

GLOBAL CHANGE RESEARCH MID-CYCLE SUBCOMMITTEE

Conference Call Summary Friday, January 4, 2008 10:30 a.m. – 12:30 p.m. Eastern Time

Welcome and Administrative Procedures

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

Ms. Monica Rodia, Designated Federal Officer (DFO) for the Global Change Research Mid-Cycle Subcommittee of the Board of Scientific Counselors (BOSC), called the meeting to order at 10:34 a.m. and welcomed all Subcommittee members and other participants to the 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 Mid-Cycle Subcommittee was established by the BOSC Executive Committee to review progress made in ORD's Global Change Research Program since the last BOSC review in 2006. The Subcommittee has been provided with charge questions and has been 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.

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 Subcommittee 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 meeting was published in the *Federal Register* on December 18, 2007. All documents distributed for the meeting or call must be made public as well. The Chair oversees the Subcommittee and mediates its deliberations.

With regard to financial conflict of interest, Ms. Rodia is working 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. She will collect these forms at the face-to-face meeting on January 23, 2008.

No requests for public comment were submitted prior to the call, but the agenda allows time for public comment at 12:00 noon. Ms. Rodia will call for public comments at that time, and each comment must be limited to 3 minutes.

A writer from The Scientific Consulting Group is present to take notes during the call and she will prepare a summary of the conference call, which will be made available to the public after certification by the Subcommittee Chair. Within 90 days of the call, the Chair must certify the summary, which then will be posted on the BOSC Web Site (http://www.epa.gov/osp/bosc).

Opening Remarks

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

Dr. Milton Russell, Subcommittee Chair, welcomed participants to the call and reviewed the agenda.

Overview of the Charge

Dr. Joel Scheraga, National Program Director (NPD), EPA/ORD/Global Change Research Program

Dr. Joel Scheraga, National Program Director (NPD) for ORD's Global Change Research Program, thanked the Subcommittee members for their participation. In particular, he thanked Dr. Russell for agreeing to chair the Subcommittee and for his valuable leadership in, and contributions to, the 2006 BOSC program review. The Global Change Research Program values the 2006 BOSC recommendations (as outlined in the April 2006 BOSC program review report) and has, in response, made significant changes and improvements to the Program. The Global Change Mid-Cycle Review Subcommittee will evaluate the Program's progress in responding to the recommendations of the 2006 review.

Dr. Scheraga then reviewed the charge questions posed to the Subcommittee:

- 1. How responsive has the Global Change Research Program been to the recommendations made in the 2006 review? The Subcommittee will evaluate progress made regarding commitments to the BOSC recommendations as outlined in ORD's response. Additionally, the Program has responded to the BOSC recommendation that it ensure that its place-based decision support activities have national-scale significance. What progress has the Program made toward integrating its results into EPA programs to support the Agency's statutory, regulatory, and programmatic requirements?
- 2. How clear is the rationale for the revised Global Change Research Multi-Year Plan (MYP)? Are the proposed revisions consistent with the advice given by the BOSC?
- 3. To what extent does the wording of the Program's long-term goals (LTGs) appropriately reflect the intended purpose of the Program?
- 4. The Global Change Research Program is designing a survey to monitor the effectiveness with which it provides timely and useful information to its clients. The results will be used for internal program management. What does the BOSC Subcommittee recommend to ensure that the survey is designed appropriately in light of the Program's objectives? What does the Subcommittee recommend regarding the communities to which the survey should be sent?
- 5. Are the performance metrics being used by all ORD programs (e.g., quality and impact of ORD publications and timeliness in completing goals) appropriate for the Global Change Research Program? Does the Subcommittee recommend different or additional metrics?

The Global Change Research Program is in the process of revising its MYP. Subcommittee members will receive a synopsis of the new MYP next week, including several options for the Program's three new Long-Term Goals (LTGs). The Program is seeking the Subcommittee's advice on the wording of the LTGs because although the Program's mission, goals, and objectives appear to be clear, it has been difficult to find the appropriate language to capture its objectives and outcomes in the LTGs. In addition, the Program is attempting to evaluate and document its progress, not only by responding to the Subcommittee's recommendation to undertake activities with "verifiable traction," but also by putting in place mechanisms by which to measure the degree of traction. The demands on the Program have increased significantly in the past year, and the Program has received a lot of positive feedback from clients. Nevertheless, it is important to identify metrics of performance to systematically measure the Program's effectiveness and its ability to provide good, timely service to clients. ORD is fully committed to providing the Subcommittee with any information it may require to assess the Program's response to the recommendations.

Subcommittee Discussion

Global Change Research Mid-Cycle Subcommittee

Dr. Russell offered Subcommittee members an opportunity to respond to Dr. Scheraga's presentation of the charge.

In response to a question from Dr. Patrick Mulholland, Dr. Scheraga and Ms. Rodia clarified that ORD's full written response to the BOSC recommendations was disseminated to Subcommittee members recently as a progress report dated December 2007. An earlier response, dated October 17, 2006, was only a short-term response to describe how EPA intended to address the recommendations over a 2-year period.

Dr. Russell observed that the charge poses a challenge to the Subcommittee. In terms of evaluating the Program's effectiveness, the most useful information would be examples of real-world changes resulting from the Program. Dr. Scheraga agreed to provide examples of instances in which the Program appears to have made a difference in the real world and the associated outcomes.

Global Change Research Program: Summary of Progress

Dr. Joel Scheraga, NPD, Global Change Research Program

Dr. Scheraga reiterated the seriousness with which the Program has considered the BOSC recommendations. The Progress Report demonstrates the Program's response to the recommendations and provides detailed evidence regarding substantive actions taken since 2006.

The Program has evolved significantly since 2006 in response to several interdependent drivers: (1) the BOSC recommendations; (2) the recommendations of other advisory committees, such as the Science Advisory Board (SAB); (3) significant Agency-wide events related to climate change; (4) climate change-related events within the Administration; and (5) events within the interagency U.S. Climate Change Science Program (CCSP). The recommendations of different advisory bodies have been remarkably consistent. The Program's changes have positioned it to be more responsive and dynamic and better able to make meaningful contributions to society.

A number of major events in the past 2 years have had important effects on the Program. First, these events have facilitated efforts by the Program to effectively respond to the BOSC recommendations. Second, they provided an opportunity for the Program to take advantage of the improvements it made in response to the BOSC recommendations and to more effectively contributing to the Agency's mission. For example, the Program was able to more effectively contribute to the development of a new Climate Change Strategy by the EPA Office of Water (OW) because it had integrated its water quality and

ecosystem focus areas in response to the BOSC recommendations. The successful linking of efforts by the Global Change Research Program with those of OW reaffirmed the logic of the BOSC recommendations and also allowed the Global Change Research Program to become more responsive to OW. The Program has been able to extend its assessment and decision support work in a way that has unprecedented applicability to issues of national significance. The increased attention to climate change within the Agency and the Administration has provided the Program with mechanisms by which to "harvest" assessment results and respond to stakeholders' needs. This also has increased the attention on climate change by other advisory committees, enabling the Program to benefit from their guidance.

Within the Agency, climate change has become a priority. In June 2007, EPA held an unprecedented workshop in Seattle, bringing together all program offices and regional offices to discuss and coordinate activities related to climate change and to consider what climate change means for the Agency's mission. As a result of this workshop, OW became more engaged in climate change, nearly all regional offices began paying more attention to climate change, and demand on the Global Change Research Program increased. This is consistent with the BOSC recommendation for a more national focus.

OW has undergone dramatic changes; this office will release its new climate change strategy for public review in the next 1 to 2 months. The Global Change Research Program helped develop OW's strategy, has made significant commitments to OW, and will conduct a major water quality assessment of how climate change will affect OW's ability to meet its statutory, regulatory, and programmatic requirements. The Program has committed to partnering with ORD's Drinking Water Research Program to research geological sequestration of carbon dioxide (CO₂). Integrating the water quality and ecosystem focus areas of the Program, as recommended by the BOSC, has enabled the Program to more effectively engage in this process. The OW climate change strategy provides a mechanism through which to focus the Global Change Research Program's stakeholder-oriented activities on the National Water Program (i.e., on issues of national significance), while simultaneously allowing the Program to work through the National Water Program to engage stakeholders in the regional offices and to work, through the regional offices, with stakeholders in the states and local communities.

Regional offices have dramatically increased their focus on climate change. Since 2006, this has led to a significant investment of the Global Change Research Program's time and resources in educating the regional offices and their stakeholders about climate change. In other words, the Program has had the opportunity to harvest its assessment results to inform regional offices about the importance of considering climate change.

Other advisory boards now are addressing climate change. For example, the SAB has been quite interested in climate change for the past several years and has recommended increased consideration of: (1) water and water quality and what it means for the Agency's mission; (2) geological sequestration of CO_2 ; and (3) decision support work with respect to mitigating greenhouse gas emissions and adapting to the effects of a changing climate. A year ago, the Clean Air Act Advisory Committee advised the Office of Air and Radiation (OAR) to assess the implications of climate change for air quality in the United States and what it means for the ability of OAR to meet the requirements of the Clean Air Act (CAA). The Global Change Research Program worked with OAR to complete an air quality assessment in September 2007. Now, partly driven by the advisory committee's recommendations, the Program is working with OAR to explore ways to incorporate consideration of climate change into the regulatory process.

In response to an executive order from President Bush, EPA now is in the process of developing a proposed rule for controlling CO_2 emissions. As part of the rulemaking process, the Global Change Research Program has been harvesting its assessment results to support development of an "Endangerment Document" that demonstrates that CO_2 poses a danger to human health and welfare and the environment.

OW recently announced the development of a proposed rule for the geological sequestration of CO₂. The EPA Administrator has asked that this proposed rule be completed by summer 2008. The Global Change Research Program is harvesting its assessment results and working with the Drinking Water Research Program to inform this process.

The CCSP coordinates climate change activities across 13 federal agencies and departments. Two years ago, the CCSP told the Global Change Research Program that its highest priority activity through 2008 is the production of two synthesis and assessment products. These 2 products are particularly important because they are among 6 of the 21 CCSP synthesis and assessment products that are necessary to meet the statutory requirements of the 1990 Global Change Research Act. The Program has completed these products, which are undergoing FACA review; they should be delivered to the CCSP by the end of January 2008. Last year, a lawsuit was brought against the CCSP and the Administration by a number of parties in federal court in California. The plaintiffs asserted that the Administration failed to satisfy two major requirements of the 1990 Global Change Research Act: (1) a requirement that the CCSP produce a major scientific assessment of the effects of global change on the United States at least every 4 years; and (2) a requirement that the CCSP produce a new strategic plan at least every 3 years. The Administration lost the lawsuit and, as a result of the court order, the CCSP is required to produce a new national scientific assessment and a new strategic plan by May 2008. The Global Change Research Program will play a major role in these activities. Because the two synthesis and assessment products the Program has produced already are two of the six that cover the requirements of the Act, they probably will be major components of the scientific assessment.

One of the major themes of the Program's progress is its focus on assessing how climate change affects the Agency's ability to satisfy its statutory, regulatory, and programmatic requirements (e.g., under statutes such as the CAA, Clean Water Act, and Safe Drinking Water Act) and to evaluate how the Agency can respond to and manage those effects of climate change.

The biggest issue for the Global Change Research Program now is ensuring that the Program has the financial resources to meet all of its commitments and to undertake these new activities of national significance.

Dr. Scheraga summarized the Program's responses to the eight major BOSC recommendations more specifically.

Recommendation #4: The Program now is taking a more integrated approach, designing and implementing activities across focus areas. In particular, the Program has integrated its water quality and ecosystems areas into a single water quality/aquatic ecosystems focus area; this is reflected in the new MYP. This approach is particularly beneficial because it is consistent with that of OW. The Program also has integrated its human health focus area with its air quality and water quality focus areas.

Recommendation #8: The Program has explored ways to apply its assessments to matters of national significance with respect to air quality, water quality, and aquatic ecosystems and EPA's ability to satisfy its statutory and regulatory requirements. With respect to air quality, the Program worked with OAR to complete the 2007 assessment of the implications of climate change for air quality and is working with OAR to conduct the 2012 assessment. With respect to water quality, the Program is working with OW to conduct a major assessment of the implications of climate change for water quality in the United States. Further, by working through the regional offices, the Program is putting in place mechanisms to ensure verifiable traction in the use of the Program's assessment results.

Recommendation #2: The Program is on track to develop a more explicit and transparent framework for setting priorities and selecting projects. The Program is tying its priorities to the Agency's mission, to issues of national significance, and to the priorities set by the CCSP. The Program has completed—and is analyzing the results from—its decision assessment approach to priority setting. In addition, the Program

has partnered with the National Oceanic and Atmospheric Administration to successfully launch a National Academy of Sciences (NAS) study to identify the most effective ways for the Agency to provide decision support regarding climate change.

Recommendation #1: The increased attention on climate change within the Agency has provided the Program with a ready-made audience for the assessment results as well as mechanisms for delivering those results. The Progress Report describes eight mechanisms by which the Program has harvested its assessment results: (1) developing the CCSP synthesis and assessment products; (2) investing resources in educating program offices, regional offices, and the National Tribal Science Council about the implications of climate change for EPA's ability to fulfill its statutory, regulatory, and programmatic requirements; (3) using the Program's assessment results to support regulatory processes; (4) working with program and regional offices to educate key stakeholders outside the Agency; (5) partnering with academic institutions to communicate lessons learned; (6) working with the CCSP to communicate assessment results; (7) partnering with international organizations to communicate lessons learned to resource managers and stakeholders; and (8) producing new communications materials and mechanisms through which to share assessment results and lessons learned.

Recommendation #3: The Program has benefited greatly from external advisors through a number of advisory committees and mechanisms such as workshops.

Recommendation #5: The Global Change Research Program is an integrated program that cannot accomplish its objectives without taking advantage of intra-Program and external synergies. The air quality assessment is an example of the Program's successful use of such synergies; this assessment would not have been possible had the Program not collaborated with programs and laboratories within and outside of the Agency.

Recommendation #7: The Program has explored cooperation with other efforts to provide decision support tools and information. For example, the Program has partnered with OW to produce a new climate assessment tool that is integrated with OW's Better Assessment Science Integrating Point and Nonpoint Sources, or BASINS, analytical tool. The Program also has partnered with the U.S. Department of Agriculture to develop a new climate assessment tool. Further, the Program is cooperating with other agencies through the CCSP and is co-chairing a CCSP workgroup tasked with determining how the Federal Government might effectively provide climate change decision support to the private sector as well as to states and localities.

Recommendation #6: The Program is following through on its commitment to issue a request for applications (RFA) focusing on nonlinear ecosystem responses to climate change. The RFA was issued and eight grants have been awarded with total funding of about \$4 million.

In addition to the accomplishments noted above, the Program successfully completed all of the assessments and projects to which it had committed 2 years ago, including the air quality, water quality, aquatic ecosystem, and human health assessments. Subcommittee members will receive copies of the water quality, aquatic ecosystem, and human health assessments at the face-to-face meeting; however, the air quality assessment is undergoing internal Agency review. In 2006, the Program was consumed with the Office of Management and Budget (OMB) Program Assessment Rating Tool (PART) review. At the same time, however, the Program has made a concerted effort to be responsive to the BOSC recommendations.

In the past 2 years, major changes have taken place in the world, within the U.S. Administration, and within EPA in terms of interest in climate change. These changes have had a major impact on the Program and its impact on society. These events and the BOSC recommendations all converged in a way that allowed the Program to improve its organization, to be extremely responsive, and to make significant contributions.

Next week, Dr. Scheraga will provide the Subcommittee with a synopsis of the revised MYP, which will include more detailed information.

Subcommittee Discussion

Global Change Research Mid-Cycle Subcommittee

Dr. Russell thanked Dr. Scheraga for his comprehensive presentation and requested comments from the Subcommittee members.

Dr. Cliff Duke said that he was very impressed, both by the progress demonstrated by the Program to date and the clarity of Dr. Scheraga's presentation. Although the Program is pulled in many different directions, it appears to be doing a good job of being responsive without abandoning its core efforts.

With respect to water safety, Dr. Rita Colwell noted that climate change probably will result in more outbreaks of infectious diseases. She asked Dr. Scheraga what the Program has done to predict, recognize, and prevent such outbreaks. As one example, she pointed to an infectious disease outbreak in Alaska that was traced to an increase in ambient water temperatures in the summer months.

Dr. Scheraga agreed that this is a very important issue and one that he would discuss in greater detail next week in the context of the MYP and the Program's planned work, which includes work on the implications of climate change for human health as mediated through changes in water and aquatic ecosystems. The Program is examining the implications of climate change for the spread of vector- and waterborne infectious diseases, as well as potential actions of the public health community to manage these risks. In particular, the Program is working in partnership with the Centers for Disease Control and Prevention (CDC) to understand the implications of climate change for human health outcomes (not limited to infectious diseases) and to develop mitigation strategies for the public health community. The Program has worked with the CCSP to successfully engage CDC in CCSP activities. Dr. Howard Frumpkin leads CDC's efforts in this area. The Global Change Research Program has made a significant investment through the EPA field office in Alaska to address concerns raised by state and tribal officials regarding the ongoing impacts of climate change, including those related to the spread of infectious diseases. The Program also is sponsoring sessions at the Alaska Forum on the Environment; at this year's Forum, the Program and CDC are cosponsoring a session on the impacts of climate change on human health. The goal is not only to identify human health risks, but also to determine what the Program can do to manage those risks with the public health community.

Dr. Colwell commented that she has been attempting to conduct a study on *Helicobacter pylori* transmission by water in Alaska. She suggested that the Program weigh this issue because transmission by water could be a serious problem for Alaska Natives. She was delighted to hear that Dr. Frumpkin from CDC is working with the Global Change Research Program.

Dr. Claudia Nierenberg said she appreciated Dr. Scheraga's presentation and his efforts to show the tremendous changes that have taken place nationally. Consideration of climate change will expand and will be incorporated into agency missions across the Federal Government. She expressed appreciation for Dr. Scheraga's attempts to reflect the Program's capacity to contribute to and encourage such changes while remaining nimble enough to respond to EPA's needs. The heart of the 2006 BOSC recommendations was the importance of understanding the Program's contribution to national capacity, and this has been very well reflected in the work of the Program as presented by Dr. Scheraga. The Program appears to be working particularly well with the regional offices and their networks of stakeholders; this, again, is linked to mandates and national capacity. She suggested future discussion of this issue.

Dr. Mulholland agreed that Dr. Scheraga provided an excellent summary. He asked Dr. Scheraga to briefly describe the shortcomings in EPA's response to the BOSC recommendations and areas where progress is yet to be made.

Dr. Scheraga outlined three specific areas of shortcomings. First, the Global Change Research Program has been struggling to find the language to effectively convey the Program's outcomes. It is easy to demonstrate the Program's products, but it is much more difficult to clearly articulate where the Program is making a difference. Second, the Program has more work to do in the development of a systematic approach to priority setting. Third, the Program needs to focus more on thresholds and nonlinear responses in ecosystems and other systems, including responses related to air quality and human health. The Program is moving in the right direction in this regard, but still has work to do.

Dr. Russell said that he was pleased with the detailed way in which Dr. Scheraga tied the Program's responses to the BOSC recommendations. The Subcommittee will examine the Program's responses in greater detail and with additional information at the next conference call and the face-to-face meeting. Already it appears that the Program has gone a long way toward meeting its goals and responsibilities.

Dr. Mulholland mentioned that he is part of a group, led by the U.S. Geological Survey (USGS) that is developing CCSP assessment product 4.2 on the issue of thresholds. He asked whether the Global Change Research Program has any interaction with the efforts of that group.

Dr. Scheraga replied that the Program is actively engaged with the ecosystem workgroup of the CCSP, which is a client for that product. The Program works closely with USGS on one of the two synthesis and assessment products for which the Program is responsible; this product addresses the related issue of protecting ecosystems by adapting to climate change. This group's author team has interacted closely with the author team from Dr. Mulholland's group to address issues such as nonlinear thresholds.

Dr. Mulholland suggested that assessment product 4.2 might provide the Global Change Research Program with information useful for evaluating the effects of thresholds.

Dr. Scheraga agreed and said that CCSP assessment products 4.2, 4.3, and 4.4 all are well coordinated. The Program is attempting to inform decision-makers and resource managers with these products. In particular, the Program works very closely with park managers and resource managers to consider how they can address some of these effects in their day-to-day operations.

Preparation for the Next Call and Face-to-Face Meeting

Dr. Milton Russell, Subcommittee Chair

Dr. Russell said that the Mid-Cycle Report should focus on the Program's response to BOSC recommendations over the last 2 years and any suggestions the Subcommittee may have with respect to the draft charge questions. The first two charge questions will be relatively straightforward; the last three questions will be fairly difficult to address. The length of the report should be on the order of 10 to 15 pages. The Subcommittee probably has not yet obtained enough information to make decisions regarding writing assignments. Therefore, he suggested focusing on the Subcommittee's information needs.

First, Dr. Russell noted, it is critical that Subcommittee members have the opportunity to read the draft MYP, including the LTGs. It would be most helpful if the MYP were distributed to the Subcommittee very soon to allow the Subcommittee members to effectively prepare for the next conference call. Second, information on the Program's budget for the past 4 to 5 years—and, if possible, the projected budget for next year—would be very useful. Third, the Subcommittee should, ideally, have an opportunity to review OMB's response to the Program's submission with respect to PART, as well as the PART submission itself if that can be made available to the Subcommittee. Fourth, it would be helpful if the Subcommittee

could review the charge to the NAS committee on decision support and information on the status of that committee's report. Finally, as noted above, the Subcommittee would benefit from a list of accomplishments and disappointments—this should be in real terms, not in terms of meetings held, and could be presented orally or in writing.

Dr. Duke agreed that the draft MYP and the PART materials are critical.

Dr. Scheraga responded that he will be able to provide all of this information to Subcommittee members very quickly. It may be difficult to provide a projected budget for next year, but Dr. Scheraga will determine whether the projected budget has been released by the Administration.

Dr. Nierenberg asked for information regarding the extent to which demand is exceeding the budget and the nature of that demand.

Dr. Scheraga agreed to provide this kind of information in very specific terms.

Public Comments

Ms. Monica Rodia, DFO

At 12:00 noon, Ms. Rodia called for public comments. No comments were offered.

Closing Remarks

Ms. Monica Rodia, DFO and Dr. Milton Russell, Subcommittee Chair

Ms. Rodia encouraged Subcommittee members to read the relevant information prior to the next conference call. She asked Dr. Ruth Reck to provide her with information on her travel preferences for the face-to-face meeting. She also asked Subcommittee members to submit any outstanding training certificates.

Dr. Russell asked for any further comments from the Subcommittee.

Dr. Mulholland thanked Dr. Scheraga for being so forthright with respect to the Program's shortcomings, noting that this is where the Subcommittee can help. Dr. Russell agreed that the Subcommittee's goal is to be helpful to the Program and added that the cooperation from EPA staff makes this possible.

Dr. Russell thanked the Subcommittee members and EPA staff for their participation and adjourned the call at 12:04 p.m.

Action Items

- Subcommittee members should submit any outstanding training certificates to Ms. Rodia.
- 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 at the face-to-face meeting on January 23, 2008.
- Z Dr. Reck should provide Ms. Rodia with her travel preferences.

- The Global Change Research Program's budget for the past 4 to 5 years, including the current year and, if possible, a projection of the Program's budget for next year.
- MB's response to the Program's PART submission and, if available, the PART submission itself.

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- A list of accomplishments—instances in which the Program appears to have made a tangible difference in the "real world"—and disappointments, whether orally, in writing, or both.
- Information regarding the extent to which demand is exceeding the Program's budget, and the nature of that demand.



PARTICIPANTS LIST

Subcommittee Members

Milton R. Russell, Ph.D., Chair

Senior Fellow

Institute for a Secure and Sustainable

Environment

314 Conference Center Building

Knoxville, TN 37996-4138

Phone: (865) 974-3939

E-mail: mrussel4@utk.edu

Clifford S. Duke, Ph.D., Vice-Chair

Director of Science Programs

The Ecological Society of America 1707 H Street, NW, Suite 400

Washington, DC 20006

Phone: (202) 833-8773, ext. 202

E-mail: csduke@esa.org

Rita R. Colwell, Ph.D.

Distinguished University Professor

Center for Bioinformatics and Computational

Biology

University of Maryland

#296 Biomolecular Sciences Building

Room 3103

College Park, MD 20742

Phone: (301) 403-0501

E-mail: rcolwell@umiacs.umd.edu

Patrick J. Mulholland, Ph.D.

Senior Scientist

Environmental Sciences Division

Oak Ridge National Laboratory

Box 2008

Oak Ridge, TN 37831-6036

Phone: (865) 574-7304

E-mail: mulhollandpj@ornl.gov

Claudia Nierenberg, M.A.

Acting Director

Climate and Societal Interactions Division

Office of Global Programs

National Oceanic and Atmospheric

Administration

1315 East-West Highway, Room 12105

Silver Spring, MD 20910-3281

Phone: (301) 427-2089

E-mail: claudia.nierenberg@noaa.gov

Ruth Reck, Ph.D.

Professor of Atmospheric Sciences

Department of Land, Air, and Water Resources

University of California–Davis

One Shields Avenue

Davis, CA 95616-8627 Phone: (530) 754-5669

E-mail: rareck@ucdavis.edu

Designated Federal Officer

Monica Rodia

U.S. Environmental Protection Agency Office of Research and Development

1200 Pennsylvania Avenue, NW (8104R)

Washington, DC 20460

Phone: (202) 564-8322

Fax: (202) 565-2925

E-mail: rodia.monica@epamail.epa.gov

EPA Participants

Joel Scheraga, Ph.D.

U.S. Environmental Protection Agency

Office of Research and Development

Global Change Research Program

1200 Pennsylvania Avenue, NW (8101R)

Washington, DC 20460

Phone: (202) 564-3385

E-mail: scheraga.joel@epa.gov

Michael Loughran

U.S. Environmental Protection Agency Office of Research and Development 1200 Pennsylvania Avenue, NW (8101R) Washington, DC 20460

Phone: (202) 564-6686

E-mail: loughran.michael@epa.gov

Contractor Support

Bette Stallman

The Scientific Consulting Group, Inc. 656 Quince Orchard Road, Suite 210 Gaithersburg, MD 20878

Phone: (301) 670-4990

E-mail: estallman@scgcorp.com



Teleconference Agenda

GLOBAL CHANGE MID-CYCLE REVIEW MEETING

Conference Call

Telephone Number: (866) 299-3188, Code: 2025648322#

Friday, January 4, 2008

AGENDA

10:30 a.m. – 10:40 a.m.	Welcome - Roll Call - Overview of Agenda	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. – 11:05 a.m.	Overview of Charge	Dr. Joel Scheraga, ORD Dr. Milton Russell
11:05 a.m. – 11:40 a.m.	Global Change Research Program: Summary of Progress Made - Brief Program Overview for New BOSC Subcommittee Members - Progress Addressing BOSC Recommendations - Additional Progress and New Activities - Progress Toward Completion of Long- Term Goals	Dr. Joel Scheraga
11:40 a.m. – 12:00 p.m.	Subcommittee Discussion	Global Change Mid-Cycle Subcommittee
12:00 p.m. – 12:10 p.m.	Public Comment	
12:10 p.m. – 12:30 p.m.	Preparation for Next Call and Face-to-Face Meeting - Discuss Writing Assignments - Identify Additional Information Needs	Dr. Milton Russell
12:30 p.m.	Adjourn	