

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
15-001	9	15	All		I've reviewed <u>CHAP 15</u> and feel that the executive summary statement: "Ocean carbon sequestration studies should also be continued." Should be eliminated from this summary. The topic of the purposeful enhancement of ocean carbon storage (direct injection and fertilization) is barely discussed in the chapter. The information provided on the topic is not particularly supportive of this statement. It should be removed.		X					Done
15-002	9	15	All		The discussion of coastal observatories and the need for them has merit. What is missing, however, is mention of the requirement for development of enabling autonomous technologies (AND SENSORS) to address the real spatial temporal variability of carbon components and fluxes in the coastal zone.		X					Done
15-003	9	15	All		I feel that limiting NACP's 'ocean' so strongly to just coastal waters is inappropriate since changes of carbon storage in waters of the N Pacific Ocean (up wind of N America) seem to be a need to know item. Further gaining predictability of the biological part of the ocean carbon cycle would seem to be very important to the needs of NACP		X					OK. Words added.
15-004	4	15	15-2	19	Add reference within parenthesis after "Sarmiento and Gruber, 2006": "Muller-Karger et al., 2005" This reference is provided in later comments on Chapter 15			X				Reference added, but in another location
15-005	4	15	15-2	22	Add text: Ultimately, it will be necessary to develop a robust observing program that incorporates time series of observations of the sinking flux of carbon in the form of organic and inorganic particulates in the global ocean. Our present estimates suggest that the carbon that reaches the bottom over continental margins to a depth of 2000 m may be responsible for upwards of 40% of the carbon sequestration in the global ocean, and that changes in surface ocean production have the biggest impact on sequestration over these regions (Muller-Karger et al., 2005). At present, how particulate fluxes change in time over the global ocean is unknown, and this represents an important gap in our knowledge without which it is difficult to understand the role of the oceans in the global carbon cycle and particularly in carbon sequestration.		X					Added
15-006	4	15	15-9	22	Add/append: Areas of strong upwelling along the southern margin of the Caribbean Sea are continuous sources of CO2 to the atmosphere. Time series observations being conducted jointly between Venezuela and the U.S. are focusing investigations on the carbon cycle along this tropical continental margin (Muller-Karger et al., 2004). The time series shows that in spite of high primary production and high sinking fluxes of particulate organic matter, upwelling and ventilation of subsurface waters along this margin leads to year-round evasion of CO2 from the ocean to the atmosphere (Astor et al., 2005).					X		Out of the scope of this paper.

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15-007	4	15	15-11	30	Add reference: Astor, Y. M. , M.I. Scranton, F. Muller-Karger, R. Bohrer, and J. Garcia. 2005. Seasonal and interannual fCO2 variability in a tropical coastal upwelling system. Marine Chemistry. 97 (3-4): 245-261.					X		Out of the scope of this paper.
15-008	4	15	15-14	18	Add reference: Muller-Karger, Frank E., Ramon Varela, Robert Thunell, Remy Luerssen, Chuanmin Hu, and John J. Walsh. 2005. The importance of continental margins in the global carbon cycle. Geophysical Research Letters, Vol. 32, L01602, doi:10.1029/2004GL021346, 2005.		X					Done
15-009		15	15-14	18	Add reference: Muller-Karger, F. E., R. Varela, R. Thunell, Y. Astor, H. Zhang, and C. Hu. 2004. Processes of Coastal Upwelling and Carbon Flux in the Cariaco Basin. Deep-Sea Research II. Special Issue: Views of Ocean Processes from the Sea-viewing Wide Field-of-view Sensor (SeaWiFS) Mission: Volume 2 - Edited by D. A. Siegel, A. C. Thomas and J. Marra. Vol 51/10-11 pp 927-943.					X		Out of the scope of this paper.