



SDM 18  
Agenda Item 4.3.4  
Person Responsible: D Liggett/  
E Leane/  
C Lüdecke

**XXXV SCAR Delegates Meeting  
Davos, Switzerland, 25-26 June 2018**

## **Proposal for a Scientific Group: Humanities and Social Sciences**

### **Report Authors**

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### **Summary**

Our proposal is to establish a permanent *Humanities and Social Sciences Group* (HSSG) within SCAR. The key aim of such a group, analogous to the existing Science Groups, would be to initiate, develop and coordinate rigorous and high-quality international research on the Antarctic region within the Humanities and Social Sciences (HASS); to provide independent advice to the ATCMs on issues requiring disciplinary expertise outside the natural sciences; and to coordinate with existing science groups on issues that call for a multidisciplinary approach.

### **Recommendation**

Delegates approve the formation of a Humanities and Social Sciences Group (HSSG).

### **Summary Budget 2019-2020**

	2019	2020
	Request	Request
(US\$)	10,000	10,000

80% of this budget would be covered by redesignating the current budgets of the SCAR Humanities and Social Sciences Expert Group (HASSEG) and the History Expert Group. Both of these groups currently receive \$4,000 each year from SCAR, which is predominantly used to subsidize travel and registration for students and early career researchers, and researchers from developing Antarctic states, to attend Group events. As these Groups would cease to exist in their current form, should this proposal be successful, their funding could be repurposed for a permanent HSSG. We are seeking an additional \$2,000 per annum for the combined group, to enable us to increase the support we provide to early-career researchers and to support new initiatives, particularly Action Groups.



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### **Background**

The humanities and social sciences research community has been part of the SCAR landscape for over a decade, first in the form of two Action Groups (AGs) and then two closely related Expert Groups (EGs). The History Action Group was formed in 2005 and became an Expert Group in 2011, while the Social Sciences Action Group was established in 2010 and expanded into the Humanities and Social Sciences Expert Group (HASSEG) in 2014. These two EGs currently sit directly under the SCAR Executive Committee and the SCAR Delegates.

The two EGs have become the peak academic forums for initiating, organizing, and disseminating research in the rapidly growing fields of Antarctic HASS. The groups have closely aligned aims and interests, and have organized joint events and business meetings. They now have overlapping memberships with total numbers well over 200. They have held joint biennial conferences and have participated in SCAR business meetings since 2013. The most recent joint HASSEG and History EG conference attracted 98 participants. The EGs also have an active presence at the SCAR Open Science conferences, with their own sessions and side meetings.

The HASSEG and History EG together proposed the establishment of a permanent Humanities and Social Science Group at the Delegates Meeting in 2016 in Kuala Lumpur, Malaysia (WP16). At that time, the proposal was viewed favourably but the EGs were advised to prepare a more detailed proposal for the SCAR Delegates Meeting in 2018, including ideas for potential Action Groups, a request to which this proposal responds.

### **Rationale**

The twenty-first century has seen increasing recognition that many of the problems facing humanity, particularly those related to the environment, cannot be addressed effectively by individual disciplines (Brown, Deletic & Wong 2015). Dealing with questions of global importance involves understanding and addressing questions of values and behaviours, social norms and cultural assumptions – questions that fall within the purview of the humanities and social science disciplines. The movement towards closer exchange between disciplines traditionally considered to be widely separate is exemplified at an organizational level by the merger of the International Council for Science (ICSU) and the International Social Science Council (ISSC), which was confirmed at the ICSU-ISSC joint General Assembly in October 2017. Antarctica, often conceptualised as a “continent for science,” is no exception to these developments.

Antarctic social science and humanities studies have evolved considerably in recent years to become both more intellectually sophisticated and more directly relevant to the governance of Antarctica. Funding agencies have recognized this emergence



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through increased support of research projects.<sup>1</sup> Recent landmark publications edited by HASSEG and History EG members speak to the emergence of Antarctic humanities and social sciences as important and dynamic fields of inquiry that go far beyond the discipline of history (Leane & McGee Forthcoming; Liggett et al. 2017; Roberts, van der Watt & Howkins 2016; Tin et al. 2013).

Scholars from archaeology, anthropology, tourism and heritage studies, and other disciplines rely upon the same logistical support structures that underpin natural scientific fieldwork in Antarctica. Their analyses frequently demand cross-disciplinary collaboration, in order to understand phenomena such as decay rates in human structures and the ecological parameters relevant to tourist activity. Scholars in less field-intensive disciplines such as international law or political science have both described and analyzed the unique history and present conditions of Antarctic governance as both a living structure capable of development, and a source of comparison for studies of other parts of the world (Rothwell & Hemmings 2018; Dodds, Hemmings & Roberts 2017; Salazar 2017). Collectively this scholarship provides a rigorous, scholarly, and intellectually fertile foundation for describing and analyzing the Antarctic. Status as a Science Group within SCAR will provide an important and timely home for this research, and a mechanism for collectively assessing future research priorities and acting to address them.

The importance of managing human impact on Antarctica is embedded in results of the SCAR Horizon Scan, which identify the need to “recognize and mitigate human impact” as one of six priorities. Specific challenges within this priority include understanding: the impact of human modification of the environment; the way in which changing geopolitical configurations will affect Antarctic governance and science; and how developments in Antarctic tourism will be regulated. Challenges such as these can only be addressed by scientists acting in concert with scholars in the humanities and social sciences. Furthermore, the governance of the Antarctic region includes issues such as tourism, cultural heritage management, and environmental management (including fisheries) that are informed by research in the natural sciences, but which also require input from the humanities and social sciences. Given the rapidly evolving nature of contemporary geopolitics and a changing global climate, the ATS cannot afford inertia (Chown et al. 2012) and must maintain its ability to adapt to constantly evolving global contexts and a widening range of actors. Humanities researchers and social scientists are able to contribute directly and substantially to the challenges of describing and managing human impacts in Antarctica, and are well placed to assess wider societal concerns related to the far south.

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<sup>1</sup> Examples include (in alphabetical order): the Australian Research Council; the Chilean Comisión Nacional de Investigación Científica y Tecnológica (CONICYT); the European Research Council and the European Commission; the Instituto Antártico Chileno (INACH); the National Science Foundation; the Netherlands Organization for Scientific Research (NWO); the Norwegian Research Council; and the Swedish Research Council.



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Many researchers within the HASSEG and History EG are working on topics directly relevant to these challenges. Some are already involved in large interdisciplinary collaborative projects in or about Antarctica funded by national grant schemes.<sup>2</sup> The existence of a Science Group would provide a much-needed structure to bring the capacity of the humanities and social sciences to bear upon the significant science questions that SCAR seeks to address, in terms of both guiding future research priorities and facilitating collaboration with scholars in the natural sciences. This will enhance and stabilize promising developments such as the new SCAR interdisciplinary Scientific Research Programme (SRP) Planning Group for an SRP on Integrated Conservation Planning for Antarctica and the Southern Ocean (Ant-ICON), drawing on expertise in HASSEG and the Life Sciences Group, which has been separately proposed for consideration by the Delegates at this meeting.

HASS-focussed organizations and contexts are of benefit for some humanities researchers and social scientists working on Antarctic topics, but these provide neither the critical mass of expertise on Antarctic issues nor the opportunity for contact with the scientific community that SCAR provides. A permanent Humanities and Social Science Group within SCAR would enable this community to interact and collaborate with natural scientists; would form a basis for innovative interdisciplinary research into the future; and would enable SCAR to provide advice to Antarctic Treaty Parties drawing on the wide range of disciplinary expertise that is necessary to address contemporary challenges. These include the demarcation and management of protected areas in the Antarctic and the likely impacts of global developments (political, technological, economic, socio-cultural and environmental) on Antarctic tourism or science. It would also provide clearer channels of communication at the national level, and enhance the capacity of HASS researchers in SCAR member states to contribute to these processes. We suggest this is particularly important in the case of HASS given that differences in values, expectations, and actions are often conditioned by specific political and historical contexts (see e.g. Leane 2016).

In order to address the grand challenges associated with the future of Antarctica and our planet, perspectives and approaches are needed from all branches of knowledge. Antarctic researchers from the humanities and social sciences conduct important work that furthers human understanding about the southern continent. With this proposal for a Humanities and Social Sciences Group, the HASS research community seeks analogous standing to the existing Science Groups within SCAR, in order to contribute advice and knowledge in an analogous way to their peers in Life Sciences, Physical Sciences, and Geosciences.

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<sup>2</sup> For example, Assoc. Prof. Adrian Howkins (University of Bristol) is a principal investigator in the NSF-funded McMurdo Long Term Ecological Research (LTER) project.



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## **Terms of Reference for a HSSG**

In line with SCAR's Rules of Procedure for Subsidiary Bodies, the terms of reference for the new Humanities and Social Sciences Group will involve:

- a) taking a strategic view of research requirements in the Antarctic;
- b) sharing information on disciplinary research being conducted by national Antarctic programmes, and identifying areas where current research is lacking;
- c) ensuring appropriate interdisciplinary awareness and linkages with the other SCAR Science Groups, and developing interdisciplinary proposals with them where appropriate;
- d) coordinating proposals for future research to achieve maximum scholarly and logistic effectiveness;
- e) establishing links and/or partnerships with other relevant international organizations having an interest in Antarctic science;
- f) identifying research areas or fields that might be best investigated by a SCAR Scientific Research Programme and where appropriate establishing a Scientific Programme Planning Group to develop a formal proposal for consideration by the Delegates;
- g) establishing Action Groups and Expert Groups, either individually or jointly with other Science Groups to address specific research questions;
- h) making funding requests where appropriate for SCAR support of Science Group activities (symposia, conferences, workshops, etc.);
- i) providing advice to the Meetings of Directors, Secretariat, or Standing Committees as required and requested;
- j) keeping other SCAR Subsidiary Bodies and the SCAR Secretariat aware of their actions and plans; and
- k) encouraging the submission of data and metadata to the Antarctic Data Management System.

## **Science Group Leadership**

An interim steering committee consisting of the co-chairs of the current Humanities and Social Sciences Expert group and the chair and a long-standing member of the History Expert Group, spanning different disciplinary fields (as is required by the Rules of Procedure for Subsidiary Bodies), will assume the interim leadership of the Humanities and Social Sciences Group and will organise formal elections to be held within six months to ensure that the leadership team will be democratically elected by the group's formal members (i.e. the respective national delegates).



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### **Subsidiary Bodies**

Should the application for Science Group status be approved, the interim steering committee will appoint a strategy sub-committee tasked with assessing the capacity of the Group and how its existing expertise can most effectively be leveraged to address significant science questions through both Action Groups and interdisciplinary Science Programme Planning Groups. This committee will collect feedback from researchers and relevant stakeholders and will issue a written report to members in advance of the next History/HASSEG conference in 2019. A preliminary process initiated by the History EG and HASSEG has resulted in five ideas for possible Action Groups that are appended to this proposal as examples of potential Group research directions (Attachment 1). These ideas will be further discussed and reviewed should our application for Science Group status be approved by the Delegates.

### **Budget**

For 2019 and 2020, we request an annual budget of US\$10,000. 80% of this requested budget could come from redesignating the current budgets of the SCAR Humanities and Social Sciences Expert Group (HASSEG) and the History Expert Group. Both of these groups currently receive \$4,000 every year from SCAR. As these groups would cease to exist in their current form, should this proposal be successful, their funding could be repurposed for a permanent HSSG. We are seeking an addition \$2000 per annum to enable the new HSSG to continue to support students and early career researchers at an increased scale, and to support the creation of Action Groups.

#### **Planned use of funds for 2019 to 2020**

Most of the funding requested would be used to support compelling Action Groups. Some of the initial ideas that are being put on the table are provided in Attachment 1. The Action Groups will be asked to set aside the majority of their budgets to support early-career researchers and researchers from developing Antarctic programmes, e.g. by providing travel support to these researchers to participate in the next humanities and social sciences conference in 2019 or the SCAR conference in Hobart in 2020.

#### **Percentage of the budget to be used for support of early career researchers**

2019: 60%  
2020: 50%

#### **Percentage of the budget to be used for support of scientists from countries with developing Antarctic programmes**

2019: 20%  
2020: 20%



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### **Linkages**

#### **Direct support from outside organisations**

#### **Major collaborations**

Important connections, although not necessarily tied to co-funding, exists with the following groups within and outside SCAR.

#### **Within SCAR**

1. Standing Committee on the Antarctic Treaty System (SC-ATS)
2. Capacity Building, Education and Training (CBET) Advisory Group
3. The Life Sciences Group (especially through the SRP Planning Group on Integrated Conservation Planning for Antarctica and the Southern Ocean (Ant-ICON))

#### **Outside SCAR**

1. The Association of Polar Early-Career Scientists (APECS)
2. The International Arctic Science Committee (IASC), and especially their Social and Human Working Group
3. The International Arctic Social Sciences Association (IASSA)
4. The World Meteorological Organization's (WMO) World Weather Research Program's (WWRP) Polar Prediction Project, and especially their Social and Economic Applications and Research (SERA) Task Group
5. The United Nations Environment Programme
6. The Council of Managers of National Antarctic Programmes (COMNAP)
7. A range of National Antarctic Programmes

### **Outreach and Capacity Building**

We already have in place a very well developed website (<http://antarctica-hasseg.com/>), in addition to our presence on the SCAR website, with facilities to add detailed member profiles, which we do on a regular basis. We use social media – Facebook and twitter to engage the wider public and have a newlist that reaches out to our members via email. Our biennial conferences are being used as effective recruitment mechanisms and outreach channels as we aim to communicate with the wider public, e.g. through public presentations, arts exhibitions or other events, at these conferences. A short documentary of our most recent conference gives as sense of our outreach capacity (<https://vimeo.com/237284492>). We already have a very good relationship with APECS and contribute to APECS skills-building workshops and seminars, and we would continue doing so in an HSSG. Most of our budget would directly benefit early-career researchers, thus contributing to capacity and network building.



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## **Attachment 1. Potential HSSG Action Groups**

- 1. Action Group on Intrinsic Value in Antarctica (AGIVA)**
- 2. Bipolar connections in the History of Environmental Management in the Arctic and Antarctic (HEMA2) Action Group**
- 3. Action Group - Human Dimensions of Environmental Change in the Antarctic Action Group (IMPACT)**
- 4. Action Group on Resilience and the Future of Science-based Decision-making for Antarctica (PoLSciNex)**
- 5. Public Engagement with Antarctic Science Action Group (PEAS)**



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## **1. Action Group on Intrinsic Value in Antarctica (AGIVA)**

### **Lead proponents**

- Rupert Summerson. Faculty of Architecture, Building and Planning, The University of Melbourne, Australia. Email: [rupert.summerson@bigpond.com](mailto:rupert.summerson@bigpond.com).
- Alan D. Hemmings. Adjunct Associate Professor, Gateway Antarctica Centre for Antarctic Studies and Research, University of Canterbury, Christchurch, New Zealand. Email: [ahe30184@bigpond.net.au](mailto:ahe30184@bigpond.net.au)
- Dr Sira Engelbertz. Independent scholar, Wellington, New Zealand. Email: [sira.engelbertz@gmail.com](mailto:sira.engelbertz@gmail.com)

### **Summary of Group:**

The aim of this group is to develop a broad cross-cultural understanding of the intrinsic value of Antarctica in order that the intention of the Madrid Protocol to provide protection to this value can be better understood. Intrinsic value is a complex philosophical problem which requires experience and expertise.



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### **The Proposal**

#### **Introduction and Background**

Paragraph 1, Article 3 of the Madrid Protocol specifies that:

The protection of the Antarctic environment and dependent and associated ecosystems *and the intrinsic value of Antarctica*, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area [emphasis added].

Intrinsic value of, and in, Antarctica is seemingly given considerable importance in the Madrid Protocol, the instrument that provides comprehensive protection of the Antarctic environment. Intrinsic value is a difficult concept, however, and the subject of considerable debate in philosophical circles; and in practice consideration of intrinsic value has hitherto been poorly realised in the Antarctic Treaty area.

Globally, practice has moved towards casting environmental value in terms of “ecosystem services” for the benefit of humans – a manifestly instrumental orientation. Environmental management debate within the Antarctic Treaty area has neither explicitly embraced ecosystem services as its normative framework, nor explicated the meaning of the various environmental value terms (including intrinsic value) that its instruments commit to. Gaining a better understanding of what intrinsic value may mean in the Antarctic context is therefore not only important in operationalising a legally mandated duty under the Madrid Protocol – a key component of the Antarctic Treaty System – but an engagement in a global discourse around the various claims of intrinsic and instrumental framings of environmental duty.

The establishment of the intrinsic value of Antarctica as a substantive fact – as opposed to merely a declaratory objective – would be a significant development, which would, because of its size and international governance system, again put Antarctica at the forefront of environmental debate worldwide.

#### **Aims, Goals and Objectives**

The overarching goal of this Action Group is to develop broad cross-cultural understanding of intrinsic value in Antarctica in order that the intention of the Madrid Protocol to provide protection to this value can be better understood and implemented. Despite the political framework, the project aims to be a scholarly exercise with the following objectives:

1. Create a research community supported by:
  - a. a productive discourse on the concept of intrinsic value in Antarctica through online forums, conference sessions and/or workshops, and
  - b. other resources (e.g. publications, publicly available bibliography);
2. Explore and develop methodological rigour in the understanding of intrinsic value in Antarctica across the linguistic and cultural spectrum of states engaged in the Antarctic Treaty System;



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3. Model an intellectual framework for assessing the duty in relation to intrinsic value under the Madrid Protocol.

#### **Proposed Milestone Activities with Timeline**

**Year 1:** Summerson, Hemmings and Engelbertz will form a core group to identify the main issues around the identification of intrinsic value of and in Antarctica and will prepare a critical literature review. They will then make personal contact with the authors who have written about intrinsic value (relatively) recently and put to them the issues that have arisen in the literature review. It is also planned to start a Discussion forum on the PhilPapers website (<https://philpapers.org>) to stimulate discussion and engage the wider community of scholars in this area.

Whilst much of the global consideration of intrinsic value in the academic literature may draw on Western traditions (reflected in thinking in Western Europe, North America, South America and Australasia), Summerson, Hemmings and Engelbertz will also seek to reveal non-Western approaches to intrinsic value through scholars in, inter alia, China, India and Japan, or elsewhere who may have detailed knowledge of the philosophical traditions of these countries and cultures and experience with the concept of intrinsic value.

**Year 2:** Summerson and Hemmings to convene a session on intrinsic value in Antarctica at a HASSEG or SCAR conference. Participants attending the intrinsic values session will be invited to contribute papers to a scholarly volume on intrinsic value in Antarctica, which could either be part of the main proceedings volume or a separate volume.

**Year 3:** Continued preparation of the proceedings volume and additional outreach activities including, but not limited to, inputs to the Antarctic Environments Portal, and preparation of a Background or Information Paper for consideration by SCAR for an Antarctic Treaty Consultative Meeting.

#### **Capacity Building, Education and Outreach Plans**

Capacity building, education and outreach plans include:

- building an international network of scholars, including reaching out to scholars not yet engaged in Antarctica;
- providing educational means such as interactive and on-demand webinars (e.g. through APECS);
- producing popular articles for mainstream and/or online media such as The Conversation (<https://theconversation.com/au>); and
- communicating through various social media channels (e.g. Twitter, Facebook).

#### **Data Management Plans**

Intrinsic value is unlikely to create data, as generally understood in SCAR's dominant traditional physical sciences communities. However, we plan to introduce an electronic, interactive and publicly available bibliography (e.g. through Mendeley) on the topic of intrinsic value in Antarctica to share this project's findings with both scholars and non-scholars.



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## **2. Bipolar connections in the History of Environmental Management in the Arctic and Antarctic (HEMA2) Action Group**

### **Lead proponents**

- Peder Roberts, KTH Royal Institute of Technology, Sweden, [peder.roberts@abe.kth.se](mailto:peder.roberts@abe.kth.se)
- Cornelia Lüdecke, University of Hamburg, Germany, [C.Luedecke@lrz.uni-muenchen.de](mailto:C.Luedecke@lrz.uni-muenchen.de)
- Lize-Marié van der Watt, KTH Royal Institute of Technology, Sweden, [lizemarie.vanderwatt@abe.kth.se](mailto:lizemarie.vanderwatt@abe.kth.se)

### **Summary of group**

The HEMA<sup>2</sup> Action Group will examine the history of bipolar connections within the science-governance nexus, asking how historical and contemporary actors employed bipolar links in managing Arctic and Antarctic environments from 1945 onwards. The AG will explore how this history shapes present-day environmental management in the polar regions.



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## The Proposal

### Introduction and background

Environmental management and environmental protection have been long regarded as important activities in both polar regions. Despite the many significant differences between the Antarctic and Arctic environments, scientists and policy-makers alike have seen value in linking these environments – through institutions, scientific programmes and even political units. These bipolar links have been employed with some success in dealing with polar environments, for example through techniques for polar travel and natural science fieldwork; through theoretical approaches to environmental change that could be used in both polar regions; or conceptions of polar environments as sites with political or even military-strategic significance. But the conception of the polar regions as environments with significant commonalities has also been problematic, perhaps most notably in silencing the voices of indigenous Arctic residents.

The HEMA<sup>2</sup> Action group will explore the history of bipolar connections within the science-governance nexus and how this applies to environmental management in the Arctic and Antarctic. Specifically, the group asks how historical and contemporary actors have linked the construction and management of Arctic and Antarctic environments, and what this reveals about the structures of environmental management we have today.

The Action Group will comprise historians, geographers, political scientists and other interested scholars. HEMA<sup>2</sup> has the ambition to diversify current polar humanities scholarship on the theme through using SCAR networks.

### Relevance

HEMA<sup>2</sup> is a timely and relevant initiative. Since the 2007-08 IPY connections between Arctic and Antarctic scholars have increased in the fields of the social sciences and humanities, and major events such as POLAR2018 reflect the existence of a bi-polar intellectual community. HEMA<sup>2</sup> will build on the growing body of scholarship on science and environmental histories of Antarctica, produced by scholars such as Alessandro Antonello, Adrian Howkins, Jessica O'Reilly, Hanne Nielsen, Peder Roberts, Juan Salazar and Lize-Marié van der Watt. These scholars mostly work in English and are based at institutions with relatively strong track records of polar humanities research. A key goal for HEMA<sup>2</sup> is to widen this network and encourage participation from the global south and scholars working with cultures where historical perceptions of Antarctic and Arctic environments differ from Western perspectives. This is important for ensuring that a diversity of voices are represented, leading to a stronger and broader intellectual network and more concretely relevant findings, with the capacity to speak to all SCAR members.

The relevance of HEMA<sup>2</sup> is further attested by the significant recognition given to science and polar environmental management in historical perspective by leading research funding agencies. There are particularly significant opportunities to leverage funding and networks from the European Research Council project GRETPOL (Greening of the Poles: Science, the Environment and the Creation of the Modern



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Arctic and Antarctic, funded from 2017-2022). GRETPOL investigates how and why environmental concerns have become so important to our conceptions of the polar regions today and is led by Peder Roberts, who will also be the chairperson for HEMA<sup>2</sup>. Recent funding grants from both the Norwegian and Swedish research councils leads us to believe the chances for mobilizing additional funding are strong.

#### **Contribution to SCAR's mission**

The proposed research speaks to the SCAR Horizon Scan scientific priority on recognizing and mitigating human influences on Antarctica (Kennicutt et. al. 2014), through historicizing how bipolar links influenced and influences conceptions of environmental protection in the polar regions. HEMA<sup>2</sup> will include scholars from several humanities and social science disciplines, and will also be open to participation by natural scientists. The Group will explore how environmental management practices function as both interventions and protective measures, and will seek to explore how conceptions of Antarctica as a fragile environment have built on knowledge and experiences from the Arctic, in addition to reflecting wider social and political currents. HEMA<sup>2</sup> provides a historical dimension to anthropogenic impacts on the polar regions, contributing to SCAR's strategic goal to more effectively integrate the social sciences and humanities in its work ([www.scar.org/about/futureplans](http://www.scar.org/about/futureplans)).

An Action Group would enable us to utilize the SCAR networks in at least two ways. First, it would make it easier to reach scholars in countries with emerging Antarctic humanities and social science scholarship, ensuring that the Group reflects the full diversity of the SCAR membership. Second, in its capacity as independent scientific advisory body to the ATS, SCAR can also draw on the Group's expertise in historically grounded research on environmental management and thus function as a direct stakeholder for the Group's research outcomes.

#### **Aims, goals and objectives**

The main aim of HEMA<sup>2</sup> is to improve our understanding of how different actors have bipolar links in managing Arctic and Antarctic environments from 1945 onwards, especially. It will create a broader network of researchers, using both online and face-to-face meetings.

Two AG specific deliverables are planned:

- An edited volume with an international press
- A report written for policy makers and polar administrators

Participants in HEMA<sup>2</sup> could be involved in one or several roles, such as chapter contributor, discussant, co-editor, and so forth.

#### **Proposed Milestone activities with timeline**

##### **Year 1:**

At a HASSEG or SCAR conference, HEMA<sup>2</sup> will organise a side meeting to develop the outline of the edited volume along with interested scholars. The meeting will take the form of an open workshop in order to encourage broad participation. All participants will be required to come prepared with a short text (500 – 700 words) broadly describing their approach to the HEMA<sup>2</sup> themes. In addition to providing travel support for scholars



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who will diversify and improve HEMA<sup>2</sup>'s existing networks, we will utilize the SCAR tools for web-based meetings to maximize quality input. Following the meeting, under HEMA<sup>2</sup> leadership, a book outline will be drawn up, additional chapter authors contacted if necessary, and a proposal submitted to a press. All three members of the HEMA<sup>2</sup> leadership have strong track records of producing successful edited volumes, and strong contacts with leading university presses.

#### **Year 2:**

At least one virtual meeting, likely in the form of a staggered online workshop (to allow for time-zone differences) will be scheduled during the second half of the year, prior to the Antarctic field-season. During the SCAR OSC in Tasmania, project members involved in HEMA<sup>2</sup> will discuss progress and plan the next meeting. In terms of HEMA<sup>2</sup>'s deliverables (and edited volume and report), SCAR funding will be more usefully put towards a physical workshop meeting when the draft texts are at a relatively advanced stage and additional funding can be leveraged. The editorial team (headed by Roberts) will at this point begin planning a report drawing upon HEMA<sup>2</sup> research for a SCAR audience, and will liaise with relevant members of the SCAR leadership in Hobart.

#### **Year 3:**

In August/September of year 3, a book workshop will be hosted in Scandinavia, likely in Sweden. SCAR funding will be allocated to subsidise travel and accommodation of scholars who lack institutional support, and who can contribute research on underrepresented perspectives. Following this a smaller workshop will be held to draft the report. Roberts will continue to lead the process of producing the report to SCAR, which will function more as a synthetic overview of the Group's research with a policy-relevant character.

### **Capacity building, education and outreach**

Capacity building is a major HEMA<sup>2</sup> goal. As explained above funds are allocated to create a diverse and global network. HEMA<sup>2</sup> can also be leveraged to host an early-career researcher with external funding, as a mechanism to host such a researcher at KTH Royal Institute of Technology in Stockholm already exists.

The report can be seen as a major outreach deliverable. In terms of communicating the research more broadly, we will use existing web-platforms (SCAR webpage, social media accounts), in addition to the platforms available at some of the participants' home institutions.

### **Data Management Plans**

The group will not generate the kind of data that can be deposited in a central, shareable database. The ambition, however, is that the report will be open-access and that enough funding can be raised so that the edited volume can be published open-access as well.

### **Terms of reference**

*The HEMA<sup>2</sup> Action Group will examine the history of bipolar connections within the science-governance nexus, asking how historical and contemporary actors employed bipolar links in managing Arctic and Antarctic environments from 1945 onwards. The*



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*AG will explore how this history shapes current environmental management in the polar regions.*

- The main aim of HEMA<sup>2</sup> is to improve historical understanding of how different actors have described and managed Arctic and Antarctic environments from 1945 onwards, including the transfer of knowledge and insights between the polar regions. It will create a broader network of researchers, using both online and face-to-face meetings.
- HEMA<sup>2</sup> plans to deliver:
  - An edited volume with an international press
  - A report written for policy makers and polar administrators
- This is an open group
- The initial duration of the group is 3 years, with the option of applying for renewal
- The group will be chaired by Peder Roberts for its duration, with Cornelia Lüdecke and Lize-Marié van der Watt as co-chairs. Should the need arise to replace the chair; the first recourse would be for one of the co-chairs to take the position of chair. In this scenario, the group will choose a new co-chair. Should neither co-chair be able to replace the chair, the group will choose a new chair.

#### **Potential members**

- Adrian Howkins, University of Bristol, UK, [adrian.howkins@bristol.ac.uk](mailto:adrian.howkins@bristol.ac.uk)
- Alessandro Antonello, University of Melbourne, Australia, [alessandro.antonello@unimelb.edu.au](mailto:alessandro.antonello@unimelb.edu.au)\*\*
- Justiina Dahl, KTH Royal Institute of Technology, Sweden, [justiina.dahl@abe.kth.se](mailto:justiina.dahl@abe.kth.se)\*\*
- Kati Lindström, KTH Royal Institute of Technology, Sweden, [kati.lindstrom@abe.kth.se](mailto:kati.lindstrom@abe.kth.se)
- Cornelia Lüdecke, University of Hamburg, Germany, [C.Luedecke@lrz.uni-muenchen.de](mailto:C.Luedecke@lrz.uni-muenchen.de)
- Hanne Nielsen, University of Tasmania, Australia, [hanne.nielsen@utas.edu.au](mailto:hanne.nielsen@utas.edu.au)\*\*
- Peder Roberts, KTH Royal Institute of Technology, Sweden, [peder.roberts@abe.kth.se](mailto:peder.roberts@abe.kth.se)
- Lize-Marié van der Watt, KTH Royal Institute of Technology, Sweden, [lizemarie.vanderwatt@abe.kth.se](mailto:lizemarie.vanderwatt@abe.kth.se)

#### *Additional potential members:*

- Iqra Choudhry, Scott Polar Research Institute/University of Manchester, UK, [iqra.choudhry@postgrad.manchester.ac.uk](mailto:iqra.choudhry@postgrad.manchester.ac.uk)\*\*
- Pablo Fontana, University of Buenos Aires, Argentina, [fontana.pablo@gmail.com](mailto:fontana.pablo@gmail.com)
- Jessica O'Reilly, Indiana University Bloomington, USA, [jlloreill@indiana.edu](mailto:jlloreill@indiana.edu)
- Ricardo Roura, Independent scholar, Netherlands, [ricardo.roura@worldonline.nl](mailto:ricardo.roura@worldonline.nl)
- Juan Salazar, Western Sydney University, Australia, [j.salazar@westernsydney.edu.au](mailto:j.salazar@westernsydney.edu.au)
- Alexis Rider, University of Pennsylvania, USA, [ridera@sas.upenn.edu](mailto:ridera@sas.upenn.edu)\*\*



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- Simone Turchetti, University of Manchester, UK,  
[simone.turchetti@manchester.ac.uk](mailto:simone.turchetti@manchester.ac.uk)
- Others to be confirmed

HEMA<sup>2</sup> is an open group and will actively recruit a wider range of members.

**Webpages and communication plans**

Upon approval, the group will use the website and online meeting services that SCAR provides. Furthermore, it will use existing websites and social media channels within the network to communicate activities.



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**3. Action Group - Human Dimensions of Environmental Change  
in the Antarctic (IMPACT)**

**Lead proponents**

- Dr. Alessandro Antonello, School of Historical and Philosophical Studies, University of Melbourne, Australia [aantonello@unimelb.edu.au](mailto:aantonello@unimelb.edu.au)
- Dr. Adrian Howkins, Department of History, University of Bristol, United Kingdom [adrian.howkins@bristol.ac.uk](mailto:adrian.howkins@bristol.ac.uk)

**Summary of group**

The IMPACT Action Group aims to understand the intellectual and practical frameworks involved in determining, assessing, and planning for human impacts on the Antarctic environment, over the course of recent Antarctic history and into the present and future.



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## The Proposal

### Introduction and background

From the earliest contact with the Antarctic continent at the beginning of the nineteenth century, humans have had a direct impact on the Antarctic environment. Sealers and whalers have hunted marine mammals, explorers and scientists have constructed stations and traveled around the continent, and tourists congregate at “hotspots” of human activity. Less directly, but much more widely, global anthropogenic phenomena such as climate change and ozone depletion also have significant environmental implications in Antarctica. Understanding and mitigating these impacts have been seen for some decades as important activities to ensure that the Antarctic environment is not negatively affected in the long term by the rapid pace of change.

Environmental management is a core activity of contemporary Antarctic science and policy. Yet the frameworks for considering human action in this context can be insensitive to the social and cultural complexities relevant to generating and explaining human actions. For this proposal, “human dimensions” covers social and cultural elements of human life in Antarctica, including legal and regulatory frameworks, the history of ideas, meaning and value, and environmental ethics. The concern here is to investigate both the human-developed structures that create impacts, as well as the structures in which humans must act to mitigate or prevent impacts.

Humanists and social scientists from various fields – including history, political science, philosophy, and literature – have much to contribute to understanding the human dimensions of environmental change in the Antarctic. But the full potential of this contribution from the humanities and social sciences has yet to be realized.

This Action Group will also address the questions relating to “Human Presence in Antarctica” articulated in the SCAR Horizon Scan (questions 74 – 80), and the priority “Recognize and mitigate human influences” outlined by Kennicutt and Chown (“Six priorities for Antarctic science”). This action group sets out to collaborate with Life Science, Geoscience, and Physical Science groups within SCAR to build an international community of scholars with an interest in the human dimensions of environmental change in Antarctica. Through its work, this group will ensure scientific leadership for Antarctica and in other regions in relation to integrated humanities-social science-science frameworks for understanding human dimensions of environmental change. It will also ensure that scientific advice provided to the Antarctic Treaty System and other organisations is robust according to humanities and social sciences frameworks.

This Action Group will seek to develop significant questions, drawn from up-to-date literatures and approaches in the humanities and social sciences, to make a contribution to the necessary and pressing task of environmental management and thinking in Antarctica. By articulating a series of questions and problems, the group will



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develop models for integrating the study of human dimensions of environmental change in the Antarctic into broader SCAR, scientific, and policy discussions.

#### **Aims, Goals and Objectives**

The aims of the IMPACT Action Group include:

- Develop a series of research questions relating to human impacts on the Antarctic environment which draw from relevant humanities and social sciences literatures;
- Generate robust conceptual and theoretical frameworks that will integrate humanities and social science approaches into prevailing scientific understandings of human impacts in Antarctica;
- Explain and narrate significant case studies in the history of Antarctic environmental management related to the human dimensions of environmental change;
- Explore and critically assess key terms and concepts in environmental management and impact frameworks in Antarctica.

Initial questions for investigation include:

- What are the conceptual elements of understanding human impacts, their histories and futures?
- Are the formal and mandated processes of environmental assessments (both national and through the Committee on Environmental Protection of the Antarctic Treaty System) functioning in a way that minimizes impacts?
- Does environmental assessment in Antarctica foster connections between actors, states, and strengthen institutional bonds at a time when skepticism about science seems to be rising around the world?

The proposed outcomes of the IMPACT Action Group include:

- An edited volume of scholarly papers published with a major scholarly press;
- Peer-reviewed articles for relevant scientific journals;
- Contributions to the Antarctic Environments Portal (<https://www.environments.aq/>).
- Identify and apply for funding opportunities—both national and international—to continue to develop this human impact work into the future.

#### **Proposed Milestone Activities with Timeline**

- **Year 1:**  
Convene a stream at the proposed Humanities and Social Sciences meeting in Ushuaia, including individual research papers, scoping papers, and round-table discussion. The purpose of this IMPACT Action Group research stream would be to identify potential lines of research, identify shared themes, and begin identifying possible sources of funding for continuing this research into the future.
- **Year 2:**  
Convene a stream and meeting at a HASSEG conference or a SCAR Open Science Conference. This stream will allow members to disseminate work to-date,



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further refine paper contributions, and refine list of potential sources of funding for this research and start to draft research proposals.

- **Year 3:**  
Convene a final workshop to finalise contributions to the proposed edited collection, as well as to develop texts for other public dissemination through a range of online platforms, both relevant to Antarctica and environmental management more broadly. Finalise and submit proposals for funding and other institutional support to continue human impacts research.

#### **Capacity Building, Education and Outreach Plans**

The IMPACT Action Group has the following aims in this area:

- Develop a range of historical case studies and notes regarding human impacts on the Antarctic environment that will be of use to Antarctic environmental managers
- Contribute to the development of disciplines within the humanities and social sciences
- Support early career scholars and scholars from developing countries

#### **Data Management Plans**

It is not expected that significant new data will be created by this Action Group. As a humanities and social sciences group, it is expected that scholars contributing to the work of this group will draw on existing published and grey literature materials as well as other publicly-accessible documents and archives.

#### **Terms of Reference**

The IMPACT Action Group aims to understand the intellectual and practical frameworks involved in determining, assessing, and planning for human impacts on the Antarctic environment, over the course of recent Antarctic history and in the present.

The IMPACT Action Group will:

- generate new conceptual and empirical work in the humanities and social sciences relevant to work on the human dimensions of environmental change;
- produce scholarly, peer-reviewed publications of international quality;
- bring humanities and social science scholars into discussion with relevant scientists and environmental managers;
- disseminate new research findings in a range of public and general forums, both Antarctic, polar, and more general;
- be open in its membership;
- operate for 3 years;
- be co-chaired by Dr. Alessandro Antonello and Dr. Adrian Howkins.



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### Potential Members

First Name	Last Name	Affiliation	County	Email
<b>Potential Members</b>				
Alessandro	ANTONELLO	University of Melbourne	Australia	aantonello@unimel.edu.au
Adrian	HOWKINS	University of Bristol	UK	adrian.howkins@bristol.ac.uk
Peder	ROBERTS	KTH	Sweden	peder.roberts@abe.kth.se
Lize-Marie	VAN DER WATT	KTH	Sweden	lizemarie.vanderwatt@abe.kth.se
Steve	CHIGNELL	University of British Columbia	Canada	steve.chignell@colostate.edu
Byron	ADAMS	Brigham Young University	USA	byron_adams@byu.edu
Aliya	KHAN	National Snow and Ice Data Center, USA	USA	alia.khan@nsidc.org
Berry	LYONS	Ohio State University/SCAR Action Group on Geological Heritage and Geo-conservation	USA	lyons.142@osu.edu
<b>Additional Potential Members</b>				
Daniela	LIGGETT	University of Canterbury	NZ	Daniela.liggett@canterbury.ac.nz
Kevin	HUGHES	British Antarctic Survey	UK	kehu@bas.ac.uk
Ceridwen (Crid)	FRASER	Australian National University	Australia	ceridwen.fraser@anu.edu.au
Pablo	FONTANA	Argentina Antarctic Institute	Argentina	fontana.pablo@gmail.com
<b>*Other potential members will include those working in environmental management and monitoring in national Antarctic programs, universities, and research institutes, as well as scholars in the environmental humanities and social sciences working on cognate regions.</b>				

### Webpages and Communication Plans

In addition to the proposed scholarly, peer-reviewed outputs, the IMPACT Action Group will maintain a page on the SCAR website as a central site of information and dissemination of research. Other potential avenues of dissemination include prominent online magazines, including: *Decision Point Online*, the magazine of the Australian Research Council Centre of Excellence for Environmental Decisions (CEED); and *Edge Effects*, a digital magazine from the Nelson Institute for Environmental Studies at the University of Wisconsin-Madison. This will particularly ensure that work on Antarctica reaches beyond the Antarctic sphere.



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**4. Action Group on Resilience and the Future of Science-based  
Decision-making for Antarctica (PoLSciNex)**

**Lead proponents**

- Luis Valentín Ferrada, Universidad de Chile (Chile), [lvferrada@derecho.uchile.cl](mailto:lvferrada@derecho.uchile.cl)
- Akiho Shibata, Kobe University (Japan), [akihos@kobe-u.ac.jp](mailto:akihos@kobe-u.ac.jp)

**Summary of Group:**

The purpose of the group is to analyze the policy-law-science nexus within the current Antarctic governance framework and to articulate the practical significance of understanding such a nexus, so as to inform stakeholders how science-based decision-making relevant to Antarctica is actually operationalized.



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## The Proposal

### Introduction and Background

In Antarctica, the study of resilience is not only about its natural systems but also relates to social systems (societal institutions and human practices), including the Antarctic Treaty System, by which the freedom of scientific investigation is guaranteed, operationalized and conditioned. Antarctic science is deeply embedded within an intricate nexus of international and domestic legal regulations and policy preferences. This nexus is apparent if one reviews the complex negotiation and now the implementation of the Ross Sea Region marine protected area (MPA) established under the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), and the discussion relating to biological prospecting at the Antarctic Treaty Consultative Meetings (ATCM) and in the United Nations (biodiversity beyond areas of national jurisdiction or BBNJ). Apparent as this Antarctic policy-law-science nexus might be, neither its operational articulation nor the theoretical underpinning of such a nexus has been critically examined. Doing so requires multidisciplinary analysis among lawyers, international relations scholars, political scientists, and more broadly, Antarctic scientists in general. Many of the questions in SCAR's *Horizon Scan* require examination within such a policy-law-science nexus, e.g. Question #66: "How successful will Southern Ocean Marine Protected Areas be in meeting their protection objective, and how will they affect ecosystem processes and resource extraction?"

The proposed Action Group on Resilience and the Future of Science-based Decision-making for Antarctica, a policy-law-science nexus AG (PoLSciNex AG), will coordinate the academic research and experts from the fields of international law, international relations, environmental management, and political science, who are interested in developing studies about this Antarctic policy-law-science nexus. Once the specific topics/areas of study have been identified, members from pertinent fields of study, such as biology, fisheries, environmental science, marine science, tourism, and Antarctic logistics will also be invited to join the Group.

The difficulties in reaching international agreements on topics like new MPAs or an environmental liability regime, despite the scientific support for these kind of measures, show the importance of analysing more deeply the relationship between policy, law, and science in Antarctic decision-making process. The study into this nexus is called for as the Antarctic Treaty System is facing several challenges that require appropriate decisions in order to strengthen Antarctic governance. If we can understand how the policy-law-science interaction operates, we will be able to take better science-based decisions.

The PoLSciNex AG has identified some specific topics or areas of interests where examination of the policy-law-science nexus would be fruitful for both social sciences and natural sciences scholarship. Some obvious examples are (numbers in parenthesis correspond to SCAR *Horizon Scan* questions): **(a)** marine protected areas (MPAs) in the Southern Ocean (61, 66); **(b)** Antarctic Specially Protected Areas



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(ASPA) and Specially Managed Areas (ASMAs) (68, 74); **(c)** invasive species in the Antarctic (55); **(d)** biological prospecting in the Antarctic (43, 44); **(e)** environmental liability in the Antarctic (74); **(f)** environmental impact assessment in the Antarctic (53, 74); **(g)** large-scale scientific establishments and logistical facilities in the Antarctic (75); **(h)** marine scientific research in the Southern Ocean (12-23); **(i)** “commercial” activities in the Antarctic, including Antarctic tourism (78); etc.

These interdisciplinary topics are clearly of interest to SCAR researchers and to members of the SCAR Standing Committee on the Antarctic Treaty System (SC-ATS) and reflect concerns expressed during ATCMs. In this sense, the PoLSciNex AG will contribute to SCAR’s mission of promoting scientific knowledge, understanding and education on Antarctic decision-making process. In addition, the AG will contribute to SCAR’s task of providing independent and objective scientific advice and information to the ATCMs, CCAMLR and other bodies about how to develop a better science-based decision-making process.

#### **Aims, Goals and Objectives**

This Action Group seeks to:

- (1) Analyse the policy-law-science nexus within the current Antarctic governance framework, which will include both international and domestic contexts and their interactions;
- (2) Articulate the practical significance of understanding such a nexus, so as to inform stakeholders how science-based decision-making relevant to Antarctica is actually operationalized; and
- (3) Examine the role of legal principles (use for peaceful purposes only, freedom of scientific investigation, environmental protection, etc.) and normative values (interest of all mankind, wilderness, aesthetic, etc.) that underpin such decision-making, enhancing the resilience of the Antarctic governance systems.

#### **Proposed Milestone Activities with Timeline**

The PoLSciNex AG is proposed for a three-year timeframe, renewable. The first phase of research (covering the first six months from its establishment) involves brainstorming meetings and e-mail discussions to establish the parameters of our analytical framework on the policy-law-science nexus relevant to Antarctica, so as to have a clearer goal for our collective endeavour. The second phase (covering the next one and a half years) will be research into existing academic literature and practice, both international and domestic, relating to the specific policy-law-science nexus relevant to Antarctica. The group members will liaise with each other by e-mails in order for our work to develop coherently. It is expected that the summary of this initial analysis and provisional findings will be shared and discussed among the Group members in a meeting coinciding either with a SCAR Open Science Conference or the biennial meetings held by SCAR’s humanities and social science scholars. The third and final phase (the remaining year) involves writing a comprehensive report and producing easy-to-understand infographics relating to specific policy-law-science nexus relevant to Antarctica. The group will also strive to see that the academic papers produced from



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the group’s collective work will be published together in a special issue of a journal or as a part of a coherent book project.

Figure 1 presents a schematic outline of the main phases of the PoLSciNex AG’s work.

Month	1	2	3	4	5	6	7	8	9	10	11	12	
1	Establishing of analytical framework												Group Meeting (SCAR Open Science Conferences / HASSEG biennial meetings)
2	Researching on relevante policy-law-science nexus												Group Meeting (SCAR Open Science Conferences / HASSEG biennial meetings)
3	Writing a report								Publishing the outcome				Group Meeting (SCAR Open Science Conferences / HASSEG biennial meetings)

Figure 1: The main phases of the PoLSciNex AG’s lifetime

#### Capacity Building, Education and Outreach Plans

The PoLSciNex AG will maintain a webpage and other social media channels, including an email list. Individual members of the group are involved in education and outreach through public talks and media appearances, and they will communicate the work that the group will be done and the conclusions reached. The group will present advances of its research and it will promote discussion on the topics related in the different SCAR Humanities and Social Sciences Group meetings. The group will also stimulate legal research relevant to Antarctica, particularly in those SCAR member states that have recently acceded or will be acceding in the near future to the Madrid Protocol. The group will promote the participation of early-career researchers and scholars from countries newly engaging with the Antarctic both in the group researching and in the group events.

#### Data Management Plans

At the end of a three-year period, a meta-database containing relevant publications, media reports, and key research results will be created and shared via the SCAR webpage.

#### Terms of Reference

The purpose of the PoLSciNex AG is to undertake a critical review about the policy-law-science nexus in Antarctic governance determining the possibilities to maintaining effective science-based decision-making in the future. Its aim is to analyse and understand this nexus and its practical operation.

#### Goals:

- Analyse the policy-law-science nexus within the current Antarctic governance framework;
- Articulate the practical significance of understanding such a nexus and how science-based decision-making relevant to Antarctica is actually operationalized; and



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- Examine the role of legal principles and normative values that underpin such decision-making, enhancing the resilience of the Antarctic governance systems.

The group is open to interested scholars, with prior acceptance based on consultation among the members. The size of the group will be around ten to fifteen.

The group is proposed for a renewable three-year lifetime. During this time it will have the same co-chairs. Should a need arise to replace one or both co-chairs, the group will decide on someone to fill the post. Group activities will be steered by the co-chairs, with the assistance of early-career researchers.

#### **Potential Members**

Initial members of the group:

Co-Chairs:

- Luis Valentín FERRADA, international law, Chile, Universidad de Chile, lvferrada@derecho.uchile.cl
- Akiho SHIBATA, international law, Japan, Kobe University, akihos@kobe-u.ac.jp

Potential Additional Members:

- Sanjay CHATURVEDI, international relations, India, Panjab University, csgiorg@gmail.com
- Julia JABOUR, international law, Australia, University of Tasmania, Julia.Jabour@utas.edu.au
- Alan D. HEMMINGS, international relations, New Zealand/Australia/UK, University of Canterbury, ahe30184@bigpond.net.au
- Daniela LIGGETT, environmental management, New Zealand/Germany, University of Canterbury, Daniela.liggett@c anterbury.ac.nz
- Nengye LIU, international law, Australia/China, University of Adelaide, nengye.liu@adelaide.edu.au
- Cristian LORENZO, international relations, Argentina, Centro Austral de Investigaciones Científicas (CADIC) – Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET). Instituto de Ciencias Polares, Ambiente y Recursos Naturales (ICPA) - Universidad Nacional de Tierra del Fuego, [clorenzo@conicet.gov.ar](mailto:clorenzo@conicet.gov.ar)
- Others to be confirmed

#### **Webpages and Communication Plans**

The group requests SCAR to provide it with a webpage upon approval. We would also like to have a mailing list set up and would like advice on communicating our activities via social media and other channels.



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## **5. Public Engagement with Antarctic Science Action Group (PEAS)**

### **Lead proponents**

- Elizabeth Leane, School of Humanities / Institute for Marine and Antarctic Studies, University of Tasmania
- Rebecca Priestley, Faculty of Science, Victoria University of Wellington

### **Summary of Group:**

The aim of this Action Group is to describe, evaluate, contextualize and critique the diverse ways in which scientists, communicators and educators engage with different publics, and the ways in which publics engage with Antarctic science. Members of the group will apply the methods and findings emerging from the scholarly fields of science communication and public engagement with science to produce analyses and recommendations for Antarctic researchers.



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### **The Proposal**

#### **Introduction and Background**

A primary goal of SCAR is to “communicate scientific information about the Antarctic region to the public.” To this end, SCAR undertakes a variety of activities, including making resources available on its website, collaborating with Polar Educators International, presenting awards to innovative communicators and featuring dedicated sessions on science communication and outreach in its Open Science Conferences. Alongside these efforts, national SCAR members, research organisations, and individual scientists conduct their own outreach activities.

At the same time, the field of study variously known as “Public Understanding of Science,” “Public Awareness of Science”, and (more recently) “Public Engagement with Science” has developed rapidly, and now has its own considerable critical literature, theoretical debates, and scholarly forums. The methods and insights of this field could provide a way for SCAR and Antarctic scientists generally to better understand and anticipate the impact of their communication and outreach efforts.

#### **Aims, Goals and Objectives**

The aim of this action group is to complement SCAR’s practical existing activities by fostering the academic study of public engagement with Antarctic science. The group’s members would describe, evaluate, contextualize and critique the diverse ways in which scientists, communicators and educators engage with different publics, and the ways in which publics engage with Antarctic science. Drawing on research methods in the humanities and social sciences, members of the group will consider specific questions such as:

- What are the unique challenges and opportunities associated with engaging different publics, and key decision makers, with science conducted in or about the Antarctic region?
- What tools exist to evaluate the effectiveness of particular science communication activities?
- How does public engagement with Antarctic science vary with demographic factors such as gender, age, education and national context?
- What role does/can citizen science play in public engagement with the Antarctic region?
- What forms of training would best enable Antarctic scientists to foster public engagement with their research?
- How effective are arts/science collaborations as ways of engaging the public in Antarctic issues?
- In what ways, and for what reasons, have efforts to engage publics in Antarctic issues changed over time?
- What is the political, historical and institutional context within which today’s scientists and educators communicate about Antarctic science?



	<b>SDM</b>	<b>18</b>
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### **XXXV SCAR Delegates Meeting Davos, Switzerland, 25-26 June 2018**

This Action Group would be well placed to work with and provide advice to other groups within SCAR who have outreach and communication as a part of their aims, and (with appropriate funding) to facilitate collaborative international education and outreach initiatives.

#### **Proposed Milestone Activities with Timeline**

##### **Year 1:**

- lead proponents meet to discuss activities, publications and grant application plans;
- identification of a subset of the above questions on which the AG will focus;
- recruitment of members through HASSEG membership list as well as the lead proponents' networks and disciplinary newsgroups.

##### **Year 2:**

- Research Methods Workshop to coincide with HASSEG conference: group members will share details of their diverse methods, with the goal of upskilling and greater collaboration;
- submission of large grant application to Australian Research Council or similar funding body.

##### **Year 3:**

- lead proponents convene sessions on Public Engagement with Science at SCAR OSC and at HASSEG biennial conference;
- submission of publications from these events to journals such as *Science Communication* and *Public Understanding of Science*.

#### **Capacity Building, Education and Outreach Plans**

The AG will establish a website linked to the HASSEG website which will feature any publications, activities and events. We will use the HASSEG membership list and conferences to recruit interested members.

#### **Data Management Plans**

As this project uses a HASS approach we are unlikely to generate the kind of empirical data that requires storage and sharing plans.

#### **Terms of Reference**

The AG will run for three years and will be chaired by Leane and Priestley throughout this time. If either of these chairs needs to step down, the other will continue alone, or nominate a replacement from within the group membership. Membership will be open to all interested scholars.



**SDM** **18**  
Agenda Item: 4.3.4  
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**Potential Members**

- A/Prof Elizabeth Leane, University of Tasmania
- A/Prof Rebecca Priestley, Victoria University of Wellington
- Dr Rhian Salmon, Victoria University of Wellington
- Hanne Nielsen, University of Tasmania (PhD graduand)
- Veronika Meduna, science communicator, Wellington
- Dr Carolyn Philpott, University of Tasmania
- Carol Devine, independent researcher and communicator
- Skye Moret, visual designer, Portland, Oregon
- Dr Annalise Rees, artist and project officer, University of Tasmania
- Dr Heidi Roop, University of Washington
- Gary Wesche, educator and president of Polar Educators International, Missouri
- Betty Trummell, science communicator and program coordinator, University of Illinois
- Justine Barrett, PhD student, University of Tasmania
- Gabby O'Connor, artist and PhD student, University of Auckland
- Craig Stevens, scientist, NIWA and University of Auckland
- Anne Nobel, visual artist and Distinguished Professor, Massey University
- Others to be confirmed

**Webpages and Communication Plans**

The AG will have a series of webpages linked to HASSEG. Communication between members will be by email, and outreach through HASSEG's list and activities, as described above.