

**GLOBAL CHANGE  
MID-CYCLE SUBCOMMITTEE****Conference Call Summary  
Thursday, January 10, 2008  
11:00 a.m. – 1:00 p.m. Eastern Time****Opening Remarks**

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

Dr. Milton Russell, Chair of the Global Change Mid-Cycle Subcommittee, welcomed participants to the call and reviewed the agenda.

**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, DFO for the Global Change Subcommittee, called the meeting to order at 11:08 a.m. and welcomed all Subcommittee members and other participants to the call. 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.

The Board of Scientific Counselors (BOSC) Global Change Mid-Cycle Subcommittee has been asked to respond to a specific set of charge questions as part of a mid-cycle review of ORD's Global Change Research Program. In accordance with FACA, all EPA BOSC Subcommittee meetings and conference calls involving substantive issues that include at least one-half of the Subcommittee members—whether in person, by phone, or by e-mail—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 meeting was published in the *Federal Register* on December 18, 2007. All documents must be made public as well.

All Subcommittee members should have received the meeting logistics sheet, which identifies the meeting site and provides directions to the hotel. Those Subcommittee members traveling by air should receive their itineraries by the week of January 14, 2008. On January 8, 2008, Subcommittee members should have received some of the supplemental materials that they requested last week during the first public conference call. The remaining items will be provided by early in the week of January 14, 2008, along with binders containing meeting materials for the face-to-face meeting on January 23, 2008. Ms. Rodia will collect homework sheets and travel vouchers at the face-to-face meeting.

No requests for public comment were submitted prior to the call, but the agenda allows time for public comment at 12:15 p.m. Ms. Rodia will call for public comments at that time, and each comment must be limited to 3 minutes.

## **Update on Supplemental Materials**

*Dr. Joel Scheraga, National Program Director, EPA/ORD/Global Change Research Program*

Dr. Joel Scheraga, National Program Director for ORD's Global Change Research Program, summarized the status of the Program's response to the Subcommittee's requests for additional information during the first conference call (January 4, 2008). Subcommittee members should have received copies of the Program's submission for the Office of Management and Budget (OMB) Program Assessment Rating Tool (PART) exercise, as well as the final version of the Program's responses. Subcommittee members also should have received the scope of work for the National Research Council (NRC) committee that is conducting the decision support study for the Program, as well as an update on the committee's meetings. Program staff members are in the process of compiling examples of the Program's outcomes and real-world accomplishments; Subcommittee members should receive this compilation early in the week of January 14, 2008. Program staff members also are compiling examples of cases in which new demands on the Program exceed existing resources. By the end of the week of January 7, 2008, Subcommittee members should have received budget information for the last 4–5 years, including FY 2008. The president's budget for FY 2009 will not be released until the first week of February 2008, and Subcommittee members will receive the president's budget for FY 2009 as soon as it is available.

## **Synopsis of the Revised Multi-Year Plan**

*Dr. Joel Scheraga, National Program Director, EPA/ORD/Global Change Research Program*

Subcommittee members should have received a synopsis of the revised Multi-Year Plan (MYP). This synopsis contains the core of the MYP, particularly the two major sections on Long-Term Goal (LTG) 1 (or focus area 1) on air quality assessment activities and LTG 2 (or focus area 2) regarding the Global Change Research Program's work on water quality and aquatic ecosystems.

MYPs are intended to be "living documents" that evolve as each program evolves; therefore, the synopsis provides a sense of the drivers for change in the Program. For example, the synopsis describes the evolution and improvements in the Program that are partly in response to recommendations from the BOSC, the Science Advisory Board (SAB), and the Clean Air Act Advisory Committee.

Section Two of the synopsis explicitly identifies events that have increased demands on the Global Change Research Program. A discussion of the new Office of Water (OW) strategy sets the stage for a later discussion of water quality assessment work under LTG 2. This section also describes new regulatory processes at EPA regarding carbon dioxide (CO<sub>2</sub>) and the geological sequestration of CO<sub>2</sub> and summarizes the federal court ruling that affects the U.S. Climate Change Science Program (CCSP). The synopsis reviews the FY 2008 omnibus appropriations bill, which stipulates that \$20 million should be spent on global change research and specifically increases the Global Change Research Program's budget by \$3 million. The increase is intended to fund research in support of future rulemaking efforts regarding greenhouse gases, and a suggestion that the program consider funding a part through the Science To Achieve Results (STAR) grant program. This funding increase is important because the Congress is asking the Program to consider mitigation issues in addition to adaptation issues, a change that is consistent with the recommendations of the SAB. Program staff members have begun to amend the revised MYP to reflect this change. This demonstrates the dynamic nature of both the Program and the MYP.

Section Three describes the new Program structure and the new LTGs. The Global Change Research Program previously had five LTGs corresponding to five focus areas: (1) regional and place-based assessments, under which the Program's work with the CCSP was subsumed; (2) air quality research; (3) water quality research; (4) ecosystems research; and (5) human health research. Based on the BOSC recommendations and the Program's efforts to more strongly link its outcomes with the Agency's mission, the Program now is organized around three focus areas or LTGs: (1) the assessment of the

impact of global change on air quality; (2) the assessment of the impact of global change on water quality and aquatic ecosystems; and (3) the support of statutory mandates requiring the CCSP to produce periodic assessments on the potential impacts of climate change. LTG 2 reflects the BOSC recommendation to integrate the water quality and ecosystem focus areas—a change that has enabled the Program to be more effective in its interactions with OW. In addition, the Program now explicitly acknowledges its commitment to the CCSP. OMB has indicated that the production of periodic assessments by the CCSP is the Program's highest priority activity.

Dr. Rita Colwell asked how the Program's new structure affects human health research. Dr. Scheraga clarified that human health impact assessments are conducted within the context of the air quality and water quality and aquatic ecosystem focus areas. The Program has tightened the focus of its own human health research and assessment activities to those outcomes most relevant to EPA's mission. This has been possible because of efforts by the Program and the CCSP director's office to engage the Centers for Disease Control and Prevention (CDC) in CCSP's human health research and assessment activities. EPA continues to partner with CDC, the National Oceanic and Atmospheric Administration (NOAA), and other agencies to leverage resources for research relevant to all agencies' missions.

Dr. Colwell responded with concern because CDC has been squelched recently and, with respect to waterborne diseases, CDC focuses only on the ultimate outcome—sick people. CDC does not conduct the kinds of monitoring that could be used to predict outbreaks in advance. It makes no sense to wait until many people are sick and then track back to the cause. On the other hand, EPA has a very good track record in water safety and water quality research, and these areas have relevance for waterborne disease outbreaks. Dr. Scheraga clarified that EPA is not simply walking away from this work. Dr. Howard Frumpkin has provided new leadership, and CDC has initiated tremendous efforts to identify those outcomes of concern to CDC; nevertheless, CDC currently has, at best, only a negligible budget to invest in these research and assessment activities. EPA will continue to conduct human health research and assessment research until CDC's budget is sufficient to take it over. Infectious diseases, both waterborne and vector-borne are, and will continue to be, of interest to EPA. In fact, EPA and CDC are collaborating on the development of a new Request for Applications (RFA) for research and assessment work related to waterborne diseases, and the bulk of the resources will come from EPA's Global Change Research Program.

Dr. Colwell asked whether the kind of research funded under this RFA will include modeling efforts and the capacity for prediction based on previous data. Dr. Scheraga replied that this is exactly the kind of research to be funded under this RFA. More information on this RFA will be included in the binder provided to all Subcommittee members. The RFA was motivated, in part, by the Program's 2006 reassessment of the implications of climate change for human health, which essentially updated the 2000 human health sector assessment. The Program found that little progress had been made in the development of models and predictive capabilities, which must occur before much of the needed assessment work can be done.

Dr. Colwell asked whether this would allow EPA to work with agencies other than CDC; for example, NOAA could contribute the weather system component, which would be extremely valuable. She observed that funding is limited for this kind of research. Dr. Scheraga replied that EPA could collaborate with other agencies. In fact, the progress report documents the Program's history of partnering with other agencies—including the National Aeronautics and Space Administration (NASA), NOAA, and the Department of Energy—in most of its RFAs.

Ms. Claudia Nierenberg commented on LTG 3, pointing out that supporting the statutory mandates of the CCSP with respect to assessments does not preclude the Program from continuing to explore and support other CCSP issues. Dr. Scheraga agreed that this is a very important point. The statutory mandates referred to in LTG 3 are codified under Section 106 of the 1990 Global Change Research Act, which is related to the periodic assessments that the CCSP must produce. Apart from these periodic assessments,

the Global Change Research Program is able to continuously look for opportunities to collaborate and leverage resources with other CCSP agencies by participating in all working groups relevant to the Agency.

Dr. Scheraga continued his description of the MYP synopsis with Section Four. The air quality assessment (LTG 1) is the more mature portion of the Program; therefore, no dramatic changes will be made to the Program's long-term objective of completing an assessment of the impacts of global change on air quality. Along the way, the Program is producing policy-relevant results. For example, the Program is conducting a scenario-based assessment of the potential consequences of global change on regional air quality in the United States, with a focus on fine particles and ozone. This assessment includes the development of climate, emissions, and underlying socioeconomic scenarios intended to provide a plausible depiction of future conditions. In addition, the Program is leveraging within ORD by taking advantage of synergies with ORD's Air Research Program, which has already invested heavily in the Community Multiscale Air Quality (CMAQ) model. Finally, the Program also is accounting for potential impacts of increases in the long-range transport of pollutants from other countries, such as China, which affects air quality in the United States. In September 2007, the Program completed its interim assessment report, which considers changes in air quality from climate change, including direct meteorological impacts on atmospheric chemistry and transport as well as the effects of temperature changes on air pollution emissions.

Even as the Program conducts its global assessment, it will continue to fund research—as described in the MYP—that provides the foundation for the assessment of the impacts of global change on air quality. The Program has committed to produce another major assessment, to be released in 2012, that will summarize the Program's progress in all of these areas. In its previous MYP, the Program expected to complete the assessment of the impacts of global change on air quality by 2010; however, it has since become clear that a great deal of scientific uncertainty must still be resolved, especially regarding the effects of climate change on particulates. Therefore, the target date has been moved to 2012.

In collaboration with the Office of Air Quality Planning and Standards (OAQPS) in the Office of Air and Radiation (OAR), the Program is developing decision support tools that can be used to evaluate and implement policies to reduce emissions of criteria air pollutants and carbon dioxide. These tools will be disseminated to air quality managers and decision-makers in states and to EPA regional and program offices to facilitate their efforts to protect air quality and adapt to a changing climate. Resource managers will thus be able to identify co-benefit opportunities—that is, opportunities to reduce emissions of criteria air pollutants while simultaneously reducing greenhouse gas emissions—as recommended by the BOSC. Further, OAQPS already is working with the Program to begin to use the results of the interim assessment to assess the health implications of projected changes in air quality. OAQPS also is working with the Program to explore ways to account for climate change within the provisions of the Clean Air Act.

The MYP synopsis describes the Program's Annual Performance Goals (APGs) and Annual Performance Measures (APMs). The MYP also provides a roadmap between the Program's work and the five questions identified in the 2003 CCSP strategic plan.

Dr. Colwell asked whether the Program plans to conduct any research on microbe-associated particulates; this is an area that requires attention because these particles are transporting spores and resistant forms of fungi, bacteria, and viruses. Dr. Scheraga replied that the Program plans to engage in such efforts, but the MYP does not address this explicitly enough.

Dr. Ruth Reck asked whether Subcommittee members could be provided with a copy of the interim assessment report. Dr. Scheraga responded that Subcommittee members could be provided with a copy of the interim assessment report, but only after it has undergone an internal clearance process. The results of this report are sensitive because of their relationship to ongoing policy decisions within the agency. For example, the results of this assessment had relevance for the Administrator's decision to deny California a

waiver under the Clean Air Act; it also relates to the new ozone standard that is under discussion. Dr. Scheraga emphasized that the substance and results of the report will not change as a result of the internal clearance process. The Program expects to have briefed the acting assistant administrator of OAR on the assessment by the end of January 2008. At that point, unless the Program is required to brief the Administrator, EPA will release this study to the public for comment and review. It should be possible to provide the report to the Subcommittee by the end of January or the beginning February 2008. Regarding LTG 2, the MYP synopsis explains the importance of considering climate change with respect to water quality issues. An understanding of those linkages is new for EPA and for water quality managers across the country. The MYP synopsis discusses strategic planning considerations, the advice received from this Subcommittee and through the OMB PART review. The MYP synopsis also discusses OW programs and OW's strategic plan. Finally, the MYP synopsis identifies the synergies between the work of the Global Change Research Program and that of other ORD programs. Specifically, the MYP synopsis describes the Program's coordination with the Water Quality Program, the Ecosystems Program, and the Drinking Water Program, as well as links to the CCSP's strategic plan.

The key components of the Global Change Research Program's proposed work related to LTG 2 include the following: (1) The Program will make considerable efforts and investments in efforts to assess OW's needs and priorities related to water quality and global change. (2) The Program will collaborate with OW to complete an "atlas of vulnerability"—a broad-based, national-scale assessment of water quality endpoints (including health-related endpoints) that are vulnerable to global change. (3) The Program will continue to conduct detailed watershed-based, stakeholder-driven studies regarding local issues and specific management solutions for addressing global change. This will be accomplished by working through the OW strategy and the regional office to prioritize studies. (4) The Program will conduct detailed studies of potential impacts and opportunities for adapting water infrastructure and the built environment to global change. The Program also is working with EPA's Smart Growth Program regarding smart growth policies to cost-effectively adapt to a changing climate. (5) The Program will continue its development of broadly applicable decision support tools that can be applied in multiple regions across the country to increase the capacity of OW's clients to assess and manage the impacts of global change on water and watershed systems. This work will culminate in 2013 with a broad-based water quality assessment report that compiles and synthesizes all of this information.

Appendix 1 in the water quality section of the MYP synopsis highlights the Program's accomplishments in its water quality and aquatic ecosystems areas under the 2003 MYP. OW's climate change strategy has not yet been released to the public, but Appendix 2 contains a roadmap linking each of the Global Change Research Program's performance measures to the key action items identified in OW's draft strategy. Appendix 2 also includes a three-line placeholder for the geological sequestration work that the Program has committed to do for OW as part of the rulemaking process. (The placeholder is necessary because the Program currently is completing the research plan for geological sequestration work through 2010.)

Dr. Russell noted that Dr. Scheraga did not discuss LTG 3, regarding support to the CCSP, and asked if this would be addressed as the MYP is completed. Dr. Scheraga agreed with this characterization. Finalization of the MYP is linked to the ongoing CCSP process to complete the new research plan that must, under court order, be completed by May.

Dr. Russell commented that the MYP synopsis is an impressive document and that he has not had time to do more than skim it as it was distributed the day before this conference call. He suggested that the face-to-face meeting will provide an opportunity for further discussion of the synopsis. The Subcommittee will look forward to reviewing the completed MYP.



## **Rating Program Performance**

*Mr. Phillip Juengst, EPA/ORD*

The Government Performance and Results Act is one of the primary drivers for managing performance in federal agencies, which are expected to develop strategic plans, program plans, and measures of performance that assess outputs and outcomes. The White House Office of Science and Technology Policy and the Office of Management and Budget developed additional guidance for research programs with three areas of emphasis: quality, relevance, and performance. ORD is faced with the challenge of trying to identify long-term outcome measures that capture program performance. Through discussions with OMB and the BOSC, ORD developed a range of measures that capture the number of publications and progress in achieving milestones. But the quantification of long-term outcomes—including the extent to which research was actually used in decisions and the extent to which it resulted in improvements for human health and the environment—is challenging. ORD developed a tool, similar to that of other agencies, through which independent expert panels such as the BOSC are asked to rate program performance over the long term. This tool is essentially meant to provide an independent, systematic assessment of the quality, relevance, and timeliness of a program's research, as well as the extent to which it is used to improve decisions and, ultimately, to improve human health and the environment.

On the 4-year BOSC rating cycle, the BOSC is to consider each of a program's LTGs and rate the research's quality, relevance, and use in decisions to achieve EPA's desired outcomes. The BOSC mid-cycle review is not intended to be a full assessment of all program research; instead, the goal is to assess the program's progress since the last full review by, for example, putting good measures in place, doing research in the appropriate areas, and revising the MYP. The mid-cycle review should rate the extent to which that progress has been timely, significant, and is likely, by the next full review, to have resulted in improvements in the program's research quality, relevance, and performance. The mid-cycle review should consider the program's response to the recommendations of the previous full review by the BOSC as well as other factors, including other recommendations and feedback from clients. Essentially, ORD is looking for a single rating of progress. ORD also seeks feedback from the BOSC on the performance measures.

Dr. Russell commented that, in the Global Change Research Program in particular, many of the real outcomes are dependent on the actions of others and cannot be assessed simply through an examination of the research the Program conducted.

## **Overview of Performance Measures**

*Dr. Joel Scheraga, National Program Director, EPA/ORD/Global Change Research Program*

Dr. Scheraga discussed the challenge of developing meaningful and accurate metrics of performance for the Global Change Research Program. Three categories of performance should be measured: program management; the Program's progress in advancing the science (the foundations for the Program's future assessments as well as research to demonstrate how to improve assessments); and progress in attaining outcomes that are meaningful to the Program.

The Program must ensure that its scarce resources are going to the highest valued uses and are being used effectively to achieve meaningful outcomes. Thanks to the BOSC, the Program has been working to develop meaningful prioritization processes. The Program's use of resources to address identified priorities is articulated in the synopsis of the MYP. Feedback from the Subcommittee regarding the effectiveness of the Program's prioritization of resources will be valuable. The real challenge, however, is to measure the Program's progress in attaining meaningful outcomes.

The first challenge is to accurately characterize a meaningful outcome for the Program and develop appropriate measures and metrics. The Global Change Research Program's role is to inform decision-

makers and resource managers but not to prescribe particular decisions, which are based on more than just the science, or to choose the endpoints or outcomes of concern. This approach sits very well with the Program's stakeholders. For example, the Program worked with OW to build a climate assessment tool into the Better Assessment Science Integrating Point and Nonpoint Sources (commonly known as BASINS) modeling system; this allows water resource managers to consider climate change in decision-making. The water quality board of the U.S. Conference of Mayors responded quite positively to this tool as an instance in which EPA has enabled them to make more informed decisions without being prescriptive. The problem, however, is that one cannot easily demonstrate that the Program's efforts have led to better environmental outcomes because such outcomes depend on the decisions, which are beyond the Program's scope. The goal is to demonstrate that the Program was useful in reaching such decisions and that it is prioritizing correctly.

ORD has developed generic metrics for measuring performance, as described by Mr. Juengst, which will be presented to the Subcommittee during the mid-cycle review. These metrics include: (1) a bibliometric analysis; (2) a listing of APGs met (and whether the Program met them on time); and (3) a client survey that the Program will use for the full BOSC review in 2 years. Some of these generic metrics are flawed in the sense that they may not result in an accurate assessment of the Program. Thus, the Program must design better performance metrics.

In particular, although a bibliometric analysis is one mechanism by which to evaluate the Program's effectiveness in advancing the science, this analysis cannot be used to measure the Program's progress in achieving outcomes. Other potential problems with bibliometric analyses include the assumption that highly cited articles represent good research when this is not always the case.

The percentage of APGs met (and trends in those percentages over time) is a valuable tool for addressing management performance and the accomplishment of tasks in a timely fashion. Again, however, this measure could be misleading because, if a program is meeting all of its APGs, it is possible that it is not being sufficiently ambitious. It is critically important for the Program to receive the Subcommittee's evaluation of the MYP, the APGs, and the APMs to determine whether the Program is being both effective and ambitious. In some cases, APGs are not met for a good reason. For example, the Program originally expected to complete a comprehensive assessment of the implications of climate change for particulates in the United States in the 2007 assessment. Because the scientific uncertainties proved to be more difficult to resolve than previously thought, the Program decided to move the deadline to the future rather than conduct a poor assessment. Therefore, it is important to consider whether the APG metric is appropriate for this Program. Subcommittee members will receive a CD with the Program's products; this is meant not only to show progress but also to enable the Subcommittee to evaluate the quality of the Program's work and to determine whether these products truly are ambitious.

Finally, the client survey Subcommittee members will receive is a generic client survey for all ORD programs. This survey may have to be tailored to ensure that the Global Change Research Program solicits appropriate feedback from its stakeholders.

In summary, the Program needs the Subcommittee's assistance in determining the usefulness of these metrics for the Program and how these metrics could be tailored to fit the Program. The package of materials sent to Subcommittee members the week of January 14, 2008, will include copies of the NRC's report, *Thinking Strategically: The Appropriate Use of Metrics for the Climate Change Science Program*. This report identifies metrics that might be appropriate for the CCSP; it might also be useful to the Subcommittee.

## **Public Comment**

At 12:15 p.m., Ms. Rodia called for public comments. No comments were offered.

***Subcommittee Discussion***

*Global Change Mid-Cycle Subcommittee*

Dr. Russell asked for Subcommittee members' questions and reactions to the presentations by Dr. Scheraga and Mr. Juengst.

Dr. Clifford Duke thanked Dr. Scheraga for the overview. The synopsis of the MYP includes a great deal of useful information as well as attention to the previous BOSC recommendations. Dr. Duke noted that he looked forward to reviewing the synopsis in more detail.

Dr. Russell agreed that it was a very useful presentation. Because the Subcommittee has not had an opportunity to seriously review the synopsis of the MYP, however, it may not be possible to discuss specifics at this time.

Dr. Patrick Mulholland suggested that, in terms of the difficulty of evaluating the Program's effectiveness in attaining outcomes, it might be useful for the Subcommittee to follow one issue as an example by reviewing the assessment science provided to decision-makers and information regarding the use of these materials to date. Dr. Scheraga agreed that this is the approach the Program is taking in responding to Dr. Russell's previous request for examples of real-world outcomes.

Dr. Scheraga added that, in his previous discussion of performance metrics, he attempted to be candid about the need to ensure that existing metrics are interpreted appropriately for the Program. The Program is quite eager, however, to come up with better metrics. He hoped that the examples of real-world outcomes would help the Subcommittee recommend metrics more appropriate for the Global Change Research Program.

Regarding the client survey, Dr. Russell asked how the Program defines client, whether the clients to be surveyed will be those who have used the Program's science, and whether clients are synonymous with users. Dr. Scheraga replied that it is very important to determine not only who should be surveyed and how to identify them but also the Program's legal flexibility to survey them. Some of the Program's clients are staff within the program and regional offices, and it is not a problem to survey them; however, the clients for OW and regional offices include potentially thousands of water quality managers outside of the Agency. This may be problematic because OMB restricts the number of surveys EPA can conduct with clients outside of the Agency. Mr. Juengst may be able to provide more input at the face-to-face meeting. Dr. Russell said that he looked forward to receiving more information on this issue.

Dr. Colwell commented that she had assumed that the Subcommittee is to evaluate the Program's research directions, adding that she did not consider it appropriate for the Subcommittee to evaluate Dr. Scheraga's performance or the performance of the Agency. The critical issue is the climate change science being conducted. She referred to Dr. James Hansen, director of NASA's Goddard Institute for Space Studies, who has indicated that changes must be made quickly to address climate change. She said that, as a member of an external advisory committee, she is interested in evaluating and providing guidance on the substance of EPA's work, rather than focusing on who is doing what within the Agency. Dr. Scheraga said that Dr. Colwell had made an important distinction. On an ongoing basis, the National Program Directors evaluate the strategic directions of ORD's programs. This type of evaluation also is the focus of the full program review every 4 years by the BOSC. The purpose of the mid-cycle review is to determine whether the Program has been responsive to the recommendations made by the BOSC in the full review and whether the Program is making progress. Nevertheless, the Subcommittee has a great deal of flexibility in its evaluation of the revised MYP (in response to Charge Question #2). In particular, the Subcommittee may choose to consider the Program's new strategic directions and evaluate whether the Agency is heading in the right direction. The Program would welcome this kind of feedback if the Subcommittee chooses to provide it.



Dr. Duke observed that, as a member of the BOSC Executive Committee, he felt that the primary focus of the mid-cycle review is to review progress since the full program review. Any further input is appropriate, but it should be understood that such input is additional to the primary purpose of the mid-cycle review. The BOSC has, in the past, conducted separate standalone reviews of MYPs. Perhaps the Program should consider asking the BOSC to conduct a review of its MYP if the schedule permits.

Dr. Colwell concluded that she understood the Subcommittee's role. She noted that the Program has constraints regarding what it can accomplish. Therefore, the Subcommittee should not berate the Program over what it has not done, but rather emphasize which areas, if any, have been neglected. Dr. Russell agreed that this would be appropriate. He added that this Program is only a small portion of a larger government-wide program. The Subcommittee is limited to addressing EPA's small piece of this puzzle.

Dr. Duke asked whether the Program is using any client surveys previously conducted by other programs as models for its own survey. If so, he asked whether the Subcommittee could be provided with some of those previous surveys. Dr. Scheraga said that he is not aware of the extent to which surveys have been done, other than one conducted by the Human Health Research Program. ORD is developing the generic client survey based on that experience; however, the generic template survey probably will need to be tailored to the individual programs.

### **Discussion of Agenda for Face-to-Face Meeting**

*Dr. Milton Russell, Subcommittee Chair*

At Dr. Russell's request, Ms. Rodia reviewed the agenda for the face-to-face meeting. In particular, she noted that the meeting will begin fairly early, at 9:00 a.m., to allow Subcommittee members more time for their deliberations. In addition, Program staff will be available to answer questions regarding the MYP if needed. Dr. Colwell noted that she will be able to attend the meeting only in the morning.

Dr. Russell said that Subcommittee members will have received a substantial amount of material from Dr. Scheraga and Ms. Rodia. Prior to the face-to-face meeting, Subcommittee members should review this material and develop tentative conclusions to share with the other Subcommittee members as well as any questions. This will allow the Subcommittee to begin its deliberations very early on. The Subcommittee is under a great deal of pressure to develop a report; therefore, the Subcommittee must reach general conclusions and decide how to process the report at the face-to-face meeting.

Dr. Scheraga asked whether it would be necessary and constructive for him to provide another presentation at the meeting or whether the time would be better spent in discussion by the Subcommittee. If a presentation would be useful, he asked whether he should focus on anything in particular. Dr. Russell replied that it would be useful for Dr. Scheraga to make a presentation but only regarding any new information or information that should have been provided to Subcommittee members prior to the meeting but was not. Dr. Duke agreed and said that the 10 minutes currently allocated for a presentation by Dr. Scheraga will not constitute an intrusion into the Subcommittee's deliberations.

Ms. Rodia asked whether the Subcommittee wished to establish writing teams now or via e-mail later. Each writing team could focus on a particular topic or part of the report and can include no more than two members. Dr. Russell said that, at this time, decisions regarding writing tasks probably cannot be made because Subcommittee members have not had an opportunity to review the relevant materials. He suggested that Subcommittee members first finish reviewing the synopsis of the MYP and other materials and then communicate via telephone to divide up writing tasks or establish writing teams. He added that he would keep Ms. Rodia informed of any such communications.

Ms. Rodia agreed that this approach is appropriate. She reminded Subcommittee members to use the

homework assignment sheets to record the time they spend reviewing materials (other than the time for the conference call itself) so that the Agency can compensate them appropriately. She invited Subcommittee members to fax these forms to her now or to provide them to her at the end of the review process. She said that Subcommittee members should receive their flight itineraries by Monday.

In response to a question from Dr. Mulholland, Ms. Rodia clarified that the binder of additional materials would be mailed to Subcommittee members on January 14, 2008; therefore, Subcommittee members should receive these materials well ahead of the meeting. Dr. Russell added that many of these materials had already been disseminated electronically.

Ms. Rodia and Dr. Russell thanked Subcommittee members and EPA staff for their participation and adjourned the conference call at 12:52 p.m.

### **Action Items**

- ✍ Subcommittee members should use the forms Ms. Rodia has provided to record time they spend reading documents and/or preparing written materials prior to or following any Subcommittee meeting or call. Ms. Rodia will collect these forms, along with the travel vouchers, at the face-to-face meeting on January 23, 2008.
- ✍ Ms. Rodia and Dr. Scheraga will mail additional materials to Subcommittee members the week of January 14, 2008. These materials will include: examples of the Program's outcomes and real-world accomplishments, examples of cases in which new demands on the Program exceed existing resources, the Program's budget for the last 4–5 years, the bibliometric analysis, information on the percentage of the Program's annual performance goals met, ORD's generic client survey, the RFA on waterborne diseases, and NRC's report *Thinking Strategically: The Appropriate Use of Metrics for the Climate Change Science Program*. Dr. Scheraga will provide Subcommittee members with the interim assessment report on the impacts of climate change on air quality once it has undergone an internal clearance process.
- ✍ Ms. Rodia will provide flight itineraries to those Subcommittee members who will travel by air to the face-to-face meeting.
- ✍ Subcommittee members should review all of the materials provided by Ms. Rodia and Dr. Scheraga prior to the face-to-face meeting and arrive at the meeting with tentative conclusions and questions.
- ✍ Dr. Russell will communicate with other Subcommittee members via telephone to assign writing tasks and keep Ms. Rodia informed of such communications.
- ✍ At the face-to-face meeting, Mr. Juengst will provide more information regarding the clients to be surveyed and any legal restrictions on such surveys.

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## **Appendix A: Teleconference Agenda**

### **GLOBAL CHANGE MID-CYCLE REVIEW MEETING**

Conference Call: 866.299.3188, code: 2025648322#

**Thursday, January 10, 2008**

#### **AGENDA**

11:00 a.m. – 11:10 a.m.	Welcome - Roll Call - Overview of Agenda	Dr. Milton Russell Chair, Global Change Mid-Cycle Subcommittee
11:10 a.m. – 11:15 a.m.	Administrative Procedures	Ms. Monica Rodia Subcommittee DFO
11:15 a.m. – 11:50 a.m.	Synopsis of the Revised MYP	Dr. Joel Scheraga, ORD
11:50 a.m. – 12:00 p.m.	Rating Program Performance	Philip Juengst, ORD
12:00 p.m. – 12:15 p.m.	Overview of Performance Measures	Dr. Joel Scheraga, ORD
12:15 p.m. – 12:25 p.m.	Public Comment	
12:25 p.m. – 12:50 p.m.	Subcommittee Discussion	Global Change Mid-Cycle Subcommittee
12:50 p.m. – 1:00 p.m.	Discussion of Agenda for Face-to-Face Meeting	Dr. Milton Russell Chair, Global Change Mid-Cycle Subcommittee
1:00 p.m.	Adjourn	