

Carbon Cycle Science Steering Group
Terms of Reference
(Last Accepted 14 September 2005; Revised 07 June 2010)

Purpose

This *terms-of-reference* describes the role of the Carbon Cycle Science Steering Group (CCSSG) for the U.S. Carbon Cycle Science Program under the auspices of the Carbon Cycle Interagency Working Group (CCIWG) of the U.S. Global Change Research Program (USGCRP). It addresses the relationship with the CCIWG and provides specifics concerning CCSSG leadership, membership, focal areas, and meetings..

Introduction

The USGCRP, as established in 1989, has a vision of collaboration among federal agencies that closely involves the scientific community. The goal of U.S. carbon cycle research is to understand the fate of carbon in the environment and how carbon cycling might change in the future, including the role of and implications for societal actions. The carbon cycle program encompasses terrestrial, aquatic, oceanic and atmospheric components, human dimensions, and societal concerns.

The CCIWG, whose members represent carbon cycle research and other research programs within the federal agencies, coordinates the development and execution of federal research programs in carbon cycle science. The CCIWG has established the CCSSG, a group of scientific experts involved in carbon cycle research and applications, and composed of people from several types of organizations (e.g., federal, state, university and non-government), to provide individual scientific inputs to the CCIWG regarding the current activities and future directions of the USGCRP's Global Carbon Cycle research element. The establishment of the CCSSG is a demonstration of the commitment to involving scientists and other stakeholders to enhance the quality and value of carbon cycle research supported by the federal government.

The CCSSG interacts directly with the CCIWG and assists them by providing individual perspectives on science issues and research approaches for U.S. carbon cycle research. Their focus is on providing scientific assistance to the CCIWG in carrying out the U.S. Carbon Cycle Science Program plan established in the Strategic Plan for the USGCRP.

Role of the Carbon Cycle Science Steering Group

The purpose of the CCSSG is to provide broad scientific, societal, and stakeholder input to the CCIWG as it coordinates carbon cycle science and applications within the U.S. federal government. The CCSSG provides relevant information and inputs to the CCIWG that aid them in ensuring that the U.S. Carbon Cycle Science Program remains coherent and robust and addresses its science questions in an integrated way.

The specific roles of the CCSSG are:

- Provide input on program relevance and perspectives of the scientific and stakeholder communities and, insofar as possible, the general public;
- Identify carbon cycle research and applications questions; critical research directions; priorities; needed experiments, measurements and observations; new areas of emphasis and

emerging issues; and other information pertinent to the goals of the U.S. Carbon Cycle Science Program and the U.S. Global Change Research Program;

- Provide input on and assist the CCIWG with major carbon cycle science program and science management plans, implementation and strategy plans, and other important documents;
- Assist with synthesis and integration of the multidisciplinary elements of the program;
- Prepare or commission scientific reports to further develop new ideas and emerging issues;
- Secure participation from a broad and diverse cross-section of scientists, research managers, and stakeholders in carbon cycle science program activities;
- Assist in the communication of USGCRP carbon cycle research, goals, objectives, and activities;
- Provide input on and assist the CCIWG with coordination with other national and international programs;
- Provide scientific assessment of the overall carbon cycle science program and inputs concerning its progress on achieving its research objectives;
- Coordinate with the Scientific Steering Groups (SSGs) of the North American Carbon Program (NACP) and Ocean Carbon and Climate Change (OCCC)/Ocean Carbon and Biogeochemistry (OCB) program, and SSGs of other interagency working groups in the USGCRP;
- Develop and stage CCIWG-sponsored workshops, joint workshops of NACP and OCCC/OCB, and other possible complementary proceedings;
- Assist the CCIWG in the collection of research highlights for preparation of an annual report (USGCRP's Our Changing Planet) and provide assistance in developing carbon cycle program reports; and
- Provide other information pertinent to the goals of the U.S. Carbon Cycle Science Program and the USGCRP.

Membership

Members of the CCSSG are appointed by the CCIWG, with the concurrence of the CCSSG Chair. Before appointing new members, the CCIWG will consult with the CCSSG Chair and membership to identify qualified new members based on their scientific expertise, leadership qualities, and ability to represent the carbon cycle science perspectives of the federal agencies, academia, and other stakeholder institutions. Membership may be drawn from the scientific and application communities including, but not limited to, scientists from universities, colleges, private and public research institutions, organizations, and federal and state agencies. However, current CCIWG members are not eligible for membership on the CCSSG. CCSSG members serve a term of three years, with approximately one third of the members eligible for rotation each year in order to ensure openness to the general community, maintain program integrity, and assure vitality in the group. Terms may be extended for one additional three-year period through mutual concurrence by the membership and that of the CCIWG.

The CCSSG will generally number about 20 members, pending new discipline representation. Because of the unprecedented challenges anticipated in the synthesis, integration, and societal issues of carbon cycle science, it is crucial that the membership represent a broad and balanced range of expertise. The CCSSG should have appropriate diversity in disciplinary representation, research and applications expertise, institutional representation, gender, as well as geographical coverage. Specifically, the combined membership must have expertise in carbon cycle science in

terrestrial, hydrologic, oceanic, atmospheric and human dimensions, reflect a balance among researchers specializing in modeling, observations, and experimental studies and analysis, and include an appropriate mix of scientists from federal agencies, academic institutions, the private sector, and/or other stakeholder institutions. Some overlap in membership among the CCSSG, NACP SSG and OCCC/OCB SSC is acceptable and desirable.

CCSSG Leadership

The CCSSG Chair is appointed by the CCIWG. In selecting a new Chair, the CCIWG will consult with the current CCSSG Chair and membership. To promote continuity, a candidate Chair will first be sought from among the existing membership. If a new Chair is not identified from among the existing members, then a nominee from outside the committee will be considered. The Chair will serve for a two-year term. Within six months prior to the completion of a Chair's term, a new Chair will be selected or the present Chair's term will be renewed. A Chair's term can be renewed for one additional 2-year term based on mutual agreement of the Chair, the CCSSG membership, and the CCIWG.

The primary function and duties of the Chair are:

- Lead the CCSSG in completing its goals and objectives,
- Moderate all CCSSG meetings using acceptable rules of order and decorum;
- Work with the CCSSG membership and the CCIWG to set mutually agreeable dates, venues, agendas, and programs for CCSSG meetings;
- As needed and desired, appoint associate leadership (e.g., vice-chairs) and subcommittees from within the CCSSG membership, make short-term assignments to CCSSG members during the course of business meetings, and provide oversight for the accomplishment and reporting of said activities;
- Liaise with the co-Chairs of the CCIWG on important items between meetings and provide general liaison between the CCIWG and CCSSG and between CCSSG and other relevant SSGs; and
- Appoint a temporary Chair from the associate leadership or other CCSSG membership in the event the Chair cannot attend a CCSSG meeting or represent carbon cycle science at other relevant meetings.

Meetings

The CCSSG will convene approximately two times per year. Dates will be mutually agreed upon by the CCSSG and the CCIWG. All meetings will be held with the CCIWG in attendance. The primary purpose of the meetings is for the CCSSG to discuss with the CCIWG scientific issues and opportunities focused on ensuring that the U.S. Carbon Cycle Science Program achieves its objectives. These discussions may address any of the topics outlined in the section above on the role of the CCSSG. The agenda will be prepared by the chairs of the CCSSG and CCIWG. Agenda items may include presentations followed by open discussions, program updates by CCIWG members and its Co-Chairs, reports from subcommittees and the chairs of the NACP and OCCC/OCB SSGs, and special briefings by third parties invited for that specific purpose. Additionally, members of the CCIWG and its co-Chairs may be asked to brief the CCSSG and/or respond to particular agency issues. The CCIWG's overall role at CCSSG meetings will be to listen and receive information, knowledge, and experiences of CCSSG members. CCSSG "executive sessions" will be convened only to address the most sensitive of topics.

The CCIWG and/or its member agencies will cover allowable travel and meeting expenses for CCSSG members. CCSSG meetings may be accomplished by conference call.

Approval and Amendments

Amendments to these terms-of-reference may be proposed by either CCIWG or the CCSSG. Amendments will be approved through mutual agreement of the two bodies.