

Comments and Responses on Public Review Draft of SOCCR/SAP 2.2 (September 2006)

COMMENTS FROM PUBLIC REVIEWERS						AUTHOR'S RESPONSE						
Comment Number	Reviewer ID	Chapter	Page	Line	Comment Text	Acknowledged, but no further response or revisions are required	Revisions have been incorporated as suggested in the comment	Agree, but see "Notes on Response"	Agree, but elaboration is precluded by length limitations	Disagree; see "Notes on Response"	Beyond scope of report/chapter	Notes on Response
05-001	13	5	5-1		Like some other titles, the title to Chapter 5 is in the form of a question: "How Can We Improve the Usefulness of Carbon Science For Decision-Making?" However, it differs from a similar question in the Preface (p. ix), which is: "How can we improve the application of scientific information to decision support for carbon management and climate decision-making?". Furthermore, we question the use of the first person "We." The emphasis should be to "North America."		X	X				We agree that there is a discrepancy in the title of this chapter between the chapter itself and the preface. We will change the preface to reflect the current title. We think the chapter, like the report as a whole, makes it clear that the focus of decision-making is North America. The authors of this chapter will recommend that appropriate revisions be made in the preface.
05-002	13	5	5-1 & 5-2	1-2 & 8-30	The emphasis in the several questions on "decision support" has the connotation of the decision-maker making decisions and seeking a scientific basis from scientists in support of that decision, rather than having the scientists combining basic research with applied research on the carbon cycle and making the resulting combined scientific information available to the decision-maker in a timely fashion to enable that person or carbon manager to make relevant, science-based decisions. The above statements clearly show that scientists are apparently remiss in their consideration of the carbon cycle in treating the subject as a "basic science" and not combining it with applied research. That does not seem to be a communications problem. It appears to be more of a research problem.			X				We agree with the reviewer that there is a need to consider both basic and applied research in trying to improve application of carbon information to decision making. Research shows that both researchers and decision-makers need to be engaged in "co-production" of knowledge in order to create effective decision support. These concepts are reflected in page 5-2, lines 20-30.
05-003	13	5	5-1 & 5-2	1-2 & 8-30	Even more importantly, there is no suggestion in this chapter or Part I about what "applied" or "solutions-oriented" research is needed to "make carbon science" more "relevant." The absence of such a suggestion or discussion seems odd for a CCSP report. We presume that the scientists, not the decision-maker, is in the best position to know what applied science is needed and to undertake the needed research			X		X		The specifics of what research is needed to assist in decision support is covered in the R&D sections of chapters in Parts II and III of the report. Based on the peer-reviewed literature, we respectfully disagree that the scientists are in the best position to know what applied science is needed. We believe (and it is precisely one of the arguments of this chapter) that neither scientists nor policymakers are, individually, best positioned to now what research to undertake but rather that the best process for identifying what research to undertake involves the co-production of knowledge by scientists and resource managers and other decision makers working together in an iterative and on-going way.
05-004	13	5	5-3	3-8	Lines 4-8 state that the CCSP Strategic Plan "defines" the term "decision support." However, the definition of that term in such lines differs from the definition of "Decision support" in the Plan's Glossary (p. 195). The draft report definition is more akin to one of the two definitions of the term "Decision Support Resources" in the Strategic Plan (see Box 11-1, p. 112) and the Plan's Glossary (p. 195). In addition, the chapter's above-referenced definition refers to stakeholders, which is a defined term in the Plan (see Glossary, p. 193).			X				The reviewer is correct, we have taken our definition used in pages 5-3, lines 4-8 from the CCSP Strategic Plan "Working Definitions" Box 11-1 of the Decision Support chapter (chapter 11, page 112). The glossary definition appears to be a condensation of that same definition and reads "The provision of timely and useful information that addresses specific questions". We use the fuller definition as it is more descriptive of the full range of decision support activities. Yes, we agree that the Box 11-1 definition does refer to stakeholders and that term is defined in the Strategic Plan glossary

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05-005	13	5	5-3	20-22	As we indicated with respect to the Preface (p. vii), the actual stakeholder participation was only 29 representatives, and several of those were from the government. There was only one utility represented and only one from the auto portion of the transportation sector. Governmental representatives should not be included as stakeholders, as that term is defined in the Strategic Plan.	X						The reviewer is correct that we had limitations to the number of stakeholders that we could directly involve in the process through our workshops and interview process. We conducted active outreach to stakeholders in the utility and automotive sectors, but ultimately were only able to engage the limited number that did participate. In our process we did consider governmental representatives as stakeholders. The Strategic Plan glossary states that stakeholders are "individuals or groups whose interests (financial, cultural, value-based, or other) are affected by climate variability, climate change, or options for adapting to or mitigating these phenomena." Government representatives certainly fall into this category. The authors of this chapter will recommend that appropriate revisions be made in the preface.
05-006	12	5	5-4	F'note 4	CASMGS is an example of the potential conflicts that can arise when scientists work for organizations that are motivated by more than providing information and technology. The CASMGS website states its agenda as "to provide the tools and information needed to successfully implement soil carbon sequestration programs so that we may lower the accumulation of greenhouse gases in the atmosphere, while providing income and incentives to farmers and improving the soil." While providing income and incentives to farmers may be laudable, these goals do not necessarily contribute to the balanced information needed for broader policy considerations. This kind of potential conflict is inherent in the intense scientist-stakeholder interactions described in this chapter. The problem merits discussion.		X	X				We have now clarified in the chapter that boundary organizations and efforts at co-production of knowledge do not remove all motivations or potential conflicts of interest from a political situation. However, studies suggest that these conflicts are perhaps better acknowledged in an open, transparent setting rather than obscured by not acknowledging such interests. So in this case, it may be more transparent to acknowledge the multiple motives and objectives up front. We have also noted elsewhere in revisions that boundary organizations may be captured by stakeholder interests.
05-007	12	5	5-4	13-27	This discussion posits a clear distinction between decision support and basic research. The relationship between research and decision support is much more complex (for example, many research activities are included in the definition of decision support given on p. 5-3, lines 3-8). Basic research and decision support should not be viewed as necessarily incompatible.			X				We agree that the relationship between decision support and research is complex, and certainly there is a continuum of research approaches that might be relevant to decision support. However, much research in the field of seasonal to interannual climate forecasting suggests that simply doing basic research (in the classic mode, as defined by only being driven by scientific curiosity
05-008	12	5	5-5	29 ff	The options and examples described are mostly general. This discussion would be improved by focus on particular applications and issues related to C cycle science. For example, are the described decision-support carbon modeling tools regarded as credible within the scientific community? Do they adequately represent uncertainties?			X				There is much information in the citations listed on the experience of scientists and stakeholders with these various options, although not specific to carbon. We acknowledge that there is not as much literature on decision support specific to carbon cycle science, simply because the field is only just beginning to consider how to provide that support. The models underpinning the CQUEST and COMET-VR decision support modeling have been validated in the peer-review literature, for more information see the websites listed.
05-009	12	5	5-7	23-29	This is the only part of this chapter that is focused on the problems encountered by scientists who become directly involved in decision support. These problems merit further attention, especially compared to the following discussion of direct involvement by stakeholders and boundary organizations.				X			We agree that there are issues that are encountered by scientists engaged in decision support, and have devoted this paragraph to those issues. In this short chapter, unfortunately, we don't have room to add more discussion.

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05-010	12	5	5-8	3-23	This discussion of boundary organizations is not balanced: it describes all pros and no cons for this type of mediation between scientists and stakeholders. For example, one obvious potential drawback is the inclination of both sides to hand off difficult issues to an involved boundary organization, at the expense of not becoming directly engaged themselves.		X					We agree, and have added a sentence on the cons of boundary organizations that are not effective or might be counterproductive (page 5-8, lines 25-28)
05-011	12	5	5-9	1 ff	The described research needs for decision support are mostly generic. This discussion would be more useful with examples and applications specific to carbon cycle science.			X				The chapters in parts II and III provide more specifics on R&D needs for carbon cycle science. This chapter focuses on missing parts of the process for conducting carbon cycle science that would improve decision support. The very nature of decision support is that user needs are context specific-- hence it would be impossible to provide more specifics than we already have, without conducting much original research that was beyond the mandate of the SAP 2.2. Please see sample carbon modeling tools described on 5-7, and the discussion in Text Box for sectoral examples of where decision support may be needed from carbon cycle science.