

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
02-001	13	2	2-1	13-15	The sentence includes a reference to the increase in CO2 since the year 1850; however, p. ES-1, line 26 uses the year 1750 as the basis. On p. II-1, lines 25-29, the year is given as "back to at least 1785." The year 1750, which relates to the dawn of the Industrial Revolution, appears to be the proper one. We also question whether the year "1850" on p. 2-2, lines 16 and 19; p. 2-3, line 21; and p. 2-6, line 15; and in Figures 2-1 (p. 2-17) and 2-2 (p. 2-18) should be "1750" as well. In the case of p. 2-4, line 5 and p. II-1, Figure 1, the year is from "1751," yet another inconsistency. As far as we can determine, the year 1785 appears nowhere else in the draft report, so we question its appropriateness.		X					All dates checked. Because the land use data start at 1850 and emissions start at 1850, there is no single starting date that works best for everything.
02-002	13	2	2-1	13-15	While the authors of this draft and many scientists may recognize and agree with these various years, the "audience" for the draft includes the general public. If these years are correct, there should be some explanation as to why they were chosen vis-a-vis the gap between 1750 and 1850. Moreover, the various statements and years should be consistent among all chapters, Parts, Preface and the Executive Summary. Similarly, the percentage numbers should be consistent.		X					All dates checked and all date statements harmonized.
02-003	13	2	2-1	13-15	These lines emphasize the "rapid, dramatic increase in the contribution" of CO ₂ "in the atmosphere" over the period of the "last two centuries," but make no mention in this chapter of methane or the importance of carbon for human life and as an energy source as well as a contributor to "potential climate change." Yet the 2003 Strategic Plan indicates quite clearly that carbon has real value for humans and that methane "is also a significant contributor."					X		The chapter talks about fluxes into and out of many pools. These are presented without a value judgement, as appropriate for an assessment of this type.
02-004	13	2	2-1	13-15	The draft should reflect the findings from p. 71 in the 2003 CCSP Strategic Plan. Moreover, we question the use of words such as "rapid" and "dramatic" in the context of an increase globally of CO ₂ since the Industrial Revolution, which was more than two and a half centuries ago. [Note: the quotation from p. 71 of the Plan is included in the text of the original comment.]					X		We believe the wording of the chapter is appropriately neutral.
02-005	13	2	2-2	5	The word "uncertainty" appears twice in a parenthetical. The word is first defined and explained in the Strategic Plan (p. 199). As to the latter, the Plan states: "Uncertainty can result from lack of information or from disagreement about what is known or even knowable." In this parenthetical, it appears that it results "from lack of information." We question whether that is the case. If so, the draft does not appear to indicate what is being done to obtain that information.	X						We believe the use of "uncertainty" in this context is sufficiently clear.
02-006	13	2	2-2	24-27	The draft report points out that on the one hand "[f]uture increases in carbon uptake... could moderate the risks from climate change" (emphasis added) and on the other hand that "decreases or transitions from uptake to release could amplify the risks." This is a balanced statement until it ends with the words "perhaps dramatically." It is unclear whether those words apply to moderation or amplification or both, and they are speculative in any event. We urge their deletion.	X						The last phrase was added to emphasize the point that there is a large asymmetry in possible rates, with maximum rates of C loss to the atmosphere much larger than maximum rates of C removal from the atmosphere.

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02-007	13	2	2-3	2-16	On line 2, the words "modern background. . .carbon cycle" appears, but there is no indication of what period the words "modern background" cover. The sentence that begins on line 3 states that the unmanaged carbon cycle "processes" that occur without human input "are, however, currently so altered by human influences on the carbon cycle that it is not appropriate to label them natural." There is no source reference for this statement. Similarly, there are no source references for the remainder of the sentences beginning on line 6 and ending on line 16. References are needed. In addition, there is no time frame or reference for the word "currently."	X						Much of the chapter is about how human actions have modified the background carbon cycle. This introductory sentence is intended to let readers know what is coming.
02-008	12	2	2-4	16-26	This paragraph cites "DOE EIA, 2005." The reference given is to the agency, not a verifiable document.		X					Full web reference added.
02-009	13	2	2-4 & 2-10	16-26 & 20	The source for these statements is stated in two parenthetical citations (lines 22 and 26) as "DOE EIA, 2005." However, the "Chapter 2 References" (pp. 2-9 – 2-15) merely provides (p. 2-10, line 20) "DOE EIA (U.S. Department of Energy, Energy Information Administration), 2005." There is no identification of the DOE or EIA publication from which this information is derived. There should be.		X					Full web reference added.
02-010	13	2	2-4 & 2-10	16-26 & 20	Incidentally, throughout the report U.S. federal agencies are often referred to for data or source information. However, there are very few references to such data or information from official Canadian or Mexican agencies.			X				For consistency, we tried to stick with a single source of information where possible. That is why all of the C emissions data (for all countries) comes from the EIA.
02-011	13	2	2-4 & 2-10	16-26 & 20	This draft report concerns carbon cycle issues of North America and the U.S., Canada and Mexico. Therefore, the word "major" on line 16 above is inappropriate because it suggests there are other non-major countries of North America, which of course is not the case.					X		We don't specifically discuss any of the smaller countries in Central America, which is usually included in North America.
02-012a	13	2	2-4 & 2-10	16-26 & 20	We reiterate that this is a report about North America's carbon cycle matters. While the first three sentences of lines 16-26 address North America, the rest of the paragraph focuses on one of the three North American countries, the U.S., and on China and India. It also begins by referring to emissions of North America as a whole, and then shifts to per capita emissions of the three North American countries and developing countries and makes comparisons without noting the differences in population. The difference between the populations of the U.S. and China is significant when discussion per capita emissions.	X						
02-012b	13	2	2-4 & 2-10	16-26 & 20	Our examination of EIA reports indicates that, based on preliminary estimates, the combined CO2 emissions of China and India exceeded those of the U.S. in 2005. See EIA's International Energy Annual 2004 (preliminary data) and International Energy Outlook 2006. Thus, the draft report's analysis does not appear to be based on the most current data, and it should be.		X					We updated the figures to 2004, the most recent generally available.
02-012c	13	2	2-4 & 2-10	16-26 & 20	The draft report should also not take the position of quibbling over the relative CO2 emissions of the world's largest industrial economy and the world's two largest developing economies: the point is, there is no question but that the U.S. and the rapidly expanding economies of China and India are all large CO2 emitters.	X						We are presenting an overview, not quibbling.

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02-012d	13	2	2-4 & 2-10	16-26 & 20	In addition, the IPCC noted in its First Assessment Report that the "relative rate of increase" of CO2 emissions in developing countries "is much larger in contrast to Western Europe and North America."			X				This chapter is not discussing rates of increase. We did, however, add a phrase to highlight the rapid growth of emissions in China and India.
02-013	13	2	2-4	16	The paragraph that begins on p. 2-4, line 16 should be deleted or revised consistent with our comments.					X		The information was updated. We consider it relevant.
02-014	12	2	2-5	17-20	This discussion of ocean sink estimates, with its 50% uncertainty estimate, is not consistent or complete with respect to the discussion of same on p. 2-6 lines 25ff.		X					We dropped the uncertainty estimate from this location.
02-015	12	2	2-6	8-12	This paragraph discounts the importance of residual calculations, but the last line on the page gives a residual terrestrial sink without qualification. The importance of global residual estimates as a constraint on inversion estimates should not be discounted.					X		The sentence indicates that it is important to have the constraint of a residual calculation.
02-016	12	2	2-6	14 ff	This section on the unmanaged carbon cycle was apparently written separately from the preceding section on carbon budgets. There are redundancies and disconnects that should be resolved in discussions of inversions, ocean uptake, and land exchange.		X					All the numbers have been reconciled and checked for consistency.
02-017	12	2	2-7	31-32	This statement is ripe for selective misquotation. NA is NOT a sink; it is a source. Adding the phrase "in the absence of fossil fuel emissions" is like saying the US Federal budget shows a surplus in the absence of defense spending.		X					We changed the sentence to emphasize that NA is a carbon source.
02-018	12	2	2-8	3-7	There is no mention of uncertainties in this description of inversion results. The uncertainties are considerable. The wording is also vulnerable to misrepresentation – NA is a source, not a sink.			X				The limitations of inversions are discussed at the top of p 6.
02-019	12	2	2-8	13 ff	The section on Carbon Cycle of the Future section is all about NA, without the global context presented in other sections of this chapter.			X				Good point, but we don't have the space or editorial freedom to expand this section.
02-020	12	2	2-8	32-33	The cited reference (Graham 2003) for this very important statement appears to be an economic analysis. Surely there are many caveats that should be mentioned, and economic analysis should not be the only measure of the capacity for afforestation to offset future emissions.			X				Constraints on space do not allow a discussion of this important issue.
02-021	13	2	2-9	12-14	The first sentence that begins on line 12 with its cross-reference to Chapter 4 is vague and unnecessary. Moreover, Chapter 4 refers to options and measures, not "opportunities." The sentence should be deleted.					X		We feel it is important to conclude with a brief perspective on things that can be done in the future.
02-022	13	2	2-9	12-14	The second sentence on line 12 seems to be inconsistent with the sentence on p. 2-8, lines 31-32 on the possible intersection of "trends in the natural carbon cycle." Further, there is no source reference for the statement.			X				This sentence is summarizing material already discussed.
02-023	13	2	2-16	Table 1	Table 1 is titled "Sinks of Carbon 1980-90 in the coterminous United States (in Gt C yr-1)." There should be a similar table for Canada and Mexico since this is a North American draft. Later in the draft, i.e., Chapter 6, the report provides data on all three countries. That should be the pattern to be followed throughout the report.		X					The table was deleted.
02-024	12	2	2-17	Fig 2-1	The cumulative fluxes in this figure are through 2003 (according to p. 2-4), but the annual fluxes are averages for the 1990's (according to the caption). This inconsistency should be resolved or explained.		X					explanations improved.

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02-025	13	2	2-17	Fig 2-1	The figure is overly complex and the caption is the same as the indented box for this figure on p. 2-2, lines 12-17. It is unclear to what extent it still reflects the source (<i>i.e.</i> , "Sabine <i>et al.</i> 2004b") since the caption says it is "[r]edrawn. . .with updates as discussed in the text." There are many changes from the May 2006 version. In addition, we are unable to locate the discussion of updates.		X					We updated the figure to better extrapolate cumulative anthropogenic C in the oceans. All of the updates from Sabine <i>et al.</i> 2004 are discussed in the text.
02-026	13	2	2-18	Fig 2-2	The caption is "Atmospheric CO2 concentrations from 1850 to 2005." However, the figure appears to provide data from 1750-2000.		X					caption changed.