



**GLOBAL CHANGE RESEARCH
MID-CYCLE REVIEW SUBCOMMITTEE**

**Conference Call Summary
Thursday, February 28, 2008
10:30 a.m. – 12:30 p.m. EST**

Welcome

Dr. Milton Russell, Institute for a Secure and Sustainable Environment, Subcommittee Chair

Dr. Milton Russell, Chair of the Subcommittee, called the meeting to order at 10:35 a.m. and welcomed members of the Board of Scientific Counselors (BOSC) Global Change Research Mid-Cycle Review Subcommittee and other participants to the conference call. He reminded participants that the purpose of the call was to discuss the draft mid-cycle review report. Specifically, the Subcommittee would discuss: (1) general comments regarding the draft report; (2) each section of the report; (3) the issue of performance metrics, which is not yet included in the report; and (4) the summary assessment and qualitative rating.

Administrative Procedures

Ms. Monica Rodia, U.S. Environmental Protection Agency (EPA)/Office of Research and Development (ORD), Subcommittee Designated Federal Officer (DFO)

Ms. Monica Rodia, Designated Federal Officer (DFO) for the BOSC Global Change Research Mid-Cycle Review Subcommittee, welcomed participants to the conference call. She reviewed the function of the BOSC, which provides independent, scientific peer review and advice to the Office of Research and Development (ORD) of the U.S. Environmental Protection Agency (EPA). The BOSC Global Change Research Mid-Cycle Review Subcommittee was established by the BOSC Executive Committee to review progress made by ORD's GCRP since the 2006 BOSC program review. The Subcommittee was provided charge questions and asked to prepare a report for the Executive Committee's deliberation. The Executive Committee has the authority to evaluate the Subcommittee's report, revise it if necessary, and submit it to ORD.

Ms. Rodia explained that this was the Subcommittee's third conference call. The Subcommittee also met face-to-face at the review meeting held on January 23, 2008.

As the DFO for the Subcommittee, Ms. Rodia serves as the liaison between the Subcommittee, the public, and EPA and ensures that all Federal Advisory Committee Act (FACA) requirements are met. Ms. Rodia reviewed the FACA procedures required for all BOSC meetings. All meetings and conference calls involving substantive issues—whether in person, by phone, or by e-mail—that include at least one-half of the Subcommittee members must be open to the public, and a notice must be placed in the *Federal Register* at least 15 calendar days prior to the call or meeting. A notice of this conference call was published in the *Federal Register* on January 11, 2008. All documents distributed for the meeting must be made public as well. The Chair oversees the Subcommittee and mediates its deliberations.

Regarding financial conflict of interest, Ms. Rodia works with EPA officials to ensure that all appropriate ethics regulations are satisfied. Each Subcommittee member has filed a standard government financial disclosure report and completed ethics training. Subcommittee members must notify Ms. Rodia if they have a potential conflict of interest with any of the topics being discussed as the Subcommittee performs its work.

Ms. Rodia asked all Subcommittee members to use the homework forms she had distributed previously to record the time they spend reading documents and/or preparing written materials prior to or following any Subcommittee meeting or call.

A writer from The Scientific Consulting Group (SCG) was present to take notes during the call. She will prepare a summary of the discussions that the Chair must certify within 90 days of the conference call. After certification by the Chair, the summary will be made available to the public via the BOSC Web Site (<http://www.epa.gov/osp/bosc>).

No requests for public comment were submitted prior to the call, but the agenda allows time for public comment at 10:45 a.m. Ms. Rodia noted that she would call for public comments at that time, and each comment must be limited to 3 minutes.

Public Comment

At 10:45 a.m., Ms. Rodia called for public comments. No comments were offered.

Subcommittee Discussion of Draft Report

Global Change Research Mid-Cycle Review Subcommittee

General Comments

Dr. Russell asked Subcommittee members to suggest topics requiring discussion during this conference call.

Dr. Cliff Duke thought the Subcommittee members should discuss the overall level of detail in each section of the draft mid-cycle review report. In response to a question from Dr. Russell, Ms. Rodia clarified that the Subcommittee will have contractor support for formatting of the report.

Dr. Russell proposed that, in addition to the charge questions, the Subcommittee may wish to consider: (1) whether the Global Change Research Program's (GCRP) focus and resources are being diverted from its primary purpose; (2) the usefulness of the Program's communications (i.e., how effectively it provides advice and resources) and its success both in harvesting information from its completed regional assessments and in assessing lessons learned about the process; (4) whether the Program should increase its efforts regarding nonlinear responses; and (5) whether the Program has sufficiently addressed issues related to priority setting.

In response to a question from Ms. Claudia Nierenberg, Dr. Russell clarified his concerns regarding the potential for diversion of resources from the Program's primary purpose. Because of limited resources, other offices and programs within EPA—such as the Office of Water (OW) and the Office of Air and Radiation—may come to rely too heavily on the GCRP for certain tasks. If this occurs, it may interfere with the Program's ability to focus on its primary purpose and its more exploratory work.

Ms. Nierenberg wondered whether this concern should be reflected in the draft report through a greater emphasis on the value of maintaining boundaries between the GCRP and other offices within EPA. This may allow the Program to maintain the capacity for integrated thinking while still providing directly

functional services for those offices. Dr. Russell suggested that the Subcommittee consider the distinctions between the role of the GCRP and the roles of other EPA offices and programs. The GCRP is innovative and future-oriented; it initiates activities and ensures consideration of all appropriate factors. The task of actually performing the work and using the Program's innovations, however, should fall to other offices and programs, such as programs within OW. This is not a sharp division, and Dr. Russell expressed concern that the Program may be pressured to cross the line and engage in activities that are better left to other programs or offices.

Dr. Russell added that this issue is related to the Program's priorities. The GCRP essentially is in a frontier of innovation; it creates systems, but other offices and programs should use these systems. Materials provided by the Program regarding its work with OW, in particular, implied that some of the activities undertaken by the Program normally would be done by OW itself. Added demands on the Program may jeopardize some of the activities that it is uniquely qualified—and mandated—to perform. This issue could be raised as a “shot across the bow,” rather than a specific concern about a specific action. Ms. Nierenberg suggested that the Subcommittee enhance sections of the report that speak to this issue. Dr. Russell agreed, highlighting the importance of maintaining the boundaries between this Program and other EPA offices and programs.

Dr. Russell offered to draft a paragraph addressing these concerns, either to include in a new section on “General Comments” or “Comments Outside of the Charge Questions” or to incorporate into an existing section of the report.

Ms. Nierenberg observed that offices within the National Oceanic and Atmospheric Administration (NOAA) also are building their capacity to understand climate change and adaptation options; this is happening across the entire Federal Government. In addition, some constructive tension always has existed over the extent to which the GCRP is an EPA program versus an interagency program. Dr. Rita Colwell noted that Paul Sandifer (NOAA/National Ocean Service) and his colleagues recently released the report, *Interagency Oceans and Human Health Research Implementation Plan: A Prescription for the Future*, describing the Interagency Oceans and Human Health Program and its areas of research emphasis for the next decade. She compared this interagency program to EPA's GCRP and wondered whether the Subcommittee's report should take some cues from the Sandifer, et al. report, especially in terms of outlining the Program's role vis-à-vis the roles of other agencies. Dr. Russell said that the Subcommittee may wish to make an addition to the report along these lines; however, this issue was addressed in the 2006 BOSC program review. In the present mid-cycle review, the key question is whether EPA is fulfilling its responsibilities to those other agencies.

Ms. Nierenberg agreed with Dr. Colwell's point that many of the Program's activities require interagency collaboration. The Subcommittee's draft report does not directly address this issue, perhaps in part because it is a mid-cycle review report. The report could suggest, however, that the Program could work constructively on these issues as it evolves.

Dr. Ruth Reck raised the issue of nonlinear responses and the section in the draft report that considers whether nonlinear responses apply to ecosystems or to the climate system. One of the principal problems in responding to climate change is the occurrence of nonlinearities. Dr. Reck clarified that she initially suggested that the Program's work on nonlinear responses should include an examination of the spectrum of noise in various measured datasets, such as those from each region, to determine whether a system is approaching a bifurcation point at which it could become nonlinear. She wondered whether such an approach would allow each region to identify areas within their jurisdictions with the potential for nonlinear responses.

In response to a question from Dr. Patrick Mulholland, Dr. Reck agreed that her suggestion could be considered a specific example of the manner in which the Program might more effectively incorporate nonlinearities and thresholds. Dr. Mulholland asked whether Dr. Reck thought that the language in the

draft report simply required further elaboration, perhaps using the example she had described. Dr. Reck clarified that the report should approach this subject from the perspective of climate forcing and then should address the other issues. Dr. Mulholland argued that EPA should not be involved in nonlinearities that occur within the climate system because other agencies are engaged in that work. Instead, EPA should focus on nonlinearities in ecosystems that are in response to sudden or gradual climate shifts. The nonlinearities and thresholds with which EPA should be concerned are properties of ecosystems and the systems affecting water quality, not climate. Dr. Reck explained that she did not mean that EPA should focus on nonlinearities within the climate system. Rather, EPA should focus on the response of an ecosystem or hydrological system to a sudden climate event or, as Ms. Nierenberg suggested, a sudden ecological response to a gradual climate shift. She reiterated the importance of harvesting existing datasets that could be used to predict nonlinearities. Dr. Mulholland replied that he and Dr. Reck were in complete agreement on this topic.

Dr. Russell suggested that the report be revised to indicate that nonlinear ecosystem responses may result from either a sudden or a gradual climate shift. Both kinds of nonlinearity are of concern with respect to adaptation, but the Program has not expended sufficient resources on this very important issue other than via the Science To Achieve Results (STAR) Program. Dr. Reck agreed but argued that the report also should indicate that an awareness of the ongoing work of other agencies is important. Dr. Russell supported this suggestion.

Dr. Mulholland agreed to clarify discussions of nonlinear responses in Sections III (addressing Charge Question #1) and V (addressing Charge Question #2) of the draft report. Specifically, he will distinguish between nonlinear responses by ecosystems to sudden versus gradual climate change.

Dr. Russell said that he would circulate the paragraphs he drafted for a general comments section; other Subcommittee members then may provide input or contribute additional general comments. The revised text on nonlinearities also will be circulated for input. Dr. Russell noted that the issue of priority setting had emerged and that the Subcommittee would discuss this soon.

Section II

Dr. Russell asked for input on Section II of the draft report, which includes the introduction and the overall goals, the charge to the Subcommittee, and the structure of the review. Dr. Duke responded that he had only minor editorial comments on this section that he would send via e-mail. Other Subcommittee members did not have substantive comments on this section and agreed it was excellent.

Section III

Ms. Nierenberg said that Section III, on Charge Question #1, has room for additions and modifications. In particular, perhaps the report should emphasize the need for a methodology for prioritization. She also wondered whether this section should offer any further advice regarding evaluation and performance criteria. The Program certainly has been responsive to the recommendations from the 2006 BOSC program review; however, some issues remain. Regarding dissemination in particular, perhaps this section of the report should address the effectiveness of the Program's attempts to harvest its research and assessment results. The Subcommittee might wish to suggest that the Program enhance its efforts to distribute its results and to maintain connections with the communities (both inside and outside of the Agency) that rely on these research results to improve their decision-making and adaptation. Dr. Reck observed that one could conceptualize two somewhat distinct functions of the Program with regard to dissemination. The first is to do the work and recognize its value; the second is to make the results useful to those who need the information.

In response to a question from Dr. Russell, Ms. Nierenberg and Dr. Reck agreed to add language to Section III regarding the need for the Program to more effectively harvest its results.

Dr. Duke asked for clarification of the meaning of two sentences in Section III. In the fifth paragraph, it is not clear how a partnership would improve evaluation, as in the following sentence: “And this continued partnership between the GCRP and the mission side of EPA will together provide an improved evaluation of whether we as a nation are able to protect air and water quality as the climate changes.” Also, in the sixth paragraph, it is not clear how the air quality assessment changed over time, as described in the following sentence: “It would also be useful to illustrate how issues evolve over the course of time, especially in the case of the Air Quality assessment that evolved over a number of years.” Ms. Nierenberg agreed to rewrite these sentences. In the first case, the language was derived from materials provided by the Program. In the second case, she explained that the air quality assessment was conducted over a period of years, but the Program provided no indication of how the assessment process might have changed over time. Dr. Duke said he would provide a few additional comments on this section to Ms. Nierenberg and Dr. Reck via e-mail.

Dr. Duke suggested that the Subcommittee discuss recommendations during the next conference call; however, recommendations, such as those currently included in Section III in boldface, should be presented for the review as a whole, rather than tied to individual charge questions.

Dr. Russell recalled that Dr. Joel Scheraga, National Program Director (NPD) for the GCRP, had expressed interest in the Subcommittee’s review and evaluation of the Program’s “leadership in science.” The bibliometric analysis of the Program appeared to be stellar in terms of the importance of publications and the number of times the Program’s publications have been cited. Perhaps a new paragraph in Section III could address whether the Program is leading in science and the meaning and importance of the bibliometric analysis.

Dr. Reck commented that academics regularly ponder the relative importance of the number of publications versus the impact, depth, or novelty of the research. This question is very difficult to address. If the Program’s leadership in science is evaluated only in terms of the number of publications, this will overlook some of the most important aspects regarding whether the Program is changing the direction of research and improving scientific understanding in the field. Bibliometric analysis provides one line of evidence but not the whole story; by stressing such measures, one may not recognize the full implications and importance of the Program’s work. Dr. Russell agreed but noted that ORD had specifically asked the Subcommittee to evaluate the Program in terms of its publications. Therefore, the Subcommittee should respond, indicating that the Program’s publication record is great, its publications are frequently cited, and the bibliometric analysis is useful and important. The Subcommittee also should emphasize, however, that the bibliometric analysis does not paint a complete picture. Dr. Reck concurred.

Ms. Nierenberg and Dr. Reck agreed to revise Section III to address the Program’s leadership in science.

Dr. Russell observed that the tone of Section III also might require revision. Each paragraph states that the Program has done a great job in one respect but that the Program could improve in another respect. This structure may downplay the Subcommittee’s praise for, and its criticisms of, the Program. Ms. Nierenberg agreed that the points raised in this section would be weakened if it reads in this way.

Ms. Nierenberg and Dr. Reck agreed to rethink the tone of Section III and perhaps reorganize the section. Consolidating all positive points and then presenting all of the suggestions for improvement may resolve this issue.

Section IV

Regarding Charge Question #3, Dr. Duke noted that the wording of the Long-Term Goals (LTGs) is still in flux. Therefore, Drs. Duke and Mulholland drafted comments on the implications of each alternative version of LTGs 1 and 2 provided by Dr. Scheraga. In general, each alternative reflects the Program’s purpose, but some of the alternatives reflect output-based goals and others reflect outcome-based goals.

Dr. Mulholland added that he had noticed some disagreement among Subcommittee members over whether the goals should be output-based or outcome-based. He said that, in his opinion, the goals should essentially be output-based, but he wondered if other Subcommittee members thought that the goals should focus more on outcomes. The compromise in Section IV proposes using Alternative 1 of LTG 1 and Alternative 2 of LTG 2 with the addition of the phrase, “and effective communication of potential impacts to decision-makers” to each LTG. In this way, the LTGs would primarily be output-based but would include some specific language about outcomes.

In response to a question from Dr. Reck, Dr. Mulholland agreed that different metrics would be required for LTGs focused on outcomes versus outputs. Dr. Duke said that this was a key point. In addition, he and Dr. Mulholland had struggled with the degree to which the LTGs should be under the control of the Program. Outcomes occur largely outside of the Program’s control. In terms of effective communication, however, the Program is responsible for making its output accessible and useful to decision-makers; this brings the LTGs closer to being outcome-based goals.

Dr. Russell observed that the Subcommittee must distinguish between a practical, functional program that engages in problem-solving versus a program that essentially engages in pure science and the advancement of science *per se*, which is partly the responsibility of ORD. The Program is pressured—by stakeholders, the Office of Management and Budget (OMB), Congress, and others—to produce outcomes directly. The GCRP, however, operates by generating outputs and by facilitating the efforts of other programs, offices, and agencies to use the Program’s outputs. The Program must remain aware of the relevance of its outputs to the potential outcomes and must ensure that its outputs are accessible and useful to decision-makers; this is how the Program contributes to outcomes. Drs. Mulholland and Duke agreed that Dr. Russell had precisely captured the issue.

Dr. Russell suggested that a revision of Section IV should bluntly summarize this problem in general terms: the Program must benefit society and the environment, but it cannot do so directly and must, instead, facilitate the work of others. Consequently, it is difficult to devise appropriate LTGs that merge outputs and outcomes. Dr. Russell added that he had no problems with the current draft of Section IV, but the Subcommittee should highlight the conundrum articulated by Drs. Mulholland and Duke in the draft report. Other Subcommittee members agreed with this suggestion.

Dr. Duke also raised concerns, based on the National Research Council report regarding metrics for the U.S. Climate Change Science Program as a whole, regarding wording in some of the alternative versions of LTGs 1 and 2 that use the reduction of uncertainty as a metric. Section IV of the draft report highlights this issue as well.

Section V

Dr. Duke cautioned that the Subcommittee’s response to Charge Question #2 in Section V of the draft report is based on the synopsis of the draft revised Multi-Year Plan (MYP), which is very much in flux.

Dr. Mulholland agreed, and observed that this represents a golden opportunity for the Subcommittee to influence the development of the MYP. He raised two primary concerns. First, the Annual Performance Measures (APMs) currently reflect a limited geographic scope. This will affect the Program’s ability to harvest results and produce nationally relevant products. The MYP may be strengthened by the addition of APMs that involve the selection of representative watersheds in different regions across the United States. Second, it appears that the topic of threshold and episode-driven changes will be addressed only through extramural research and that the next Request for Applications (RFA) will not be released until 2011. To address this problem, the Program should release the RFA earlier and also undertake a significant intramural research effort. This will allow the Program to better harvest what is known about thresholds and nonlinearities in ecosystems.

Dr. Duke asked Subcommittee members for their thoughts on the level of detail and clarity of Section V compared with other sections of the draft report.

Dr. Russell turned the discussion to the detail and clarity of the MYP synopsis itself, commenting that he could not discern the MYP's rationale. Although the Program certainly has addressed many of the recommendations from the 2006 BOSC program review, the MYP synopsis does not clearly state the problem or outline the Program's goals and objectives for addressing the problem. As noted in Section V of the draft report, the statement of the rationale occurs far too late in the MYP synopsis. Dr. Duke asked whether the currently mild critique of the MYP's rationale in Section V of the draft report should be strengthened. Dr. Russell recalled Dr. Mulholland's observation that the Subcommittee has the opportunity to influence the development of the MYP. The Program should clarify the MYP in terms of the why, what, and how, and the rationale should be stated up front in the document; this would facilitate a reader's understanding of the Program.

Drs. Duke and Mulholland agreed to strengthen the critique of the clarity of the MYP's rationale in Section V of the draft report. Other Subcommittee members agreed with this suggestion. Dr. Duke wondered whether a revision to Section V of the draft report should indicate that it is important not only for the Program to be responsive, but also to be sufficiently clear that one can understand its responsiveness. This goes beyond an editorial issue because disorder within the MYP may detract from its utility for priority setting. Dr. Russell agreed and added that the clarity of the MYP also affects its utility for communication with outside entities, such as OMB, that evaluate the Program; this ultimately may influence the investment of resources in the Program. Ms. Nierenberg agreed that the Subcommittee's report should specifically mention the effect of the MYP's clarity on outside perceptions of the worthiness of investing in the Program.

Section VI

With respect to Section VI on Charge Question #4, Dr. Russell said that he had attempted to explain, in the introduction of the draft report (Section II), why the Subcommittee had chosen not to respond to Charge Question #4. Specifically, the Subcommittee had determined that a survey would not be terribly useful to the Program because it would be very difficult to find a meaningful sample and to quantify and interpret the results. Dr. Colwell added that surveys must be conducted very carefully by professional survey organizations.

Dr. Russell highlighted the importance of having a particular population from which to sample. The materials provided by the Program suggest that it plans to sample clients within EPA, but this is not the relevant population with respect to the function of the Program. He asked whether the report should further elaborate on this issue and whether the discussion of Charge Question #4 should remain in the introduction. Dr. Reck responded that she thought Dr. Russell had handled this issue appropriately.

Dr. Mulholland suggested that, for the sake of completeness, it might be helpful to briefly reiterate these points in Section VI. Dr. Russell agreed and offered to draft language to this effect for Section VI.

Section VII

Dr. Colwell apologized for her tardiness in drafting Section VII on Charge Question #5. She proposed that the performance metrics should focus on the value of the Program's research and the effectiveness with which the Program produces information that is useful in decision-making.

Dr. Russell observed that the GCRP is not the only program in which the development of performance metrics is problematic. In some programs, however, one can gauge performance through the number of publications or experiments; in contrast, such an assessment is difficult for this Program. Dr. Colwell

noted that the Subcommittee is not meant to evaluate what the Program has produced; this would be an entirely separate analysis.

Ms. Nierenberg said that she was unaware of any program that had developed good performance metrics. She added that performance metrics are related to the expression of LTGs as outcomes versus outputs. Dr. Colwell clarified that she initially had been thinking of performance metrics similar to the red-yellow-green rating scale of the Government Performance and Results Act. She suggested, however, that this endeavor was of questionable value and asked whether the Subcommittee must engage in this exercise. Dr. Russell agreed that this was a good point. Part of the charge to the Subcommittee is to engage in this exercise, but the Subcommittee could choose, instead, to reject this charge question. The Subcommittee probably would agree with the importance of evaluating performance in principle; in reality, however, performance is difficult to quantify.

Dr. Colwell proposed that Program staff provide a succinct list of its accomplishments to date and ask the Subcommittee simply to assess these accomplishments rather than attempting to develop numerical rankings. In other words, it might be valuable to assess the tasks with which the Program has been charged, the tasks it has accomplished, and whether the Program has met its responsibilities and engaged in appropriate efforts. Dr. Russell responded that this may be an effective approach to Charge Question #6 in the final section of the draft report—the summary assessment and qualitative rating. In terms of Charge Question #5, however, the Subcommittee must determine what the Program itself could examine as a performance metric. The Program has indicated that it must develop good performance measures using criteria related to management, advancing science, and outcomes. Dr. Colwell commented on the difficulty of expressing a program's performance when communicating with decision-makers outside of the Agency, such as members of Congress.

Dr. Duke observed that similar charge questions have been posed to other BOSC mid-cycle review subcommittees; the responses of these other subcommittees (all of which have been accepted by the BOSC Executive Committee) could prove useful to this Subcommittee's deliberations regarding performance metrics. Dr. Duke offered to send the responses of other Subcommittees to this kind of charge question to the Global Change Research Mid-Cycle Review Subcommittee members. Drs. Colwell and Russell agreed that this would be very useful.

Drs. Colwell, Russell, and Duke agreed to work together, via e-mail, to draft Section VII.

Next Steps and Schedule

In terms of revisions to the draft report, Ms. Rodia asked that Subcommittee members work from the compiled draft report that she had sent out. The completed report will be formatted by the contractor. Ms. Rodia inquired about the Subcommittee's planned timeline for revisions to the draft report.

Dr. Russell observed that the Subcommittee would have very little time to make revisions prior to the next conference call on March 4, 2008. The Subcommittee must develop a summary assessment and qualitative rating to address Charge Question #6. The summary assessment and rating is intended to reflect the Program's progress in responding to the 2006 BOSC program review. This is an important section of the report because it will be widely read; therefore, this section should be the primary topic for the March 4th conference call. Dr. Russell offered to draft a summary assessment and qualitative rating of the Program and circulate this draft to the other Subcommittee members by Monday, March 3rd, for their consideration and input. The Subcommittee also will discuss revisions, if any, that have been completed by that time.

Subcommittee members agreed to circulate revised sections of the draft report by Friday, March 7, and to provide comments on the revised sections by Tuesday, March 11. Authors of each section should complete their revisions in response to this latest round of input and send the final drafts of their sections

to Drs. Russell and Duke by Friday, March 14. Drs. Russell and Duke will combine all final sections and circulate the entire report to all Subcommittee members by Friday, March 21. Subcommittee members should approve the completed final report, or raise any additional comments or concerns, by Tuesday, March 25. The final report will be provided to the contractor (SCG) for formatting and light editing in the last week of March. This will leave enough time to provide the report to the BOSC Executive Committee prior to its May 2008 meeting.

Ms. Rodia agreed that this plan would meet FACA requirements. She reminded everyone that she must be copied on any e-mail communications, and that no more than two Subcommittee members may meet by phone. Ms. Rodia then updated the Subcommittee on the status of finalizing the summary from the January 23rd face-to-face meeting.

In response to a question from Dr. Colwell, Dr. Russell clarified that the draft report sent to Subcommittee members by Ms. Rodia on February 26, 2008, included all sections that had been written to date.

In response to requests from Drs. Colwell and Reck, Ms. Rodia agreed to add page numbers to the report.

In response to a request from Dr. Russell and Ms. Rodia, SCG agreed to provide a summary of next steps as discussed on this conference call by the end of the day.

Ms. Rodia thanked all the Subcommittee members for remaining up to date on their homework forms. She asked Subcommittee members to submit their next homework forms by Wednesday, March 5. Dr. Duke told Ms. Rodia that he would send her his new office address.

Dr. Russell and Ms. Rodia thanked the Subcommittee members for their participation and Dr. Russell adjourned the conference call at 12:02 p.m.

Action Items

- ✍ SCG will provide a summary of next steps to the Subcommittee members and the DFO by the end of the day.
- ✍ Ms. Rodia will add page numbers to the draft report.
- ✍ Dr. Duke will provide Subcommittee members with the responses of other mid-cycle review subcommittees to charge questions regarding the development of performance metrics.
- ✍ By Monday, March 3, 2008, Dr. Russell will circulate a draft summary assessment and qualitative rating of the Program to the other Subcommittee members for their consideration and input.
- ✍ During the conference call on Tuesday, March 4, 2008, the Subcommittee will finalize its summary assessment and qualitative rating of the Program. The draft of this section circulated by Dr. Russell will serve as the basis for this discussion. The Subcommittee also should discuss its recommendations on this call and may discuss any other sections of the report that have been revised by that time.
- ✍ Subcommittee members should submit their homework forms to Ms. Rodia by Wednesday, March 5.
- ✍ Dr. Russell will draft a paragraph, to include in a new “General Comments” section of the draft report by Friday, March 7. This new text will address the concern that the GCRP’s resources not be pulled away from their primary purpose.

- ✍ By Friday, March 7, Dr. Mulholland will clarify discussions of nonlinear responses in Sections III and V of the draft report.
- ✍ By Friday, March 7, Ms. Nierenberg and Dr. Reck will revise Section III of the draft report to suggest that the Program more effectively harvest its assessment results and to emphasize the importance of methodologies for prioritization.
- ✍ By Friday, March 7, Ms. Nierenberg and Dr. Reck will add to Section III a discussion of the Program's leadership in science, including consideration for how the results of the bibliometric analysis should be used and interpreted.
- ✍ By Friday, March 7, Ms. Nierenberg and Dr. Reck will reassess the tone of Section III and perhaps reorganize the section. They also will clarify the meaning of two sentences in Section III, as suggested by Dr. Duke.
- ✍ By Friday, March 7, Drs. Mulholland and Duke will revise Section IV to explicitly discuss the problems inherent in determining whether the Program's LTGs should be outcome- or output-based.
- ✍ By Friday, March 7, Drs. Mulholland and Duke will add to Section V a discussion of the lack of clarity in the MYP, including implications for priority setting and effective communication with outside entities that evaluate the Program.
- ✍ By Friday, March 7, Dr. Russell will draft language for Section VI, reiterating the points made in the introduction.
- ✍ By Friday, March 7, Drs. Colwell, Russell, and Duke will draft Section VII on performance metrics, communicating via e-mail.
- ✍ By Tuesday, March 11, all Subcommittee members should comment on the revised sections of the draft report.
- ✍ By Friday, March 14, authors of each section should complete their revisions in response to the latest round of input and send the final drafts of their sections to Drs. Russell and Duke.
- ✍ By Friday, March 21, Drs. Russell and Duke will combine all final sections and circulate the complete final draft report to all Subcommittee members.
- ✍ By Tuesday, March 25, Subcommittee members should approve the complete final report, or raise any additional comments or concerns.
- ✍ After the report is formatted by SCG, the Subcommittee will submit it to the BOSC Executive Committee prior to its May 2008 meeting.

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Teleconference Agenda

GLOBAL CHANGE RESEARCH MID-CYCLE REVIEW MEETING

Telephone Number: 866.299.3188, Code: 2025648322#

Thursday, February 28, 2008

AGENDA

10:30 a.m. – 10:40 a.m.	Welcome - Roll Call - Purpose of Teleconference Call	Dr. Milton Russell Chair, Global Change Mid-Cycle Subcommittee
10:40 a.m. – 10:45 a.m.	Administrative Procedures	Ms. Monica Rodia Subcommittee DFO
10:45 a.m. – 10:55 a.m.	Public Comment	
10:55 a.m. – 12:30 p.m.	Subcommittee Discussion - Summary of Draft Report Progress - Draft Report Discussion - Draft Report Next Steps and Schedule	Dr. Milton Russell Chair, Global Change Mid-Cycle Subcommittee
12:30 p.m.	Adjourn	