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**Report of the SCAR Delegation to
XXXIX ATCM and CEP XIX
in Santiago, Chile, 23 May – 1 June 2016**



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Report of the SCAR Delegation to XXXIX ATCM and CEP XIX in Santiago, Chile, 23 May – 1 June 2016

Introduction

SCAR provides objective and independent scientific advice to the Antarctic Treaty Consultative Meetings and other organizations on scientific issues affecting the conservation and management of Antarctica. This advice is coordinated through the SCAR Standing Committee on the Antarctic Treaty System (SCATS).

The SCAR Delegation to XXXIX ATCM and CEP XIX was comprised of Jerónimo López-Martínez (SCAR President), Aleks Terauds (Chief Officer of SCATS), and Jenny Baeseman (SCAR Executive Director).

Summary of Engagement

SCAR submitted two Working Papers (WPs), six Information Papers (IPs) and two Background Papers (BPs) to CEP XIX, some of which were also presented to the ATCM (the papers can all be found on the SCAR website at <http://www.scar.org/treatypapers/atcm39>). WP023 was the *SCAR Code of Conduct for Activity in Terrestrial Geothermal Environments in Antarctica*. WP010, on the Antarctic Environments Portal, was submitted jointly with other Treaty Parties. The SCAR Lecture, given by SCAR President Jerónimo López-Martínez, was on ‘*Exploring the future of scientific research in Antarctica*’. Leading up to the ATCM, SCAR also provided input on intersessional groups, including the review of the Non-native Species Manual and the Climate Change Response Work Program. SCAR also attended the joint CEP/SC-CAMLR Workshop on Climate Change and Monitoring (see IP017 for more detail) and participated in the 25th Anniversary of the Protocol Symposium through a presentation by Aleks Terauds on ‘The impact of the Protocol from a scientist perspective’.

Agreements and Commitments

The following agreements and/or commitments have been made (either in the meeting, associated discussions or in previous meetings):

- SCAR will continue to play an active role in supporting the Environments Portal project, in particular through the provision of editorial and review services (coordinated through SCATS) and the development of content.
- SCAR will continue to provide updates to the Antarctic Climate Change and the Environment Reports, and consider the inclusion of a high level synthesis of the information in these updates.
- SCAR will bring a selection of previous Codes of Conduct to CEP XX (2017) for consideration for endorsement by means of resolution.

- SCAR will provide a report on the findings of the Monaco Assessment meeting held in 2015 to CEP XX (2017).
- SCAR will prepare a summary of the current state of knowledge, including any advances in research, regarding the impacts of UAVs on wildlife for CEP XX (2017) (agreed 2015, confirmed 2016).
- SCAR will provide a report to CEP XX (2017) on research and monitoring activities that are being undertaken that are of relevance to the CEP Climate Change Response Work Program (CCRWP).
- SCAR will provide an update on the current state of knowledge of the impact of underwater noise on marine biota to CEP XX (2017).
- SCAR will provide the final report on Southern Ocean Acidification CEP XX (2017).
- The ATCM (2017) once again, invited SCAR to give a lecture on scientific issues relevant to ATCM XXXX.
- SCAR will provide a proposal about the conservation of Antarctic geological and geomorphological values, including fossils, to CEP XXI (2018).

Engagement Detail

WP010 Antarctic Environments Portal

New Zealand introduced WP010 *Antarctic Environments Portal*, jointly prepared with Australia, Japan, Norway, SCAR, Spain, and United States. The paper recorded the benefits of the Portal and reviewed progress made since CEP XVIII, noting that the management of the Portal had been transferred to the University of Canterbury, Christchurch, New Zealand and that the Tinker Foundation had provided three years of external funding to support the Portal. SCATS Chief Officer, Aleks Terauds, reminded the Committee that the quality of the articles published in the Portal was safeguarded through a rigorous editorial process involving a two-stage review by scientific experts as well as the Editorial Group. The Committee congratulated the proponents on progress made on the Environments Portal since CEP XVIII. It also thanked the Tinker Foundation and the University of Canterbury for their support.

IP020 The SCAR Annual Report 2015/16 & BP02 SCAR Selected Science Highlights 2015/16

SCAR presented IP020 *The Scientific Committee on Antarctic Research (SCAR) Annual Report 2015/16* and referred to BP002 which highlights some recent scientific publications by the SCAR research community since the last ATCM that could be of interest for the delegates. The Committee thanked SCAR for facilitating its work through providing high quality advice and welcomed the opportunity to comment on SCAR's new strategic plan.

IP035 Antarctic Climate Change and the Environment – 2016 Update

SCAR presented IP035 *Antarctic Climate Change and the Environment – 2016 Update*, which provided an update on recent significant advances in the understanding of climate change in the Antarctic Continent and the Southern Ocean. In addition to

reporting on the physical effects of climate change on the environment, the update also detailed research on the biological and ecological impacts of these changes. The Committee thanked SCAR for continuing to provide updates to the ACCE report, and reiterated the importance of SCAR's research activities for efforts to understand and address the environmental implications of climate change for the protection and management of the Antarctic Treaty area.

IP078 Antarctic Climate Change, Ice Sheets Dynamics and Irreversible Thresholds: ATCM contributions to the IPCC and Policy Understanding.

ASOC urged the Antarctic scientific community to contribute to the IPCC Special Report on the Implications of Global Warming of 1.5°C, and the Special Report on the Oceans and Cryosphere. ASOC recommended that Members, together with SCAR and other scientific organisations, respond in a timely fashion through a rapid assessment report. SCAR remarked that the summary of research requested by ASOC was consistent with its existing and planned research activities. SCAR further noted that it would consider how best to contribute to the IPCC Special Reports.

WP023 SCAR Code of Conduct for Activity within Terrestrial Geothermal Environments in Antarctica

SCAR introduced WP023 *SCAR Code of Conduct for Activity within Terrestrial Geothermal Environments in Antarctica*, which provided guidance on practical measures to minimise impacts by scientists undertaking fieldwork in terrestrial geothermal areas. SCAR highlighted that the development of the Code of Conduct had involved consultation with policy makers, environmental managers, scientific experts, SCAR Subsidiary Groups and COMNAP. It recommended that the CEP consider the Code of Conduct and, if agreed, encourage its dissemination and use when planning and undertaking activities within terrestrial geothermal environments in Antarctica. The Committee warmly thanked SCAR for its work in finalising this Code of Conduct, and thanked all Members who were engaged in the process. The Code of Conduct was subsequently endorsed by means of Resolution 3, at ATCM XXXIX.

IP031 Antarctic Geoconservation: a review of current systems and practices

SCAR presented IP031 *Antarctic Geoconservation: a review of current systems and practices*, which reported on current threats to Antarctic geological features and detailed existing systems for their protection. The paper included a list of considerations relating to the protection of Antarctica's significant geological and paleontological localities and specimens for future Antarctic study. It further noted that a comprehensive paper on the findings would be presented in 2018. The Committee thanked SCAR for its paper, and noted the importance of enhancing the protection of geological values, including fossils, had been highlighted at previous meetings. The Committee welcomed the useful and up-to-date review of current systems and practices for Antarctic geoconservation, and looked forward to the report on these matters under preparation by the SCAR Action Group on Geological

Heritage and Geoconservation, which would be submitted to the CEP meeting in 2018.

IP038 Antarctica and the Southern Ocean in the Context of the Strategic Plan for Biodiversity 2011-2020

Introducing this paper, SCAR noted that to date, Antarctica and the Southern Ocean have not been adequately represented in global biodiversity assessments and efforts for its conservation. One of the most significant of these is the Strategic Plan for Biodiversity 2011-2020, and its associated 20 Aichi Targets. An assessment of progress against these targets globally will be made in 2020. SCAR, the Principality of Monaco and partners held a meeting of biodiversity, legal and policy experts to assess Antarctic and Southern Ocean biodiversity and its conservation status in the context of the Strategic Plan. The aims of the meeting and its associated activities were to ensure that the considerable biodiversity of the Antarctic and significant collaborative efforts to ensure its conservation are not omitted from any global assessment. SCAR informed the Committee that the full outcomes of the Monaco Assessment meeting will be published in 2016 and reported to CEP XX. The Committee thanked SCAR and Monaco for this important benchmarking exercise, looked forward to receiving the full report in due course, and noted the importance of ensuring that Antarctica is included in planned global biodiversity assessments.

IP032 Report on the 2015-2016 activities of the Southern Ocean Observing System (SOOS)

SCAR presented IP032 *Report on the 2015-2016 activities of the Southern Ocean Observing System (SOOS)*. In 2015, SOOS finalised its five-year Implementation Plan which, following an external review facilitated by SCAR, would be made available to the community. Other key milestones for SOOS included: significant progress in the development of regional working groups for implementing the observing system in the field; the submission of a publication on ecosystem essential ocean variables, and progress in a number of capability working groups, such as Enhancing Observations under Ice.

BP003 (Rev 1) Abstract of the SCAR Lecture: Exploring the future of scientific research in Antarctica

This presentation, by SCAR President Jerónimo López-Martínez, described the process and main results of the 1st SCAR Antarctic and Southern Ocean Horizon Scan, and the Antarctic Roadmap Challenge, which was led by the Council of Managers of National Antarctic Programs (COMNAP) and supported by SCAR. The presentation outlined future scientific priorities, the associated challenges and the means to achieve them and highlighted that results from these initiatives reinforce the importance of wider international partnerships, more coordination of science and infrastructure funding and expanded knowledge-sharing. The importance of the use of scientific evidence in its decision-making and conservation measures was also highlighted to Delegates. The presentation concluded by reinforcing that such initiatives represented the collective effort of the Antarctic community, and were based in broad international cooperation, involving many hundreds of scientists,

managers and technicians from dozens of countries, with a close cooperation between SCAR and COMNAP, carried out in a framework inspired by the Antarctic Treaty.

General Engagement

In response to a range of papers on UAV operation and wildlife disturbance, the Committee recalled SCAR's generous offer to prepare a summary of the current state of knowledge regarding the impacts of UAVs on wildlife for the next meeting of the Committee, and appreciated SCAR's advice that this work was underway and progressing well. Undertaking this review is currently a priority for SCATS, with several members of the committee assisting in the process.

The Committee reviewed the Climate Change Response Work Programme (CCRWP) agreed to by CEP XVIII and adopted as Resolution 4 (2015). It considered the actions identified for CEP XIX and noted that steps were already being taken to address most of these. The Committee also noted that SC-CAMLR, SCAR and programmes such as the Southern Ocean Observing System (SOOS) and Integrating Climate and Ecosystem Dynamics in the Antarctic (ICED) were already undertaking activities of relevance to the CCRWP. The Committee updated its CCRWP and welcomed the offers by SCAR and WMO to provide reports to CEP XX on their research and monitoring activities relevant to the CCRWP

Appendix: List of Acronyms

ACCE	Antarctic Climate Change and the Environment
ASOC	Antarctic and Southern Ocean Coalition
ATCM	Antarctic Treaty Consultative Meeting
BP	Background Paper
CCRWP	Climate Change Response Work Programme
CEP	Committee for Environmental Protection (Antarctic Treaty)
COMNAP	Council of Managers of National Antarctic Programs
ICED	Integrating Climate and Ecosystem Dynamics
IP	Information Paper
IPCC	Intergovernmental Panel on Climate Change
SCATS	Standing Committee on the Antarctic Treaty System
SC-CAMLR	Scientific Committee on the Conservation of Antarctic Marine Living Resources
SCAR	Scientific Committee on Antarctic Research
SOOS	Southern Ocean Observing System
UAV	Unmanned Aerial Vehicle
WMO	World Meteorological Organisation
WP	Working Paper