

TERMS OF REFERENCE FOR A FIRST STATE OF THE CARBON CYCLE REPORT

The U.S. Climate Change Science Program (CCSP) Strategic Plan envisions a series of reports on the state of the carbon cycle designed to provide accurate, unbiased, and policy-relevant scientific information concerning the carbon cycle to a broad range of stakeholders. The two broad objectives for a State of the Carbon Cycle Report (SOCCR) are (1) to summarize scientific knowledge about carbon cycle properties and changes and (2) to provide scientific information for decision support and policy formulation concerning carbon. These two objectives may be addressed in a single document or in two documents produced in close coordination, one focused on scientific analysis and summary and the other on producing information for decision makers. The audience for a SOCCR includes researchers, decision-makers in the public and private sectors, and the general public. Production of the report will be sponsored by federal government agencies of the Carbon Cycle Interagency Working Group (CCIWG) of the U.S. CCSP.

This *Terms of Reference* applies to the first SOCCR to be produced under the auspices of the CCSP; it is anticipated that the scope, content, and production process for subsequent SOCCRs may be modified to take into account lessons learned in producing the first.

Scope and Coverage

Focus for the initial SOCCR will be on (1) summarizing our knowledge of carbon cycle properties and changes relevant to the contributions of and impacts upon the U.S., and the rest of the world, and (2) providing scientific information for U.S. decision support focused on key issues for carbon management and policy. The goals of the SOCCR depend on results from comprehensive, coordinated programs such as the North American Carbon Program (NACP). They also demand a global perspective, integrating information from studies of the land, atmosphere, and oceans around the world.

The SOCCR should address emissions, natural reservoirs, rates of transfer, the consequences of changes in carbon cycling on land and the ocean, effects of purposeful carbon management, and the socio-economic drivers and consequences of changes in the carbon cycle. To the extent possible, the report should provide error estimates and characterize uncertainties. The first SOCCR should include scientific information relevant to regional (i.e., sub-national) and sectoral issues, and to a range of geographic scales relevant to needs identified by the scientific, decision-making, and policy communities. The first SOCCR will address selected key issues and needs for decision support. These key issues and needs will be defined in consultation with stakeholder groups.

The scientific analysis of the state of the carbon cycle in the SOCCR will be a policy-neutral and unbiased product of the broad scientific community. The scientific information for decision makers and other stakeholders in the SOCCR will be policy-relevant, but not policy-prescriptive, and will be developed through partnerships involving scientists, managers, and key end users.

Leadership and Authorship

The responsibility for producing the SOCCR will be assigned to a small group of experts termed the SOCCR Group. They will provide leadership in planning, developing, coordinating, and integrating the SOCCR. The SOCCR Group will secure input and participation from a diverse cross section of researchers, research managers, and stakeholders sufficient to ensure the breadth, depth, balance and independence of views requisite for the highest possible quality in the finished product. The SOCCR Group will identify and secure the services of additional lead and contributing authors as appropriate and will regularly report to the Executive Committee (described below) and, to the CCIWG. The SOCCR Group will take steps to determine the range of aspects that will be covered in the report. The SOCCR Group will be responsible for identifying the key issues for thorough analysis, as well as the definition of the spatial, temporal, and sectoral domains for each chapter of the report. They will be responsible for coordinating and integrating all inputs to the SOCCR and for ensuring the report is well integrated, balanced, and responsive. As needed, the SOCCR Group will secure additional input or relevant expertise. Opportunities for offering information to the SOCCR Group will be broadly disseminated in appropriate scientific and other public venues. The SOCCR Group will also ensure that relevant scientific bodies are informed of the intent and progress of the SOCCR and will seek to harmonize their efforts with ongoing relevant work of other scientific bodies.

Oversight, Review, and Delivery of Report

An Executive Committee will oversee the work of the SOCCR Group. This committee will be composed of representatives of the CCIWG and CCSSG, and additional persons as needed to ensure critical perspectives are provided. The Executive Committee will provide high-level guidance for SOCCR development. It will focus on general SOCCR direction and schedule; help ensure that relevant data, analyses, and information are made available to the SOCCR Group; and facilitate liaisons with stakeholder groups. Individual chapters and/or the full document(s) will be reviewed prior to final publication. The Executive Committee will be responsible for arranging for these independent, external review(s) of the SOCCR. The SOCCR Group has responsibility for the final content of the report and the delivery of the Report, through the Executive Committee, to the CCIWG and CCSP Office.

Review of the completed document(s) by the National Research Council (NRC), or another body with comparable credibility and independence, will also be conducted. This will be arranged by the CCIWG in consultation with the CCSP Office. Distribution of the final publication will be arranged by the CCIWG in consultation with the CCSP Office.

Coordination

The first SOCCR should identify, utilize to the extent possible, and complement related activities in the U.S. and internationally. The CCIWG will support the SOCCR Group in engaging scientists from other nations in preparing the SOCCR. A process for engaging important stakeholder groups and establishing an ongoing dialogue with them must be developed. The SOCCR should be closely coordinated with any development of educational tools to improve public understanding of the carbon cycle that may be supported in parallel through the CCSP

Schedule

The first SOCCR should be completed and submitted to the CCIWG and CCSP within two years of initiation of the activity. A draft outline for the SOCCR, summarizing content and development and production processes, should be presented to the Executive Committee within two months of initiation of the activity. This outline should be forwarded to the CCIWG and CCSP Office for review and feedback immediately thereafter. The draft manuscript should be submitted to the Executive Committee within 20 months of initiation of the activity. The scientific review will be completed no more than 22 months after initiation of the activity. The SOCCR Group should assure that the review comments are reflected in the final report, and should prepare an explanation of how comments were addressed. The completed report should be submitted within 24 months after initiation of the activity.

Amendments

These *Terms of Reference* may be modified by the CCIWG after consultation with the CCSSG and the SOCCR Group.

Definitions:

US Global Change Research Program (USGCRP): The USGCRP is a coordinated interagency research program that supports research on the interactions of natural and human-caused changes in the global environment and their implications for society. It began in 1989 and was codified by Congress in the Global Change Research Act of 1990 (P.L. 101-606).

Climate Change Science Program (CCSP): In February 2002 President Bush announced a new management structure to integrate the US Global Change Research Program (USGCRP) and the Climate Change Research Initiative (CCRI), which are managed under the direction of the US Climate Change Science Program (CCSP).

Carbon Cycle Interagency Working Group (CCIWG): The CCIWG consists of individual program managers of U.S. Federal Government agencies that are charged by their agencies to implement the U.S. Carbon Cycle Science Program under the auspices of the CCSP. Federal agencies participating in CCIWG will be responsible for providing the resources to support the production of the SOCCR.

Carbon Cycle Science Steering Group (CCSSG): The CCSSG consists of professional scientific specialists who are appointed by the CCIWG to provide scientific information and guidance for U.S. carbon cycle research.

Executive Committee: The Executive Committee is composed of representatives of the CCIWG and the CCSSG, and additional persons as needed, to ensure critical perspectives are provided. This group will oversee the work of the SOCCR Group, providing high-level guidance.

SOCCR Group: The SOCCR Group is the group of individuals that is selected by the CCIWG to lead the development the SOCCR in conformance with the TOR above. The SOCCR Group will be responsible for the conduct of all activities required to ensure successful preparation of the SOCCR consistent with the highest professional and scientific standards of objectivity, completeness and relevance.

Policy-relevant: pertinent to the scientific information needs of policy makers, but not policy-prescriptive, not driven toward particular policy objectives, and not designed to make or recommend policies.