



AntarcticClimate²¹



Antarctic Climate Change in the 21st Century (AntClim21)

Implementation Plan

1. Introduction

In the final years of AntarcticClimate21, we aspire to complete the guidelines, metrics and recommendations for future modelling experiments including the design of CMIP6 and high resolution numerical modelling efforts for the Antarctic / Southern Ocean region. Moreover we aim to develop in collaboration with SOCCOM the Antarctic / Southern Ocean modelling portal to provide access to modelling results, data and evaluations for the non-expert. This will empower a large science community as well as other interested parties, such as policy units, to become informed users and will lead to faster, improved, and more extensive use of model results.

2. Deliverables, Timeline and Milestones

Over the remaining years, AntarcticClimate21 plans to:

Workshops and meetings:

- Hold the “#The Great Antarctic Climate Hack” workshop. This will aim to provide training for senior and emerging scientists on the use of data products related both to AntClim21 and other initiatives (late 2017).
- Hold a workshop in 2018 on Antarctic climate projection to 2100 AD, which will aim to synthesise the outcomes of the previous AntClim21 workshops and plan a synthesis paper on Antarctic climate projections to 2100.

Publications:

- A peer review publication on proxy ice core and climate reanalysis analogues for understanding past, present and near future Antarctic climate, which follows on from the first AntClim21 workshop (submit 2016/2017).
- A peer review publication (or potentially multiple publications, since we are currently considering options for a journal special issue) will be a key output from “#The Great Antarctic Climate Hack” (submit in early 2018).
- A synthesis paper (peer review) on Antarctic climate projections to 2100 (submit in early 2019).
- A number of papers based on AntClim21 data products (see below) are anticipated and authors will be asked to acknowledge SCAR and AntClim21.

Community products and outputs

- Link with the Southern Ocean Carbon and Climate Observations and Modeling (SOCCOM) project in providing a data portal for access to climate

model estimates of 21st century climate change (2017-2018).

- Provide the Antarctic component of diagnostics being developed in parallel with the next set of IPCC-class climate / earth-system models (ESMValTool) (2017-2018).
- Help disseminate regionally downscaled climate data from Antarctic CORDEX (a World Climate Research Programme initiative) across the SCAR community (initiate in 2017 and update as new data become available).

Capacity building and education

- Continue to develop early career researchers by both maintaining the presence of an APECS member on the AntClim21 Steering Committee and encouraging participation at AntClim21 workshops and other activities.
- Encourage the attendance and participation of researchers from emerging Antarctic nations.

Involvement with major reports and committees

- An AntClim21 member has been nominated for IPCC special report on Southern Ocean (pending).
- An AntClim21 member is currently serving on the Standing Committee on the Antarctic Treaty System (SCATS).
- Continue to maintain an official link to Ant-ERA through the inclusion of a physical sciences Liaison Officer on their steering committee.