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Antarctic Environments Portal: Content Management Plan

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Information Paper submitted by Australia, Netherlands, New Zealand, Norway, Spain, United States, SCAR

Summary

The Antarctic Environments Portal continues to provide the CEP and Antarctic Treaty Parties with a reliable source of information on issues of policy and management relevance.

A Content Management Plan for the Portal has been developed and is appended to this Information Paper.

The content management plan aims to provide a more structured approach to developing articles for the Portal and for facilitating a dialogue with the CEP to allow Committee Members to have input to the articles published on the Portal website.

Content Management Plan

As recorded in Working Paper 52, the Management Board and Editorial Group of the Portal have developed a Content Management Plan so as to provide a more structured approach to the development of Information Summaries and Emerging Issue content.

The Content Management Plan aims to identify a series of topics or issues for which knowledge summaries are required so as to ensure that the content published on the Portal website is contemporary and relevant to current issues being attended to by the CEP and ATCM.

The Content Management Plan is regularly reviewed and updated by the Editor and Editorial Group.

The Portal Content Management Plan also offers a useful mechanism for engaging with the CEP and for offering the Committee an opportunity to provide feedback on Portal content that it wishes to see prepared.

The Committee is invited to provide comment on the utility of the content management plan, and to provide feedback on content that it wishes to see prepared for publication on the Portal website.

Antarctic Environments Portal - Content Management Plan

The following table sets out a series of subject matter headings that are currently under consideration for development as Portal Information Summaries, or are currently being drafted, and indicates the relevance of the planned knowledge summaries against the CEP's 5-year Work Plan and Climate Change Response Work Programme.

This table will be updated annually based on feedback provided.

Biodiversity knowledge

CEP 5-Year Work Plan Priority 3. Science knowledge and information needs:

- Research on the environmental impacts of remotely piloted aircraft systems (RPAS), particularly on wildlife responses including:
 - ◆ a range of species including flying seabirds and seals;
 - ◆ both behavioural and physiological responses;
 - ◆ demographic effects, including breeding numbers and breeding success;
 - ◆ ambient environmental conditions, for example, wind and noise;
 - ◆ the effects of RPAS of different sizes and specifications;
 - ◆ the contribution of RPAS noise to wildlife disturbance;
 - ◆ comparisons with control sites and human disturbance; and
 - ◆ habituation effects.
- Collection and submission of further spatially explicit biodiversity data
- Research on the impacts of underwater noise on Antarctic marine mammals
- Synthesis of available knowledge on the biogeography, bioregionalisation and endemism within Antarctica
- Site-specific, timing-specific and species-specific studies to understand the impacts arising from interactions between human activities and wildlife and support evidence-based guidelines to avoid disturbance
- Inventory of Mt Erebus ice caves and microbial communities
- Regular population counts and research to understand the status and trends in the southern giant petrel population

Climate Change Response Work Programme:

6. Marine and terrestrial species at risk due to climate change.

- Understand population status, trends, vulnerability and distribution of key Antarctic species
- Improved understanding of effect on climate on species at risk, including critical thresholds that would give irreversible impacts
- Understand relationship between species and climate change impacts in important locations / areas

Planned Portal Information Summary	Rationale for inclusion	Status
Terrestrial Biodiversity	To provide the CEP with an understanding of the current state of knowledge on terrestrial biodiversity. Of relevance to the CCRWP.	At drafting stage
Impacts of noise on marine animals	An emerging issue that CEP has requested more information on. Of relevance to the CEP's 5-year work plan.	On hold pending completion of SCAR publication
Environmental consequences of UAV use	Of current interest to the CEP and ATCM. Requested at CEP XIX (para 23 of the CEP XIX Report).	Not yet commissioned
Individual species status reports	Consideration is being given to commissioning a series of species-specific Information Summaries (similar to the current Information Summary on Ross Seal). Of relevance to the CEP's work on specially protected species; the CCRWP and the CEP's 5-year work plan.	Not yet commissioned

Climate change implications

CEP 5-year Work Plan Priority 1. Science knowledge and information needs:

- Improve understanding of current and future change to the terrestrial (including aquatic) biotic and abiotic environment due to climate change
- Long-term monitoring of change to the terrestrial (including aquatic) biotic and abiotic environment due to climate change
- 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
- Identify and prioritise Antarctic biogeographic regions most vulnerable to climate change
- Understand and predict near-shore marine changes and impacts of the change
- Long-term monitoring of change to the near-shore marine biotic and abiotic environment due to climate change
- Assessment on impact of ocean acidification to marine biota and ecosystems
- Understand population status, trends, vulnerability and distribution of key Antarctic species
- Understand habitat status, trends, vulnerability and distribution
- Southern Ocean observations and modelling to understand climate change
- Identify areas that may be resilient to climate change
- Monitor emperor penguin colonies, including using remote sensing and complementary techniques, to identify trends in populations and potential climate change *refugia*

Climate Change Response Work Programme:

2. Change to the terrestrial (incl. aquatic) biotic and abiotic environment due to climate change.

- Understanding how terrestrial and freshwater biota will respond to a changing climate and the impacts of these changes
- Understanding how the abiotic terrestrial environment will change and the impacts of these changes

3. Change to marine near-shore abiotic and biotic environment (excluding OA)

- Understanding and have the ability to predict near-shore marine changes and impacts of the change
- Have a broader understanding of what monitoring data will be required to assess climate driven changes to the marine environment

4. Ecosystem change due to ocean acidification

- Understanding of the impact of Ocean Acidification to marine biota and ecosystems

5. Climate change impact to the built (human) environment resulting in impacts on natural and heritage values

- Understanding how the abiotic terrestrial environment will change and how this might impact result in impacts on environmental or heritage values
- Understanding of effects of climate change on contaminated sites and implications for species/ecosystems (e.g. whether climate change will increase mobilization and exposure of species/ecosystems to contaminants and understanding how species/ecosystems will respond to exposure to such contaminants)
- Understanding what conservation/remedial interventions might be applicable to counteract these impacts

7. Marine, terrestrial and freshwater habitats at risk due to climate change

- Understand habitat status, trends, vulnerability and distribution
- Improved understanding of the effects of climate change on habitat, e.g. sea ice extent and duration, snow cover, ground moisture, microclimate, changing melt flows and consequences to lake systems
- Improved understanding of potential expansion of human presence in Antarctica as a result of changes resulting from climate change through e.g. changes in sea ice distribution; collapse of ice shelves; expansion of ice-free area).

Planned Portal Information Summary	Rationale for inclusion	Status
Response of terrestrial ecosystems to climate change	Of direct relevance to the implementation of the CCRWP.	Under revision
Ocean temperature shifts	Of direct relevance to the implementation of the CCRWP.	At drafting stage
Permafrost and clathrates	Of background interest to the Committee in relation to the	At drafting stage

	CCRWP.	
The importance of sea-ice in the Southern Ocean	Of background interest to the Committee in relation to the CCRWP. Of interest also to CCAMLR.	At drafting stage
The impact of the ozone hole	Of background interest to the Committee in relation to the CCRWP.	At drafting stage
Southern Ocean acidification	Use of the Portal to bring a forthcoming SCAR publication to the attention of the CEP and to provide background state of knowledge information to the Committee. Highlighted as important at CEP XX (para 21 of the CEP XX Report).	On hold pending completion of SCAR publication
Potential methane reservoirs and climate change	Of background interest to the Committee in relation to the CCRWP.	On hold pending associated publication

Introduction of non-native species

CEP 5-year Work Plan Priority 1. Science knowledge and information needs:

- Identify terrestrial and marine regions and habitats at risk of introduction
- Identify native species at risk of relocation and vectors and pathways for intra-continental transfer
- Synthesise knowledge of Antarctic biodiversity, biogeography and bioregionalisation and undertake baseline studies to establish which native species are present
- Identify pathways for the introduction of marine species (including risks associated with wastewater discharge)
- Assess risks and pathways for introduction of microorganisms that might impact on existing microbial communities
- Monitor for non-native species in the terrestrial and marine environments (including microbial activity near sewage treatment plant discharges)
- Identify techniques to rapidly respond to non-native species introductions
- Identify pathways for introduction of non-native species without any direct human intervention

Climate Change Response Work Programme:

1. Enhanced potential for non-native species (NNS) introduction establishment

- Framework for surveillance for non-native species establishments in marine, terrestrial and freshwater environment
- Response strategy for suspected NNS introductions
- Assessment of whether existing regimes for preventing NNS introductions and transfer are sufficient. Analyse management tools applied in other areas

Planned Portal Information Summary	Rationale for inclusion	Status
<i>None currently planned</i>		

Pollution and Remediation**CEP 5-year Work Plan Priority 2. Science knowledge and information needs:**

- Research to inform the establishment of appropriate environmental quality targets for the repair or remediation of environmental damage in Antarctica
- Techniques to prevent mobilisation of contaminants such as melt water diversion and containment barriers
- Techniques for *in situ* and *ex situ* remediation of sites contaminated by fuel spills or other hazardous substances

Planned Portal Information Summary	Rationale for inclusion	Status
Long-range transported organic pollutants in Antarctica	Of relevance to impacts on species and habitats in Antarctica. SCAR produced a report on persistent organic pollutants in Antarctica in 2009.	At final review stage
Inorganic pollutants in Antarctica	Of interest to the Committee in relation to Annex III and advising the ATCM on the state of the Antarctic environment.	Under discussion
Bioremediation methods	Of relevance to the CEP's work on clean up	Not yet commissioned

Overview of the protected areas system**CEP 5-year Work Plan. Priority 2. Science knowledge and information needs:**

- 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
- Use remote sensing techniques to monitor changes in vegetation within ASPAs and more

Planned Portal Information Summary	Rationale for inclusion	Status
Antarctic Heritage Conservation	No overview of the status of Antarctic heritage conservation exists. A key role of the CEP is to maintain an overview of listed historic sites and monuments. Significant effort has been put into conserving some Antarctic buildings. Relevant to the CEP's five-year work plan.	At scoping stage
Antarctic conservation biogeographic regions	Endorsed by the ATCM by means of Resolution 6 (2012) and has been updated recently by the researchers. Relevant to the management of protected areas and to the CEP's five-year work plan.	Not yet commissioned
Geological conservation in Antarctica	An issue of recent discussion within the CEP. Relevant to the CEP's five-year work plan.	Not yet commissioned

Human activity in Antarctica

Planned Portal Information Summary	Rationale for inclusion	Status
Human footprint / wilderness	Of relevance to the CEP's consideration of cumulative impacts as well as wilderness values. A number of recent publications could be synthesised into an Information Summary	Not yet commissioned