

**Summary Minutes of the
U.S. Environmental Protection Agency (EPA)
Science Advisory Board (SAB)
Panel for the Review of EPA's 2007 Report on the Environment
Teleconference, June 22, 2007**

Panel Members: See Panel Roster – Appendix A

Date and Time: Friday, June 22, 2007, 1:00 – 4:00 p.m. Eastern Daylight Time

Location: By telephone only

Purpose: The purpose of this teleconference was to prepare for a meeting of the Panel on July 10 – 12, 2007 to review EPA's draft 2007 Report on the Environment: Science Report

Attendees: Panel Chair: Dr. Deborah Swackhamer

Panel Members: Dr. Fred Benfield
Dr. Timothy Buckley
Dr. Aaron Cohen
Dr. David Dzombak
Dr. Dennis Grossman
Dr. George Lambert
Dr. Allan Legge
Dr. Maria Morandi
Dr. Deborah Neher
Dr. Duncan Patten
Dr. Ramesh Reddy
Dr. Alan Steinman
Dr. C. John Suen
Dr. Robert Twiss
Dr. Judith Weis
Dr. Barry Wilson

EPA SAB Staff: Thomas Armitage, Designated Federal Officer
Anthony Maciorowski
Vanessa Vu

EPA Staff: Carrie Knowlton, EPA NCEA/ORD
Ethan McMahan, EPA OEI
Peter Preuss, EPA NCEA/ORD
Denice Shaw, EPA NCEA/ORD

Others Present: Linda Aller, Bennett and Williams
Clifford Duke, Ecological Society of America
Scott Slaughter, Canter for Regulatory
Effectiveness
Dan Watts, New Jersey Institute of Technology

Meeting Summary

The discussion followed the issues and timing as presented in the meeting agenda (Appendix B).

Convene Teleconference

Dr. Thomas Armitage, Designated Federal Officer (DFO) convened the teleconference at 1:00 p.m. He stated that teleconference was being held in accordance with Federal Advisory Committee Act (FACA) procedures. He stated that summary minutes of the teleconference meeting would be prepared and certified by the subgroup leader. Dr. Armitage then called the roll of panel members and asked others who had called in to identify themselves.

Welcoming Remarks

Dr. Vanessa Vu, Director of the EPA SAB Office, thanked panelists for serving on the SAB Panel. She explained that, in addition to the ROE-07 Science Report to be reviewed by the Panel, EPA would publish a less technical ROE-07 “Highlights Document” for concerned citizens. The Highlights document would be reviewed by the Agency’s National Advisory Committee on Environmental Policy and Technology. Dr. Vu thanked two members of the SAB panel, Drs. Lambert and Twiss, for agreeing to participate in the upcoming review of the Highlights Document.

Purpose of the Call and Review of the Agenda

Dr. Deborah Swackhamer, Panel Chair, thanked the members for calling in. She reviewed the purpose of the call and agenda, stating that the Panel would first hear an overview presentation from EPA’s Office of Research and Development on both the ROE-07 Science Report and Panel charge questions. She encouraged members of the Panel to ask questions in order to prepare for the face-to-face meeting on July 10-12. She stated that before adjourning she also wanted to review the agenda for the upcoming Panel meeting.

Overview of EPA's Draft Report on the Environment

Dr. Swackhamer invited Drs. Peter Preuss Denice Shaw of EPA's National Center for Environmental Assessment to provide an overview of the ROE-07.

Dr. Preuss presented a brief history of the development of EPA's ROE-07 and commented on the scope of the document. He stated that the ROE-07 focused on questions and indicators important to EPA and that it had been developed from a draft report completed in 2003. The 2003 draft had been reviewed by the SAB. He noted that the Council on Environmental Quality had indicated that EPA's ROE-07 should be a model for a broader government-wide report on the environment.

Dr. Preuss stated that EPA was very interested in hearing the Panel's comments on the scope and formulation of the questions posed in the ROE-07 and whether the indicators in the report were used appropriately to answer the questions. He stated that development of the report had involved a large number of offices and people at EPA. He also pointed out that a rigorous peer review process had been followed to develop the questions and indicators. Dr. Preuss also pointed out elements of the ROE-07 that had been developed in response to previous comments from the SAB. In particular, he noted that a set of regional indicators was included in the ROE-07.

Dr. Denice Shaw then provided an overview of the ROE-07 (slides attached in Appendix C) and reviewed the Panel's charge. Dr. Shaw stated that the ROE-07 was organized around 23 questions that were important to EPA. She described the process that EPA had followed to develop the questions and select the indicators in the report. She noted that the scope of each of the 23 questions had been described in the ROE-07 and that text had also been included to summarize what the indicators say about the questions.

Dr. Shaw stated that EPA had decided to scale a number of the national indicators in the ROE-07 to the regional level. She also noted that some new regional indicators had been included in the ROE-07. Dr. Shaw stated that EPA was also particularly interested in receiving comments on the scaling of national indicators and the use of regional indicators. Dr. Shaw noted that a number of new indicators had been added to the ROE since completion of the 2003 draft. She pointed out that greenhouse gasses were included in the set of new indicators in the ROE-07.

Dr. Shaw described the relationship of the ROE-07 to EPA's strategic planning process and stated that the Agency had been considering how to use the ROE-07 to inform priority setting. Dr. Shaw concluded by stating that EPA looked forward to receiving comments from the Panel.

Panel Discussion of the Draft Report and Charge Questions

Panelists discussed the draft ROE-07 and the Panel's charge. The Panel also posed questions to Drs. Preuss and Shaw. Several panelists noted that when the ROE-03 was reviewed by the SAB, EPA had stated that the draft document would not be revised. They asked whether EPA would be revising the draft ROE-07 in response to Panel comments. EPA staff responded that the Agency would review the SAB report and intended to make necessary revisions before publishing a final ROE-07.

A panelist asked EPA to identify the target audience of the ROE-07 Science Report. EPA staff responded that: 1) the report was aimed at a broad audience of environmental professionals, and 2) the report was intended to provide information to those in the environmental community who needed an integrated view of human health and ecological condition.

A panelist stated that very little statistical information had been included in the ROE-07. He noted that this might be acceptable if the report were primarily aimed at policy makers, but additional statistical information might be needed for a science report. Another panelist asked why EPA had decided not to include more statistical information. EPA staff responded that in the ROE-07 they had tried to effectively summarize and provide links to statistical information. Another panelist stated that, although the indicators in the ROE-07 were based on statistics, the report did not contain much discussion of possible biases in the data sets. EPA staff responded, stating that if there were biases in the report, the Agency would like to hear about them. EPA staff also stated that it would be interesting to hear how statistical information could be presented in the ROE-07, but it would be challenging to incorporate much of this information and still provide a usable document.

A panelist stated that EPA had apparently made no attempt to incorporate linked indicators of human health and environmental condition (e.g., relative rates of mortality or hospital admissions associated with environmental conditions) into the ROE-07. He asked why this had not been done. EPA staff responded that such indicators may not meet the indicator definition and criteria included in the report. However, if the Panel were to find that these indicators were important, the Agency could think about how to use them. A panelist stated that he wanted a better understanding of how the health indicators in the report were related. EPA staff stated that it might be possible to better link certain indicators in the report.

Another panelist complemented EPA for putting together the report, but noted that in some cases information was not provided to describe trends, even though this was a stated goal of the report.

A panelist asked EPA to provide more information on the intended audience and purpose of the report. EPA provided more information on the dual purpose of the report: 1) to communicate to the public what is understood about environmental condition and human health, and 2) to provide information for long and short term EPA planning. Another panelist asked how the EPA ROE-07 was related to the Heinz Center report on the environment. EPA staff responded that there were differences between two reports. The

Heinz Center report included a set of indicators for reporting environmental condition but in contrast to EPA's report, no attempt was made to match the indicators to any Agency's needs. Furthermore, the Heinz Center report was focused on indicator related to ecosystems, and not on indicators primarily related to human health.

A panelist asked EPA staff whether the Agency was open to receiving and addressing significant comments on the ROE-07. EPA staff responded that they wanted both "large" and "small" suggestions to improve the report. EPA staff acknowledged that some recommended changes may have to be worked into the next version of the ROE. Another panelist asked whether EPA had considered the need to coordinate across the Agency to address the limitations and gaps in identified in the ROE-07. EPA staff responded that EPA offices were engaged in an ongoing dialogue concerning the report.

Another panelist asked how differential sensitivity of individuals was addressed in the ROE-07. EPA staff responded that the Agency was currently trying to "tease out" how indicators could be designed to do this, but had not yet found adequate data. A panelist observed that although EPA had been working with the Centers for Disease Control on the ROE-07, the evidentiary basis for indicators had not been developed in the report. EPA staff responded that if panel members knew of additional data sets that could be used in that regard, the Agency wanted to know about them. Another panel member stated that criteria for indicators reflecting evidentiary basis were different from the criteria EPA had used to select indicators for the ROE-07.

A panelist stated that although the Panel's charge addressed the formulation and scope of questions in the ROE-07, he had comments on the overall structure of the report. EPA staff responded that the Agency would welcome comments on the structure of the report. The panelist stated that the current draft of the ROE did not provide discussion of how indicators in different parts of the report were related. Another panel member noted that this issue had been raised by the SAB Panel that reviewed the ROE-2003. He expressed the opinion that in some ways the organization of the report was optimal because it enabled readers to consider environmental problems as well as solutions.

A panelist asked whether EPA would consider adding a section to the ROE-07 to provide recommendations for future work. EPA staff responded that the Agency could consider this suggestion.

A panelist asked the Chair how the Panel's report would be structured. The Chair responded that the Panel's report could be organized around either the charge questions or chapters of the ROE-07. A panel member noted that the SAB ROE 2003 panel had organized its report around charge questions. He also asked EPA staff whether the ROE-07 would be used to hold EPA accountable for actions. EPA staff responded that the Office of Management and Budget had not looked at the ROE-07 with that in mind. Specific linkages had not been made between the ROE-07 and Government Performance and Review Act objectives.

There were no further questions, so the Chair thanked EPA staff for responding to the Panel's questions and called for public comments.

Public Comments

The Designated Federal Officer stated that there had been no requests to make comments and asked whether any person on the phone wished to offer comments. There were no comments.

Review Agenda and Assignments for July 10-12 Panel Meeting

The Panel then discussed how the July 10-12 peer review meeting would be structured. The Chair reviewed the agenda for the upcoming meeting and reminded panel members that they had each been assigned to two subgroups (a media chapter subgroup and a subgroup that would address either the ecological condition or human health chapter). The Chair stated that each subgroup should respond to all of the charge questions. The Chair asked members to send their initial comments on the ROE-07 to the DFO by Friday July 6. She stated that the initial comments would be compiled and distributed to the Panel. The Chair also encouraged panel members to bring laptop computers to the meeting to facilitate drafting responses to the charge questions. A member requested that printed copies of the initial Panel comments be made available to members upon arrival at the hotel. The DFO responded that he would leave copies of the initial responses at the hotel to be picked up at check-in.

A member asked EPA to provide an example of how indicators in the report were linked. EPA staff responded that they would do their best to address this at the upcoming meeting. A panel member asked whether there would be an effort made at the face-to-face meeting to relate the ROE-07 to the Agency's strategic plan. Another member suggested that the Panel should not focus on this. The Chair stated that the SAB was involved in a separate review of EPA's 2008-2009 research budget in the context of the strategic planning, but Panel members should consider the purposes of the ROE-07 as they review it.

Several members requested copies of the ROE-07 on CD. The DFO stated that he would have CDs made and mailed to panel members who wanted to receive them. Several members discussed whether EPA should provide more information in the ROE-07 to interpret trends. One member suggested that the ROE-07 should not include value judgments but it should provide information to be used and interpreted by others.

The Panel Chair then asked the Panel members whether they had additional questions. There were none, so the Chair thanked the Panel and EPA staff for participating on the call. She stated that the DFO would send panelists a follow-up note reminding them to submit their initial comments on the report by July 6. The Chair then stated that she

looked forward to seeing Panel members at the July 10-12 meeting and adjourned the teleconference.

Respectfully Submitted:

Certified as True:

/Signed/

/Signed/

Dr. Thomas Armitage
Designated Federal Officer

Dr. Deborah Swackhamer, Chair
SAB Panel for the Review of EPA's
2007 Report on the Environment

APPENDICES

Appendix A: Panel Roster

Appendix B: Teleconference Agenda

Appendix C: EPA Presentation

Appendix A – Panel Roster

U.S. Environmental Protection Agency Science Advisory Board Panel for the Review of EPA's 2007 Report on the Environment

CHAIR

Dr. Deborah Swackhamer, Interim Director and Professor, Institute on the Environment, University of Minnesota, Minneapolis, MN

MEMBERS

Dr. Henry Anderson, Chief Medical Officer, Division of Public Health, Wisconsin Division of Public Health, Madison, WI

Dr. Fred Benfield, Professor of Ecology, Department of Biological Sciences, Virginia Tech, Blacksburg, VA

Dr. Mark Borchardt, Director, Public Health Microbiology Laboratory, Marshfield Clinic Research Foundation, Marshfield, WI

Dr. Timothy Buckley, Associate Professor and Chair, Division of Environmental Health Sciences, School of Public Health, The Ohio State University, Columbus, OH

Dr. Aaron Cohen, Principal Scientist, Health Effects Institute, Boston, MA

Dr. David A. Dzombak, Walter J. Blenko Sr. Professor of Environmental Engineering and Associate Dean for Graduate and Faculty Affairs, College of Engineering, Carnegie Mellon University, Pittsburgh, PA

Dr. Dennis Grossman, Principal Associate - Biodiversity Protection and Conservation Planning, Environmental and Natural Resources Department, Abt Associates Inc., Bethesda, MD

Dr. Philip Hopke, Bayard D. Clarkson Distinguished Professor, Department of Chemical Engineering, Clarkson University, Potsdam, NY

Dr. George Lambert, Associate Professor of Pediatrics, Director, Center for Childhood Neurotoxicology, Robert Wood Johnson Medical School-UMDNJ, Belle Mead, NJ

Dr. Allan Legge, President, Biosphere Solutions, Calgary, Alberta, CANADA

Dr. Maria Morandi, Assistant Professor, Division of Environmental and Occupational Health, School of Public Health, University of Texas, Houston, TX

Dr. Deborah Neher, Associate Professor and Chair, Plant and Soil Science, College of Agriculture and Life Sciences, University of Vermont, Burlington, VT

Dr. Duncan Patten, Research Professor, Land Resources and Environmental Sciences Department, Montana State University, Bozeman, MT, USA

Dr. Ramesh Reddy, Graduate Research Professor and Chair, Soil and Water Science Department, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL, USA

Dr. Gary Saylor, Beaman Distinguished Professor, Joint Institute for Biological Sciences, Oak Ridge National Laboratory, University of Tennessee, Knoxville, TN

Dr. Alan Steinman, Director, Annis Water Resources Institute, Grand Valley State University, Muskegon, MI

Dr. C. John Suen, Professor, Earth and Environmental Sciences, College of Science and Mathematics, California State University, Fresno, Fresno, CA, USA

Dr. Robert Twiss, Professor of Environmental Planning Emeritus, University of California-Berkeley, Ross, CA

Dr. Judith S. Weis, Professor, Department of Biological Sciences, Rutgers University, Newark, NJ

Dr. Barry Wilson, Professor, Animal Science and Environmental Toxicology, College of Agriculture and Environmental Science, University of California, Davis, CA

SCIENCE ADVISORY BOARD STAFF

Dr. Thomas Armitage, U.S. Environmental Protection Agency, Washington, D.C.

Appendix B – Teleconference Agenda

U.S. ENVIRONMENTAL PROTECTION AGENCY

SCIENCE ADVISORY BOARD

Panel for the Review of EPA's 2007 Report on the Environment

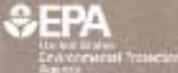
Public Teleconference

June 22, 2007, 1:00 – 4:00 p.m. EDT

Agenda

1:00 p.m.	Convene Meeting	Dr. Thomas Armitage Designated Federal Officer EPA SAB Staff Office
1:15 p.m.	Welcoming Remarks	Dr. Vanessa Vu, Director EPA SAB Staff Office
1:20 p.m.	Purpose of the Call and Review of Agenda	Dr. Deborah Swackhamer, Chair
1:30 p.m.	Overview of EPA's Draft Report on the Environment 2007 and Charge to the Panel	Dr. Peter Preuss, Director EPA National Center for Environmental Assessment Dr. Denice Shaw, EPA National Center for Environmental Assessment
2:00 p.m.	Panel's Discussion of the Draft EPA Report on the Environment 2007 and Charge	Dr. Deborah Swackhamer, Chair and Panel
3:30 pm	Public Comments	
3:45 pm	Review Agenda and Assignments for July 10-12 Meeting	Dr. Deborah Swackhamer, Chair
4:00 pm	Adjourn	

Appendix C – EPA Presentation



EPA's 2007 Report on the Environment: Science Report

SAB Panel for the Review of EPA's 2007 Report on the Environment
Public Teleconference
June 22, 2007



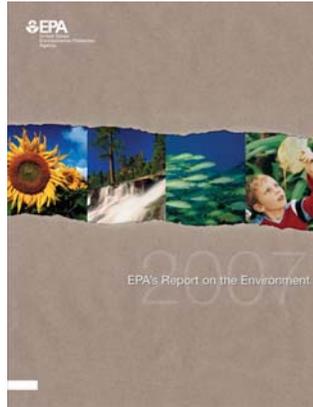
Office of Research and Development
National Center for Environmental Assessment



“My goals for the Agency are to make our air cleaner, our water purer and our land better protected. These are the results that we are working hard to achieve. Our progress towards these goals will be the measure of our success. *To know whether we are making progress toward these goals, we need high quality information about the state of the environment.* –

Christine Todd Whitman, November, 2001

EPA's Reports on the Environment 03 and 07



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ROE and EPA Strategic Planning

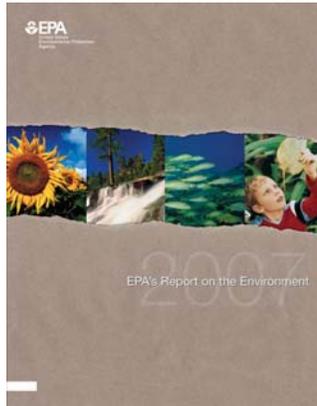
ROE should:

- Complement EPA's strategic planning efforts
- Identify important gaps in information that hinder our decisions about how to invest in the future.

» *Administrator Steve Johnson*

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EPA's 2007 Report on the Environment



- Asks questions important to EPA's mission (air, water, land, human health, and ecological condition)
- Answers questions with "what we know and don't know"
 - Indicators
 - Gaps
 - Limitations

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Report Structure

Chapters:

- Air, Water, Land, Human Health, Ecological Condition

Questions:

- Introduction and scope
- Indicators – Text, Graphic, Metadata
- Discussion
 - Summary of what the indicators say about the question
 - Important gaps, limitations, and challenges

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Charge Questions

- Formulation and scope of the questions
- Appropriateness of indicators for answering the questions
- Presentation of gaps and limitations
- Regionalization of National Indicators
- Regional Indicators
- Overall quality of the Report

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What are the trends in.....and their effects on Human Health and Ecological Condition?

- Water
 - Fresh Surface Water
 - Ground Water
 - Wetlands
 - Coastal Water
 - Drinking Water
 - Fish and Shellfish
 - Recreational Water

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What are the trends in.....and their effects on Human Health and Ecological Condition?

- Land
 - Land Cover
 - Land Use
 - Wastes
 - Chemicals
 - Contaminated land

10



Human Health What are the trends in?.....

- Health Status in the U.S.
- Human Disease and Condition for Which Environmental Pollutants May be a Risk Factor
- Exposure to Common Environmental Pollutants

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Indicators

- Revised indicator definition and developed indicator review criteria

“An indicator is a numerical value derived from actual measurements of a pressure, state or ambient condition, exposure, or human health or ecological condition over a specified geographic domain, whose trends over time represent or draw attention to underlying trends in the condition of the environment.”

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The Report on the Environment and Strategic Planning



- EPA Strategic Plan
 - Sets the Agency’s goals, objectives, and strategic targets.
- EPA Annual Performance Report
 - Reports on achievement of goals, objectives, and strategic targets.

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How can the ROE inform strategic thinking and planning at EPA?

- Strategic Planning Pilot study underway
- Possibilities:
 - Is the ROE asking the right questions?
 - Revise, add or replace indicators?
 - Revise, add, or replace performance measures?

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ROE07 Next Steps

- SAB Review (July 2007)
- Indicator research and development
 - Better quantify uncertainty
 - Better ways to regionalize and scale indicators
 - Sensitivity of indicator to management actions
- ROE and strategic planning
- e-ROE and Highlights Document
- Next ROE in 2010 or 2011, but with more frequent electronic indicator updates

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ROE07 Next Steps

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- Indicator research and development
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