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Antarctic Environments Portal

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Working Paper submitted by SCAR

Summary

The aim of the Antarctic Environments Portal is to support the work of the CEP by providing impartial and up-to-date information on issues of relevance to the Committee's work, based on the best available science.

In January 2020 SCAR took over the management of the Portal, including the operation of the website that has been designed to provide easy access to the Information Summaries. This Working Paper provides an update on the operation of the Portal, and includes examples of how Information Summaries published in the Portal link directly to issues of priority interest for the CEP.

SCAR recommends that the CEP continue to support the Portal, and identifies any additional Information Summaries it would like to see prepared.

Background

The Antarctic Environments Portal (the Portal; environments.aq) was launched in 2015 and endorsed by the ATCM by means of Resolution 3 (2015).

The Portal ensures that the current state of knowledge on key issues is commonly available to all CEP Members, as well as Antarctic Treaty Parties and the public. The Portal aims to:

- Meet the urgent and increasing Antarctic policy information needs,
- Provide reliable, policy-ready summaries on priority issues,
- Raise awareness of emerging issues,
- Support informed discussions and wise decision-making,
- Make information available to all Parties irrespective of their Antarctic investment.

Portal update

Prior to 2020 the Portal was based at the University of Canterbury, New Zealand and supported with funding generously provided by the Tinker Foundation. In January 2020, with the conclusion of the Tinker Foundation funding, the Portal was formally transferred into the management of SCAR.

SCAR has a Portal Management Board comprising the SCAR Executive Director, Dr Chandrika Nath, SCAR Vice President for Science, Prof. Deneb Karentz, Chief Officer of SCAR's Standing Committee on the Antarctic Treaty System (SC-ATS), Dr Susie Grant, and the former Chair of the Management Board, Assoc. Prof. Daniella Liggett. The Board meets quarterly to discuss ongoing business and priorities for the Portal. The Portal Editor reports to the Portal Board. SCAR's Executive Director acts as the Portal Manager and SCAR's Communications and Information Officer as Assistant Editor, supporting the Portal Editor. The Portal Editor works with a Portal Editorial Group that comprises: Prof. Carlota Escutia, University of Grenada, Spain; Dr Polly Penhale, National Science Foundation, USA; Assoc. Prof. Akinori Takahashi, National Institute of Polar Research, Japan; and the Chief Officer of SC-ATS. The Portal Editorial Group is currently seeking to expand its membership, particularly to ensure that it includes members with management and policy roles, as well as scientists.

Funding for the Portal has generously been provided by Australia, the UK, New Zealand and the Netherlands, which will support SCAR's management of the Portal for at least the next year. All Information Summaries published on the Portal are currently available in the official languages of the ATS and SCAR expresses its gratitude for the in-kind support for translations that has been generously provided by France and Spain. SCAR also recognises the importance of maintaining geographical balance and diversity in the authorship of information provided in the Portal.

The Portal website provides a structured approach for presenting and accessing the Information Summaries, which are grouped under six categories: Marine, Terrestrial, Human Activities, Inland Aquatic Environments, Atmosphere, and Cryosphere. Infographics to accompany Information Summaries are produced by SCAR's Communications and Information Officer.

The Portal is very grateful for the contribution of time by authors and is currently investigating approaches to acknowledging these contributions, including through preferential rates for attendance at SCAR conferences and other events.

Since the launch, the new website has been viewed by over 8,200 users, with most users logging in from the US (1,523), China (768), Australia (574), the UK (533) and Russia (454). The Information Summaries on Microplastics in the Southern Ocean, Persistent Organic Pollutants and Marine Noise in the Southern Ocean have been viewed most.

The Portal Management Board agreed a Portal review procedure in which there is an annual review of each information summary by the Editorial Panel to determine if it remains relevant, is up to date and whether there is a need for an updated summary (see Figure 1).

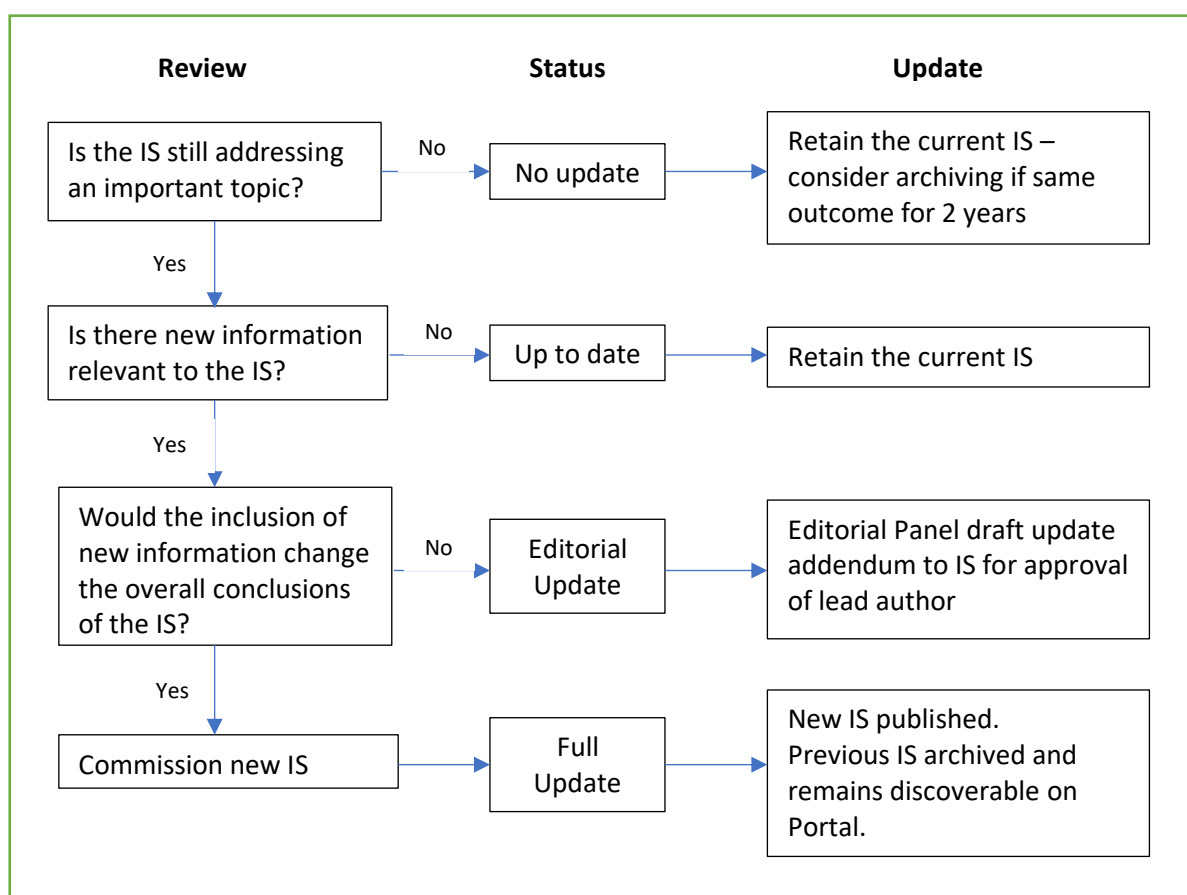


Figure 1 – Annual review and update process for information summaries on the SCAR Environments Portal.

Support to the work of the CEP

Information Summaries published on the Portal website aim to provide impartial ‘state-of-knowledge’ reports that address specific issues that the CEP has on its agenda and work programmes; with an emphasis on the science knowledge and information needs that are included in the CEP’s five-year work plan. In delivering on this aim the Portal contributes to fulfilling one of the CEP’s core functions of advising the Antarctic Treaty Parties on the state of the Antarctic environment (Article 12(1)(j) of the Protocol refers).

Examples of how currently published Information Summaries directly support the issues and environmental pressures identified in the CEP Five-year Work Plan (CEP XXIII Report Appendix 1) are provided in Table 1. New Information Summaries on sea ice, ocean warming and the impact of ocean acidification are in development and should be particularly relevant in supporting the delivery of the Climate Change Response Work Programme (CCRWP).

Content Management Plan

The Portal Content Management Plan is appended to this Working Paper; this has been developed to provide an overview of the status of current and planned Portal content. It is important that CEP Members (as a key user community) continue to have input to identifying specific needs for content to be included on the Portal. The review process shown in Figure 1 will be undertaken by the Editorial Panel in June/July 2022, to respond to feedback from ATCM 44. Comments and suggestions on the status of current Information Summaries and proposals for new Information Summaries are welcomed and can be provided during discussions at the CEP meeting or at any time to the Portal Editor (editor@environments.aq).

Next steps and recommendations

SCAR will continue to support the Antarctic Treaty System by providing independent and scientifically rigorous Information Summaries through the Antarctic Environments Portal.

SCAR recommends that the CEP and CEP Members:

- 1) Continue to support the publication of Information Summaries on the Antarctic Environments Portal, recognising its value in contributing to the work of the Committee;
- 2) Communicate with SCAR on any updates to existing Information Summaries and/or new Information Summaries that they would like to see published on the Antarctic Environments Portal.

Table 1. Examples of Information Summaries published in the Portal that address the science needs highlighted in the CEP Five-year plan (CEP XXIII Report Appendix 1)

Science Needs		AEP Information Summaries
Issue / Environmental Pressure: Introduction of non-native species		
	Identify terrestrial and marine regions and habitats at risk of introduction	The introduction of non-native species to Antarctica
	Identify native species at risk of relocation and vectors and pathways for intra-continental transfer	Pathways for the introduction of terrestrial non-native species.
	Synthesize knowledge of Antarctic biodiversity, biogeography and bioregionalization and undertake baseline studies to establish which native species are present	Status of known non-native species introductions and impacts.
	Identify pathways for the introduction of marine species (including risks associated with wastewater discharge)	Sources, dispersal and impacts of wastewater in Antarctica
	Assess risks and pathways for introduction of microorganisms that might impact on existing microbial communities	Non-native microbial introductions: what risk to Antarctic ecosystems?
Issue / Environmental Pressure: Tourism and NGO activities		
	Consistent and dedicated monitoring of tourism impacts	The impacts of trampling and ground disturbances on Antarctic soils
Issue / Environmental Pressure: Climate Change Implications for the Environment		
	Improve understanding of current and future change to the terrestrial (including aquatic) biotic and abiotic environment due to climate change	In preparation
	Assessment on impact of ocean acidification to marine biota and ecosystems.	In preparation
	Southern Ocean observations and modelling to understand climate change.	In preparation
	Monitor emperor penguin colonies, including using remote sensing and complementary techniques, to identify trends in populations and potential climate change refugia.	Climate change as an emerging threat to Emperor Penguins
Issue / Environmental Pressure: Processing new and revised protected / managed area management plans		
	Long-term monitoring of biological values in ASPAs	Specially protected and managed areas in Antarctica
Issue / Environmental Pressure: Repair or Remediation of Environmental Damage		
	Research to inform the establishment of appropriate environmental quality targets for the repair or remediation of environmental damage in Antarctica	Clean-up of past waste disposal sites and abandoned work sites in Antarctica
	Techniques for in situ and ex situ remediation of sites contaminated by fuel spills or other hazardous substances	Environmental remediation
Issue / Environmental Pressure: Monitoring and state of the environment reporting		
	Long-term monitoring of change to the terrestrial (including aquatic) biotic and abiotic environment due to climate change	In preparation

	Science Needs	AEP Information Summaries
	Long-term monitoring to verify or detect environmental impacts associated with human activities.	<u>Microplastics in the Southern Ocean</u>
Issue / Environmental Pressure: Overview of the protected areas system		
	Continue to develop biogeographic tools to provide a sound basis for informing Antarctic area protection and management at regional and continental scales in light of climate change, including identifying the need to set aside reference areas for future research and identifying areas resilient to climate change	<u>Specially protected and managed areas in Antarctica</u>
Issue / Environmental Pressure: Biodiversity knowledge		
	Research on the impacts of underwater noise on Antarctic marine mammals	<u>Marine Noise in the Southern Ocean</u>