



**Paper 19**  
**SCAR Group**

**Agenda 4.1**  
**SCATS**

Person  
Responsible:

Aleks  
Terauds

**SCAR Executive Committee Meeting 2017**  
**Brno, Czech Republic, 31 July - 2 Aug 2017**

# **Standing Committee on the Antarctic Treaty System**

## **2016-2017 Annual Report**

**Report Author: Aleks Terauds**

### **Summary of activities from 2016-17 and any other important issues or factors (<150 words):**

SCATS continued to focus on the provision of advice to the Antarctic Treaty System. SCAR was involved in 21 submissions to ATCM XL in Beijing, May 2017. Two of these submissions resulted in endorsement by means of Resolution. SCAR was congratulated for exploring new formats for presenting annual submissions, and was encouraged to continue to present submissions in a similarly accessible form at future meetings. The SCAR Lecture was a resounding success, resulting in agreement by the ATPCs to move it on the Agenda to Day 1 of the meeting. SCAR agreed to several commitments for CEP XXI in 2018, and will prioritize the delivery of these through 2017-18. Through its members, SCATS continues to stay informed of emerging issues across the SCAR community that are of interest to the Antarctic Treaty System.

### **Recommendations that EXCOM should consider (if any):**

1. That the SCAR Executive Committee (ExCom) recognize the active involvement of SCAR in the ATCM, CEP and CCAMLR, and associated meetings, and note the high regard in which SCAR, and the advice that it provides, is held by the Antarctic Treaty Consultative Parties.
2. That ExCom give consideration to issues around the future membership of SCATS identified in this report, and provide advice as appropriate.
3. That ExCom consider the recommendations with regard to the review of underwater noise impacts as outlined in this report.

## Progress and Plans:

### **Major Activities and Significant Progress from the past year (<500 words):**

SCAR was involved in 21 submission to the 2018 ATCM XL recently held in Beijing. SCAR submitted five lead Working Papers (WPs), three co-sponsored WPs, six lead Information Papers (IPs), four co-sponsored IPs and two Background Papers (BPs) to ATCM XL. While most were focused on the Committee for Environmental Protection (CEP), some were presented to both the CEP and the ATCM on areas of mutual interest, and five were only presented to Working Group 1 of the ATCM.

Full details are provided in the SCAR ATCM/CEP report to SCAR ExCom. Highlights included the endorsement of *SCAR's Code of Conduct for Exploration and Research in Subglacial Aquatic Environments* by resolution and the SCAR Science Lecture *What does the Paris Climate Agreement mean for Antarctica*. The latter was very well attended, and extremely well received in plenary. SCAR's advice to the Antarctic Treaty System continues to be held in high regard, and SCAR's position as the primary provider of independent and objective scientific advice was explicitly reaffirmed several times at the meeting.

SCATS will continue to coordinate and facilitate timely provision of submissions arising from the agreements and commitments made at the most recent meetings, and identify, through its members, emerging issues of importance to the Antarctic Treaty System.

Four members of SCATS attended the SC-CAMLR Meeting in Hobart October 2016. At this meeting SCAR presented its Annual Report in a new format, focusing on priority areas of interest to CCAMLR. SCATS has maintained a close liaison with key SC-CAMLR representatives over the last two years, including the current and previous chairs of the Scientific Committee, resulting in improved and more effective engagement between the two groups.

In March 2017, *Antarctica and the Strategic Plan for Biodiversity* was published in the prestigious journal PLoS Biology (Chown *et al.* 2017). This scientific paper was the culmination of the Monaco Assessment Workshop held in 2015 (co-funded by SCATS) and provides a comprehensive assessment of Antarctic biodiversity in the context of the Strategic Plan for Biodiversity 2011-2020. This paper, and the associated submission to CEP XX (WP13), generated significant discussion. There was a clear and explicit recognition of the value of this work from several Members of the CEP, and SCAR was encouraged to bring further updates to future meetings.

**Major Initiatives and Actions, including rough timeline, for at least the next 2 years (<500 words):**

Delivery of advice to the CEP, ATCM and CCAMLR remain priorities of SCATS and will constitute the majority of activities over the next two years.

**1) ATCM and CEP commitments (2017-18)**

SCAR's current commitments are provided in detail in the SCATS ATCM/CEP Report to ExCom. In light of these it will be another busy year for SCATS leading up to, and during, the 2018 ATCM and CEP.

**2) Underwater noise impacts (2017-18)**

In addition to the above, SCAR is also committed to providing an update on underwater noise impacts to the CEP. A detailed background briefing document regarding this issue is provided in Appendix 1. In summary:

- SCATS recommends that the initial review be coordinated by an independent expert in the field and seeks ExCom approval to initiate contact with Dr. Russell Leaper (see Appendix 1 for more details) to check his availability and interest in leading this review

- SCATS also recommends that ExCom considers positively the offer from the Alfred Wegener Institut (AWI) to assist with funding this review (in addition to SCATS funding), and seeks ExCom endorsement for further negotiations with AWI in this regard.

Further details on these recommendations, and the proposed process for undertaking the review and eventual submission, are provided in Appendix 1.

**3) CCAMLR Engagement (2017-18)**

SCAR, through SCATS, will continue to engage actively with SC-CAMLR and send at least two representatives to the meeting of the Scientific Committee in October in Hobart 2017. SCATS has started discussions with key CCAMLR representatives, to ascertain current priority areas for the SCAR Annual Report to CCAMLR

**4) Antarctic conservation and biodiversity: addressing the Monaco assessment (July 2017)**

This meeting follows on from the first Monaco Assessment (3-5 July 2017). The primary objective was to assess the available approaches and indicators used to understand trends in the status of biodiversity and its conservation to determine their relevance to, applicability in, and possibility for use in the Antarctic region and identify 3-5 actions that can be implemented to strengthen conservation in the region. The findings will be published in scientific journals and inform submissions to the CEP and CCAMLR.

### 5) Priority Threat Management Workshop (July 2017)

The objective of this workshop (8-9 July 2017) is to bring together a diverse range of Antarctic experts from around the world to identify the management actions available to mitigate threats to terrestrial Antarctic biodiversity, and quantify the cost, feasibility and benefit of each action. The main output will be a prioritized set of actions and/or management strategies that will be submitted to the CEP.

### 6) Red-listing of species workshop (2018 tbc)

A meeting of Antarctic experts is proposed to improve red-listing of Antarctic species, with a focus on representative species from a range of taxa.

### 7) Protecting terrestrial Antarctica workshop (2018 tbc)

Bring together scientists and policy-makers to discuss the evidence-base, mechanisms, challenges and stakeholder perspectives related to the development of a comprehensive, representative and integrated network of Antarctic Specially Protected Areas.

**Please list any new outputs and deliverables (including publications and products that your group feels are part of your achievements):**

See SCATS ATCM/CEP Report for details of all outputs, including scientific publications that underpin Working Papers.

## Budget

### Planned use of funds for 2017 and 2018

Month/Year (MM-YY)	Purpose/Activity	Amount (in USD)	Contact Name
<b>2017</b>			
<b>May-Aug 2017</b>	Monaco Assessment II	\$20,000	Aleks Terauds
<b>April- Aug 2017</b>	PTM Antarctica Workshop	\$25,000	Aleks Terauds
<b>May 2017</b>	Support docs for ATCM	\$400	Aleks Terauds
<b>July-Dec 2017</b>	SCATS related travel	\$5,000	Aleks Terauds
<b>Aug 17 - May 18</b>	Underwater noise impacts	\$5,000	Aleks Terauds
<b>2018</b>			
<b>June-Dec 2018</b>	SCATS related travel	\$7,000	Aleks Terauds
<b>Late 2018 (TBC)</b>	Red listing workshop	\$tbc*	Aleks Terauds
<b>Late 2018 (TBC)</b>	Protected areas workshop	\$tbc*	Aleks Terauds

\* tbc – workshop and funds to be confirmed, external funding will also be required

**Briefly describe what the funds will be used for and what the desired results are:**

- Monaco Workshop – Travel assistance (transport, TA) for key participants, including Early Career Researchers
- PTM Workshop – Travel assistance for participants (transport, TA, accommodation), facilitator fees, catering.
- Underwater noise impacts – part funding of contract for independent reviewer
- Support docs for ATM – graphic design for Annual Report infographic
- Travel support for SCATS members on SCATS related business
- Workshops to explore research and associated products for delivery to CEP, to be confirmed pending further discussions.

**Provide an estimate on the % of the budget to be used for support of early career researchers:**

2017:10%

2018:10%

**Provide an estimate on the % of the budget to be used for support of scientists from countries with developing Antarctic programmes (as listed here: <http://www.scar.org/finances/contributions>):**

2017: 0%

2018: 10%

## Linkages

**Please describe any direct support you receive for your activities beyond SCAR (eg. Funds from another organization for a workshop):**

Note the below table also includes in-kind support as this represents a significant contribution to these workshops, without which they would be unlikely to proceed.

Activity	Funder	Type	Amount
Monaco II workshop	Principality of Monaco	Direct funding	€ 40,000
Monaco II workshop	Monash University	In-kind	\$US12,000
PTM Workshop	CSIRO	In-kind	\$US10,000
PTM workshop	Sustainable Consulting	In-kind	\$US 4,000

Note the above does not include in-kind contribution of the Australian Antarctic Division through Terauds' time, to these and other SCATS activities, calculated conservatively to be approximately \$US 22,000 per annum.

**Please list any major collaborations your group has with other SCAR groups and with organizations/groups beyond SCAR:**

SCATS liaised closely with the following groups in preparation of submissions for the ATCM, CEP and CCAMLR:

- Life Sciences Standing Group
- Geosciences Standing Group
- Physical Sciences Standing group
- Expert Group on Birds and Marine Mammals
- SRP State of the Antarctic Ecosystem
- Expert Group on Antarctic Climate Change and the Environment
- Humanities and Social Science Expert Group
- SRP Antarctic Climate Change and the 21<sup>st</sup> Century

In addition to the above, many SCAR groups also contributed to the SCAR mapping of research to the CEP's Climate Change Response Work Program.

## **Outreach and Capacity Building**

**Please describe any outreach, communication and capacity building activities that your group participates in. Also provide information on activities that demonstrate effectiveness as a network. (coordinating activity for your discipline/topic, i.e. mailing list and diversity of scientists involved) (<250 words):**

- Chief Officer Terauds has been active in presenting, to a diverse range of audiences, on how scientists can influence policy through their research, including highlighting the role of SCATS in this process. These presentations have included large conferences (in plenary) and also to smaller groups, including early career researchers.
- SCATS has worked on improving its communication with policy makers, and the success of this has been acknowledged at the most recent CCAMLR and CEP meetings.
- SCATS involves early career research in its initiatives whenever possible to assist with capacity building.

**List one or more people (name and email address) from your Group who would be willing to serve as Fellowship reviewers for the next few years**

Aleks Terauds

## Membership

SCATS membership requires consideration by the SCAR ExCom as six member's terms are up for review at the Delegates Meeting in Davos 2018 (See Table 1):

- Current SCATS Chief Officer Aleks Terauds has indicated that he will be stepping down from his role at the end of his first term, which will be at the SCAR Delegates Meeting in Davos 2018. A new Chief Officer will need to be identified, ideally within the next 6 months to help facilitate a smooth transition.
- Kevin Hughes (current SCATS Deputy Chief Officer) was elected as one of the CEPs Vice-Chairs at the Beijing CEP Meeting. In consequence, a potential conflict of interest now exists between that role and his current role as Deputy Chief Officer of SCATS. Kevin has agreed to step down from SCATS to alleviate any perception of a conflict of interest.
- Yan Ropert-Coudert is due to remain the Life Sciences Chair throughout 2018 and 2019, and in this capacity consideration should be given to extending his SCATS membership when it comes up in Davos. Consideration should also be given to the extension of the membership of Akinori Takahashi and Daniela Liggett, whose first terms also conclude at the Davos meeting.
- While there are no specific service terms for ordinary members of SCATS, normally members are rotated off after 8 years. On this basis, consideration should be given to Mark Hindell finishing his term in 2018. A replacement SCATS-CCAMLR representative will then need to be identified.

**Table 1 Current SCATS membership and terms**

Name	Country	Term
Dr Aleks Terauds - <i>Chief Officer</i>	Australia	2014 - 2018
Dr Kevin Hughes - <i>Deputy Chief Officer</i>	UK	2010 - 2018
Dr Thomas Bracegirdle - <i>PSG Representative</i>	UK	2016 - 2020
Dr Mark Hindell - <i>SCAR-CCAMLR Liaison</i>	Australia	2008 - 2018
Dr Daniela Liggett	New Zealand	2014 - 2018
Dr Anton Van de Putte - <i>SCADM Chief Officer</i>	Belgium	2016 - 2020
Dr Marcelo Reguero - <i>GSG Representative</i>	Argentina	2016 - 2020
Dr Yan Ropert-Coudert - <i>LSG and EGBAMM Representative</i>	France	2014 - 2018
Dr Akinori Takahashi	Japan	2014 - 2018
Dr Jenny Baeseman	Secretariat	2016 -

## Appendix 1

### SCAR report into underwater noise: Briefing Note

#### Background

Underwater noise impacts on marine animals has been of interest to the CEP for some time and in 2014 SCAR agreed to coordinate a review on wildlife impacts of underwater noise. This review was originally intended for the 2017 CEP XIX meeting, however, while collating the information in the 2015-17 intersessional periods, it became clear that more time was needed to complete the review to an appropriate standard. In consequence, following discussion with SCAR ExCom, Terauds (as SCATS Co) informed the CEP (through the CEP Chair) that the report would be delayed.

Having now collated much of the relevant information, SCATS recommends that SCAR enlist appropriate expert assistance in the preparation of this submission. It will be important to ensure a wide consultation process in this process, which includes all relevant stakeholders and incorporates a broad range of expert knowledge. Also integral to this report will be a comprehensive review process prior to submission, and there may be merit in forming a review panel to formally assess the review. There are also close links with the objectives of this review and work ongoing under the auspices of the International Whaling Commission. Where possible, efforts should be made to avoid duplicating processes, and take advantage of any potential synergies or information sharing arrangements.

Funding support for the review has been offered by the Alfred-Wegener-Institut (AWI), and there is also money allocated for the process in the SCATS budget. Costs are yet to be established, but are estimated to be US\$ 10,000 – US\$ 20,000 depending on who is contracted, and the length of time it is likely to take. More funds will likely be needed if SCAR is to also support a workshop to consider the content of the review prior to submission.

#### Key Considerations for ExCom

1. That ExCom endorse SCATS to approach and appropriately experienced person(s) to submit an Expression of Interest to undertake the review and draft the report, under contract to SCAR, with the scope and details of the contract and deliverables to be established by SCATS, in conjunction with SCAR ExCom. A list of potential candidates is provided below. Based on experience, independence and expert advice, Dr. Russell Leaper has been identified as the preferred candidate. Dr. Leaper is an acoustician and mathematician whose research has covered a wide range of marine mammal conservation and welfare issues with an emphasis on marine noise impacts, survey methods and population assessment. He has also been a member of the Scientific Committee of the IWC since 1996 and attends as a member of the UK delegation.



2. A decision is required as to whether the funding offer from AWI should be explored further ? At this point only preliminary discussions have been held between Stefan Hain and Aleks Terauds, and SCATS seeks endorsement to continue these discussions.

Other people on the below lists could be asked to take part in an overview review committee/panel, which would review any documents prior to wider dissemination.

Aspects such as budget, time line and process details will need to be developed further (by SCATS and ExCom) once endorsement from ExCom has been obtained to begin the process.

### **Suggested names to co-ordinate review**

The following people have been suggested for consideration as appropriately skilled to coordinate or participate in the review. Sources of these names include SCATS members, IWC representative, and through literature searches.

Rob Williams (SMRU, St Andrews)  
Peter Tyack (SMRU, St Andrews)  
Stephanie Lanerock (Belgium Government, Brussels)  
Olaf Boebel (AWI)  
Karsten Gohl (AWI)  
Andrew Carroll (Geosciences Australia)  
Rachel Przeslawski (Geosciences Australia)  
Russell Leaper (UK IWC rep - links to IFAW, AMMC)  
Doug Nowacek (Duke University USA)  
Brandon Southall (NOAA)

### **Committee on the Assessment of the Cumulative Effects of Anthropogenic Stressors on Marine Mammal Hearing**

The below group formed the committee that oversaw the National Oceanic and Atmospheric Administration of the United States (NOAA) assessment. Some of these people should be considered for

PETER L. TYACK, Chair, University of St. Andrews, Scotland  
HELEN BAILEY, University of Maryland Center for Environmental Science, Solomons  
DANIEL E. CROCKER, Sonoma State University, Rohnert Park, California  
JAMES E. ESTES, University of California, Santa Cruz  
CLINTON D. FRANCIS, California Polytechnic State University, San Luis Obispo  
JOHN HARWOOD, University of St. Andrews, Scotland  
ORI H. SCHWACKE, Hollings Marine Laboratory (National Oceanic and Atmospheric Administration), Charleston, South Carolina  
LEN THOMAS, University of St. Andrews, Scotland  
DOUGLAS WARTZOK, Florida International University, Miami

### Recently published reviews on the topic

- 1) Approaches to Understanding the Cumulative Effects of Stressors on Marine Mammals (2017). Committee on the Assessment of the Cumulative Effects of Anthropogenic Stressors on Marine Mammals; Ocean Studies Board; Division on Earth and Life Studies; National Academies of Sciences, Engineering, and Medicine. <https://doi.org/10.17226/23479>
- 2) Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (2016). Underwater Acoustic Thresholds for Onset of Permanent and Temporary Threshold Shifts. NOAA Technical Memorandum NMFS-OPR-55 July 2016
- 3) Williams, R., Wright, A.J., Ashe, E., Blight, L.K., Bruintjes, R., Canessa, R., Clark, C.W., Cullis-Suzuki, S., Dakin, D.T., Erbe, C. and Hammond, P.S., 2015. Impacts of anthropogenic noise on marine life: publication patterns, new discoveries, and future directions in research and management. *Ocean & Coastal Management*, 115, pp.17-24.\
- 4) Popper, A.N. and Hawkins, A.D., 2016. The effects of noise on aquatic life II. *Advances in Experimental Medicine and Biology (Springer Verlag, New York, 2016)*.
- 5) Carroll, A.G., Przeslawski, R., Duncan, A., Gunning, M. and Bruce, B. (2016) A critical review of the potential impacts of marine seismic surveys on fish & invertebrates. *Marine pollution bulletin* 114, 9-24.
- 6) Peng, C., Zhao, X., & Liu, G. (2015). Noise in the Sea and Its Impacts on Marine Organisms. *International Journal of Environmental Research and Public Health*, 12(10), 12304–12323. <http://doi.org/10.3390/ijerph121012304>

### International Whaling Commission (IWC) related work

In 2016, the Environmental Concerns Group of the IWC Scientific Committee will focus on examining concerns related to the 'masking' effect of anthropogenic sound on cetaceans. Masking is the term used when other noise(s) block or 'mask' the sounds on which whales rely. Specifically the working group will:

- Update progress made on the effects of masking sound from commercial shipping.
- Provide an overview of a modelling application known as the Population Consequences of Disturbance model (known as PCoD).

- Explore ways that the PCoD or similar frameworks could be expanded to predict population consequences of 'masking' sounds important to cetaceans.

For more info see <https://iwc.int/anthropogenic-sound>