Scientific Partnership

between the

World Climate Research Programme (WCRP)

(Geneva, Switzerland, hereafter "WCRP")

and the

Global Carbon Project (GCP)

(Canberra, Australia, hereafter "GCP")

1 Parties of this Partnership

This Partnership has been undertaken between GCP and WCRP, hereafter called "Parties".

GCP (Global Carbon Project) supports and coordinates research aimed at developing the complete picture of the global carbon cycle and other interlinked biogeocheical cycles, including its biophysical and human dimensions together with the interactions and feedbacks between them. Founded in 2001, the GCP is funded by a number of activity grants from research agencies and foundations, institutional in-kind support, and by the Commonwealth Scientific and Industrial Research Organization and the National Institute on Environmental Science that support their Canberra (Australia) and Tsukuba (Japan) offices. The GCP currently exists as a core project of Future Earth, but was initially created by IGBP, WCRP, IHDP, and Diversitas under the umbrella of the Earth System Science Partnership. It is overseen by a Scientific Steering Committee (SSC) comprised of members chosen to provide balanced expertise in the major techniques, disciplines and geographic regions that contribute to carbon sciences.

WCRP is an international research programme co-sponsored by the World Meteorological Organization (WMO), the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the International Council for Science (ICSU). A Joint Science Committee (JSC) with international and interdisciplinary membership agreed by the three sponsors oversees the goals and activities of WCRP. The WCRP Mission is to facilitate analysis and prediction of Earth system variability and change for use in an increasing range of practical applications of direct relevance, benefit and value to society. The two overarching objectives of the WCRP are to determine the predictability of climate and the effect of human activities on climate.

2 Background

The World Climate Research Programme (WCRP) stimulates and coordinates research into climate change and climate variability through a variety of projects and working groups covering interlinked land, ocean, atmosphere, and ice processes using a complex array of observations, reanalysis and models. In time span the WCRP foci cover from a few weeks to a few centuries. More recently, WCRP has launched a Grand Challenge on "Carbon Feedbacks in the Climate System" with the aim of addressing a) the durability and persistence of land and ocean carbon sinks; b) their current state; and c) whether they will continue to function in an efficient and protective manner as climate changes.

The GCP focuses on the integrated picture of the carbon cycle and other interacting biogeochemical cycles, including biophysical and human dimensions and their interactions and feedbacks. This broad objective is covered by three themes: a) *Diagnostics* - Patterns and variability of natural and anthropogenic carbon sources and sinks; b) *Vulnerability* - Processes and feedbacks of the biophysical-human system; and c) *Low Carbon Outcomes* - Carbon management and policy.

Research in both WCRP and GCP are complementary and converge in key areas; great potential therefore exists for substantial mutual collaboration. Likewise, GCP's main focus on recent past and contemporary dynamics of the carbon cycle coupled with WCRP's strength in future dynamics of the fully coupled carbon-climate system together provide important opportunities to address new scientific challenges. Both WCRP and the GCP have already collaborated in contributing to major assessments such as the IPCC on carbon budgets and on future dynamics of carbon sinks.

Anticipating growing needs and opportunities to coordinate research and planning, the GCP and WCRP establish this Scientific Partnership.

3 Parties, subject and scope of this Partnership

The Parties agree to maintain this Partnership for the mutual benefit of both Parties. This document sets out the intended goals and activities of the Partnership as well as responsibilities for each Party.

4 Activities of Collaboration and Partnership.

4.1 Who: Official addresses and contact information

The official address of WCRP will be:

World Climate Research Programme c/o WMO

7bis, avenue de la Paix Case postale 2300 CH-1211 Geneva 2 Switzerland

Official correspondence concerning WCRP should go to its Director, David Carlson, <u>dcarlson@wmo.int</u>.

The official address of GCP will be:

GCP International Project Office CSIRO Oceans and Atmosphere Synergy Building, Black Mountain, GPO Box 3023, Canberra, ACT 2601 Australia

Official correspondence concerning GCP should go to its Executive Director, Pep Canadell, <u>pep.canadell@csiro.au</u>

4.2 What: Elements of collaboration and partnerships

The Parties will develop explicit activities of mutual interest focused on enhancement of climate and paleoclimate research. These activities might include workshops, ad hoc or on-going shared working groups or panels, jointly sponsored and produced reports or assessments, convergent and interoperable data sets and databases, integrated models, joint sessions at international conferences, collaborative proposals, public outreach and education, or other activities or products of mutual interest.

4.3 How: Enhanced communication and research planning

The Parties will establish sustained communication and mutual research planning at several levels, starting from the director and steering committee level and extending as necessary and useful into the project and working group levels of both WCRP and the GCP. This communication and planning collaboration might include elements such as shared calendars, mutual representation on steering committees, coordinated activities on data or modeling, and other regular or ad hoc interactions as identified by the parties. Each Party will announce and promote this scientific partnership on their respective websites and other publications where appropriate.

4.4 When: Upcoming actions and activities

The directors of GCP and WCRP together with the co-chairs of the WCRP Joint Science Committee and the GCP Scientific Steering Committee will identify a small scoping committee, consisting of appropriate members from within the research communities of each Party, and charge and support that committee to develop a WCRP-GCP interactions and collaborations synopsis for approval by the full steering groups of both organizations. The scoping effort will identify opportunities for episodic and on-going research collaborations between the GCP and components of WCRP including, but not limited to, the Grand Challenge on "Carbon Feedbacks in the Climate System". Presuming multiple opportunities identified by the scoping committee, the JSC of WCRP and the SSC of the GCP may choose to endorse and initiate specific actions and to review progress of those activities at subsequent meetings.

5 Financial and Administrative Commitments of the Parties

- 5.1 Nothing in this agreement commits or requires either Party to expend or exchange funds or other resources. Mutually-agreed funding exchanges or joint funding of agreed activities will require active communication, close coordination of proposal plans and decisions, and, when necessary, separate mutually-agreed and signed Letters of Agreement between the Parties.
- 5.2 The Parties agree to institute administrative cooperation as necessary, at the director level, to support the overall goals and mutually-agreed tasks of this Partnership.
- 5.3 The Parties invite representatives of the collaborating party to the meetings of their steering bodies.

6 General provisions

6.1 Amendments and additions to the Partnership

This Partnership document describes the intended relationship of and collaboration between the Parties. There are no existing collateral agreements and any earlier official or unofficial agreements are hereby terminated. Amendments and additions to this Partnership are only valid if made in writing and signed by both Parties.

6.2 **Obligation of assistance**

The Parties will provide each other promptly, to the extent possible, with any mutual assistance required to enable this Partnership. In particular, they agree to provide timely information and cooperation in advance of JSC or SSC meetings and to ensure, again to the extent possible, timely cooperation on joint proposals.

7 Term and right of termination

This Partnership will enter into force once it is signed by the Parties and endorsed by the WCRP JSC and GCP SSC, and be valid for 3 years. This Partnership can be renewed.

If either Party desires to terminate this Partnership prematurely, it should submit a justification in writing to the other Party at least 3 months in advance. Upon receipt of such letter both Parties will work together to plan the way forward.

Signed by the duly authorized representatives of the Parties:

Dr Josep Canadell Executive Director GCP International Programme Office Canberra, April 2017

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Dr. David Carlson Director World Climate Research Programme Geneva, April 2017