-A. Contribute information about whales and their habitats to relevant international research programmes.	Collaboration with relevant scientific programmes to examine effect of environmental change on marine ecosystems, including interactions between primary production, krill and dependant species.

*Objective 7: Allow for the Comprehensive Assessment of the effects of setting zero catch limits on whale stocks.*

Measurable Objective	Approach/Action	Performance measure
Continue to develop comprehensive assessments for SOS species.	Scientific Committee to continue its work on comprehensive assessments.	Continuing progress on comprehensive assessments.

*Objective 8: Allow for application of the Revised Management Procedure (RMP) to be phased in over limited geographic ranges and species.*

The context of this objective is that the decision to resume commercial whaling by amending paragraph 10e of the Schedule of the Convention alone would not enable to the resumption of commercial whaling in the SOS. Paragraph 7b (which establishes SOS) would also have to be amended before the RMP/RMS could be applied to any area currently included in the sanctuary. The intent of the objective is that the amendments to Paragraph 7b should not be considered until experience with the application of the RMP/RMS has been obtained elsewhere.

Measurable Objective	Approach/Action	Performance measure
<i>Deferred to Commission Discussions</i>		

#### REFERENCES

- International Whaling Commission. 1993. Chairman's Report of the Forty-Fourth Meeting, Appendix 4. Resolution on a Sanctuary in the Southern Hemisphere. *Rep. Int. Whal. Comm.* 43:41-8.
- International Whaling Commission. 2014. Report of the Scientific Committee Intersessional E-mail Group on Sanctuary and Sanctuary Proposals. Paper IWC/65/CCRep08rev1 presented to the 65th meeting of the International Whaling Commission, September 2014, Portoroz, Slovenia (unpublished). [Paper available from the Office of this Journal].
- International Whaling Commission. 2017. Report of the Scientific Committee. *J. Cetacean Res. Manage. (Suppl.)* 18:1-109.

**Adjunct A. Abundance and Trend Estimates for Whale Stocks Found in the Southern Ocean**

Species	Stocks	Trends in abundance (period, CV, reference)	Most recent abundance estimate (Year, CV, reference)	Observation	Threats
Blue whale	Areas I-IV	2.5-8.4%/year (1978/79-1997/98, Branch, 2007)	2,280 (1991/92-1997/98, CV=0.36, Branch, 2007)		
Pygmy blue whale	Areas I-VI	NA			
Fin whale	Areas I-VI	NA	5,500 (1996, CV=XX, Branch and Butterworth, 2001)	Only includes animals south of 60°S	
Sei whale	Areas I-VI	NA	NA		
Antarctic minke whale	Areas I-VI	515,000 (1992/93-2003/04, CV=XX, IWC, 2013)			
Common minke whale	Areas I-VI	NA	NA		
Humpback whale	BSA (Brazil)	7.4%/year (1995-1998, CV=0.45, Ward et al., 2011)	6,400 (2005, CV=0.11, Andriolo et al., 2010)		
Humpback whale	BSB1 (central-west Africa)	NA	6,800 (2001-5, CV=XX)		
Humpback whale	BSB2 (central-west Africa)	NA			
Humpback whale	BSC1 (eastern Africa)	9-12.3%/year (1988-2002, Findlay et al., 2006)	6,808 (2001, CV=0.14, Findlay et al., 2011)		
Humpback whale	BSC2	NA	NA		
Humpback whale	BSC3 (Madagascar)	NA	7,406 (2006, CV=0.37, Cerchio et al., 2009)		
Humpback whale	BSC4	NA	NA		
Humpback whale	BSD (West Australia)	12.9%/year (1999-2008, CV=0.2, Hedley et al., 2010)	NA		
Humpback whale	BSE1 (East Australia)	10.9%/year (1984-2010, CV=XX, Noad et al., 2011)	14,522 (2010, CV=XX, Noad et al., 2011)		
Humpback whale	BSE2+E3+F (Oceania)	NA	4,329 (1999-2005, CV=0.12, Constantine et al., 2012)		
Humpback whale	BSG	NA	6,504 (2006, CV = XX, Felix et al., 2011)		
Southern right whale	Southwest Atlantic	~6.2%/year (IWC, 2013)	4,030 (2009, IWC, 2013)		
Southern right whale	South Central Atlantic	NA	80 (2009, IWC, 2013)		
Southern right whale	Southern Africa	~6.8%/year (IWC, 2013)	4,410 (2009, IWC, 2013)		
Southern right whale	Southwest Pacific/ Mainland NZ	NA	NA		
Southern right whale	Southwest Pacific/Sub Antarctic NZ	~7%/year	2,670 (2009, IWC, 2013)		
Southern right whale	SE Australia	NA	NA		
Southern right whale	South Central Australia/SW Australia	~6.8%/year	2,420 (2009, IWC, 2013)		
Southern right whale	SE Pacific (Chile/Peru)	NA	NA		
Sperm whales	Divisions 1-9	NA	11,599 (1991/92-1997/98, CV=0.20, Branch and Butterworth, 2001)	Only includes mature males south of 60°S	

**Adjunct B. List of Acronyms**

<b>CCAMLR</b>	Commission for the Conservation of Antarctic Marine Living Resources
<b>CEMP</b>	CCAMLR Ecosystem Monitoring Programme
<b>CEP</b>	Committee for Environmental Protection under the Antarctic Treaty
<b>FAO</b>	Food and Agricultural Organisation of the United Nations
<b>IGO</b>	Inter-Governmental Organisation
<b>IMO</b>	International Maritime Organisation
<b>NGO</b>	Non-Government Organisation
<b>RFMO</b>	Regional Fisheries Management Organisation
<b>SCAR</b>	Scientific Committee for Antarctic Research
<b>SC-CCAMLR</b>	Scientific Committee for the Conservation of Antarctic Marine Living Resources
<b>SCOR</b>	Scientific Committee on Oceanic Research
<b>SORP</b>	IWC Southern Ocean Research Partnership
<b>SOOS</b>	Southern Ocean Observing System (SCAR and SCOR)
<b>SOS</b>	Southern Ocean (Whale) Sanctuary
<b>RMS</b>	Revised Management Scheme
<b>RMP</b>	Revised Management Procedure
<b>UNEP</b>	United Nations Environment Programme

**Appendix 3****STATEMENT OF THE GOVERNMENT OF JAPAN ON THE DRAFT SOUTHERN OCEAN SANCTUARY MANAGEMENT PLAN**

Japan opposed the establishment of the Southern Ocean Sanctuary (SOS) when it was adopted in 1994 and does not support maintaining sanctuaries without scientific justification.

While Japan opposes the SOS, it understands that the Working Group to Review Sanctuaries and Sanctuary Proposals in 2016 (Sanctuary WG 2016) recommended elaboration of a Management Plan for the SOS taking into account its other recommendations.

With that understanding, Japan urges reconsideration and modification of the proposed Management Plan in accordance with the recommendations of the Sanctuary WG 2016, including the establishment of review criteria linked to performance measures and reflecting the goals and objectives of the SOS. Further, actions that fall outside the regulatory competence of the IWC should not be included in the Management Plan.

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