

**U.S. Environmental Protection Agency
Science Advisory Board
Advisory Panel on EPA's Report on the Environment 2014**

**Teleconference Meeting
October 3, 2014**

Minutes of the Meeting

Attendees:

Members of Advisory Panel on EPA's Report on the Environment (ROE) 2014: James Sanders (Chair), Joe Arvai, Sharan Campleman, Terry Daniel, Chris Frey, Lucinda Johnson, Rob Johnston, Allan Legge, James Mihelcic, Eileen Murphy, Jim Opaluch, Rebecca Parkin, Amanda Rodewald, Sujoy Roy, Tom Theis, Stephen Weisberg (for full details, see Attachment A: Panel Roster)

SAB Staff Office: Stephanie Sanzone (Designated Federal Officer)

Other Attendees (see Attachment B)

Purpose:

The purpose of the meeting was to discuss the Panel's September 10, 2014, draft report on review EPA's draft *Report on the Environment 2014*

Meeting Materials:

All materials discussed at the meeting are available on the SAB website, at www.epa.gov/sab on the October 3, 2014 meeting page:

<http://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/b45b0c51878b53d885257d2a006f69b3!OpenDocument&Date=2014-10-03>

Summary of Discussions:

The teleconference was announced in the Federal Register¹ and proceeded according to the meeting agenda,² as revised. **Stephanie Sanzone**, Designated Federal Officer for the Panel, convened the meeting and noted that the Science Advisory Board Advisory Panel on the Report on the Environment (ROE) 2014 (the ROE Panel) operates under the auspices of the chartered SAB. The SAB and its panels operate in accordance with the Federal Advisory Committee Act. This means that meetings are announced and open to the public, deliberations are done in public, meeting minutes are prepared, and all materials prepared for or by the Panel are available to the public. She noted that panel members serve as Special Government Employees who are subject to Executive Branch ethics rules and regulations. Prior to the July 30-31, 2014 meeting, all panel members were evaluated for potential conflicts of interest and the SAB Staff Office has determined that all panel members are in compliance with ethics rules that apply to them. Ms. Sanzone noted that all materials for the meeting are available on the SAB website, including the panel's draft report (dated September 10, 2014) and a summary list of discussion topics for the meeting. She added that no public comments had been received for the meeting and there had been no requests to present oral statements. Ms. Sanzone then called the roll, reminded participants to mute their lines when not speaking, and requested that anyone participating on the call who had not already done so should send her an email so that she could include them on a list of participants in the meeting minutes.

Dr. James Sanders, Chair of the ROE Panel, welcomed the panel and thanked them for their work over the last few months. He reviewed the meeting agenda and expressed the hope that the panel could complete discussions of some key points and reach consensus on the messages to include in the final panel report. In keeping with SAB policy, he noted that the agenda included an opportunity for EPA representatives to make brief comments, including any requests for technical corrections or clarifications of the draft panel report.

Dr. Jeffrey Frithsen, Senior Scientist and Special Projects Coordinator with EPA's Office of Research and Development (ORD) National Center for Environmental Assessment, thanked the panel for its thorough review and thoughtful comments on the ROE. He noted that the SAB's advice was important as the agency moves to finalize the ROE. He added that EPA had already started revising the ROE based on discussions at the July meeting, and looked forward to receiving the final report from the SAB.

Panel Discussion of the Draft Report

Dr. Sanders opened panel discussion of the draft report by referring members to the list of proposed discussion topics³ that had been developed based on the comments provided by panel members to the DFO on the September 10, 2014 draft report. The panel discussed each of the items, although not in the order given in the list of discussion topics, and agreed to the following disposition.

1. Tone: balance between support for ROE and recommended improvements: Panel members discussed the desirability of clarifying which recommendations could be implemented immediately to help all ROE audiences versus future recommendations, including addition of social and economic sustainability indicators. Members agreed that the letter could give examples of recommendations in these two categories, but leaving more detailed recommendations for the Executive Summary. Some members expressed concern about how well the SAB could determine how much time the agency would need to implement recommendations. After discussion, panel members agreed to urge the agency to release the ROE promptly and not to try and specify a list of enhancements that should be done before the release. The letter would include the bullets with key recommendations, and a sentence would be added about including the perspectives of First Nations.

2. Letter: simplify the recommendation about restructuring the ROE: the panel agreed to the language suggested by Dr. Murphy.

3. Letter/Executive Summary: the importance of including the most recent data in the ROE: panel members agree to add this point to the bullet on statistical analyses in the ROE.

4. Executive Summary: ROE as a "Report" versus a collection of indicators: the panel agreed to add a sentence emphasizing the need for a synthesis of ROE findings or highlights.

5. Executive Summary: Parallel Tracks for Different User Audiences: panel members discussed the different needs of technical versus nontechnical audiences, with technical audiences likely to find what they needed in the ROE, but with nontechnical audiences likely needing a more integrated set of highlights. The panel agreed to provide examples of how the site could be restructured, but to keep the focus on asking audiences what they needed from the site. The panel agreed to bring forward a statement from p. 29 of the draft report to make the point that focus groups and other means should allow the

agency to gain a better understanding of the needs of site users and this would then guide the revisions to the ROE.

6. Executive Summary: recommendation about adding “non-environmental, human dimensions” to the ROE: panel members discussed the need to be less vague about the types of health, social and economic metrics that might be added. Members discussed the importance of keeping these indicators relevant to EPA’s mission, and keeping the focus on “environmentally relevant” social and economic metrics. Some panelists noted that the ROE is presented around the sustainability framework with three pillars, but all of the ROE indicators are under one pillar (the environmental pillar). The panel agreed to use the recommendation on p. 13 and to be consistent within the report when talking about the sustainability framework.

7. Executive Summary: recommendations about regular SAB reviews of ROE: Panel members agreed that an annual review would be overkill, but agreed that the SAB letter should note that the SAB would welcome an opportunity to review the ROE in the future as substantive changes are made.

8. Definition of Sustainability and the “Three Pillars”: Panel members discussed possible definitions of sustainability, noting that the ROE definition focuses on the environmental pillar, which is consistent with the data that EPA collects. If ROE adopts a broader definition, it will be important to add indicators beyond waste metrics, etc. Members agreed that the definition should be consistent within the ROE and that the sustainability implications of the indicators and the trends should be presented. The panel agreed to add Dr. Frey’s text about sustainability as a desired condition and transitions toward sustainability. The panel also discussed whether life cycle metrics made sense at the national scale. One member noted that the draft report provides suggestions of possible indicators (e.g., eco footprints for cities, regions and the nation; embodied energy calculated for market baskets of goods).

9. Sustainability trade-offs: the panel agreed to add language provided by Dr. Arvai on trade-offs and the systems perspective when assessing progress towards sustainability.

10. Sustainability Framework Diagram: Panel members discussed the framework figure in the ROE, noting that it didn’t reflect the overlap between environment, economy and society, and that the pictures within the “economy” box implied that all economic activity is a negative for the environment. The panel agreed that the pictures could be removed to avoid this unintended message, and that text could be added to the ROE on overlaps and interactions among the three boxes.

11. Sustainability Tab and/or Integrating Sustainability with the Other Themes: Panel members discussed the pro’s and con’s of highlighting sustainability as a stand-alone theme versus incorporating sustainability considerations within the other themes. The panel continued to have mixed views on the best way to treat sustainability and directed the Chair and the DFO to develop some text, based on the panel discussions, on the pro’s and con’s of the two options and let the agency decide how it wished to structure this within the ROE.

12. Including Key Stories in the ROE: Panel members discussed the potential value of including some narrative in the ROE about the meaning of changes in indicators and connections among indicators as a way of conveying information. If these “stories” provide examples where EPA policies or programs are showing success, then that would be a secondary benefit, but marketing would not be the primary objective. The panel also agreed to add suggested language from Dr. Frey regarding the recommendation to add some cogent illustrative examples of the linkages among indicators, rather than comprehensive coverage of all possible combinations.

13. Clarify Recommendations for Additional Data: The panel agreed to emphasize that ROE is using data collected by others, including data in the published literature. One member cautioned that EPA would need to use due diligence in interpreting water use restrictions and bans as reflecting health outcomes or risks. Another member noted that this suggested metric was intended as a signal of water scarcity versus of health risks. Other members agreed that the SAB report would caveat the suggestions and note that EPA would need to evaluate possible limitations of any of the suggested data sources/indicators. Regarding use of the latest data, one member noted that data on GHG emissions show that emissions went down during the recession, but that emissions have been climbing in concert with the economic recovery; this example was provided as another reason why the latest data should be provided and that interpretation of trends should be discussed in the ROE. Members agreed to provide additional information on how ecosystem services and condition relate to sustainability and to provide references for “green GDP.”

14. Incorporating Statistical Information: panel members discussed the potential pitfalls of doing statistical analysis just for the sake of doing it, and agreed that ROE should focus on areas where such analysis would add value; in particular, cases where the EPA has very high quality quality-assured data. Regarding weight of evidence, the panel agreed that this was referring to the consideration of multiple lines of evidence in the sense of Cormier and colleagues.

15. IPCC Approach to Representing Uncertainty: The panel discussed the potential value of the IPCC approach to communicating variability, but with caution about the possible ambiguity associated with narrative, qualitative descriptors of variability.

16. Level of Priority and Timeline for Recommendations: the panel discussed the fact that some sections and recommendations included suggested timeframes (short versus longer term) and relative priority (high, medium, low) but this was not done consistently throughout the SAB report. The panel agreed that this should be consistent and that the panel could not assign priorities to each and every recommendation. Instead, they agreed to remove these parenthetical suggestions from the recommendations and to incorporate the information (where available) into the wording of the recommendations. The discussion referenced earlier discussion about the difficulty for SAB of determining how long the agency would need to implement some of the recommendations. Members agreed to provide examples in the letter of changes that seemed appropriate in the short term, versus those that would take longer to achieve.

17. Focus Groups: the panel agreed to broaden references to focus groups to indicate that other approaches (e.g., one-on-one interviews and site testing with individual users, or surveys of potential users) also could be effective in determining the needs of various audiences for the ROE.

18. Questions for Site Users: the panel agreed to drop the last suggested question posed in Section 3.5.1 because it was a question for the agency, rather than for potential users.

19. Advice on Primary Audience: the panel discussed the need to clarify its recommendation that EPA determine who the primary audience for the ROE would be, rather than recommending that it should be public audiences.

20. Section 3.5.3 (Structure of Individual Indicators): One member suggested that the proposed Levels 2 and 3 for each indicator might overlap, and that this might be clarified in the draft report.

Next Steps: The Chair requested that panel members provide any suggested language to the DFO by October 10, and noted that he would work with the DFO to prepare a revised draft by October 24 for the panel's concurrence, with concurrence requested by October 30. The goal would be to have a final concurred panel draft ready to send to the chartered SAB by November 3, so that quality review could be scheduled in late November 2014.

There being no further discussions, the DFO adjourned the call at 4:30 p.m.

Respectfully Submitted:

/s/

Stephanie Sanzone
Designated Federal Officer

Certified as Accurate:

/s/

Dr. James Sanders, Chair
SAB Advisory Panel on the Report on the
Environment 2014

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by Panel members during the course of deliberations within the meeting. Such ideas, suggestions and deliberations do not necessarily reflect consensus advice from Panel members. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters or reports prepared and transmitted to the EPA Administrator following the public meetings.

Attachment A. SAB Advisory Panel on the Report on the Environment (ROE) 2014

CHAIR

Dr. James Sanders, Executive Director, Skidaway Institute of Oceanography, University of Georgia, Savannah, GA

SAB MEMBERS

Dr. Joseph Arvai, Svare Chair in Applied Decision Research, Department of Geography, University of Calgary, Calgary, Alberta, Canada

Dr. Terry Daniel, Professor of Psychology and Natural Resources, Department of Psychology, University of Arizona, Tucson, AZ

Dr. H. Christopher Frey, Distinguished University Professor, Department of Civil, Construction and Environmental Engineering, College of Engineering, North Carolina State University, Raleigh, NC

Dr. Lucinda Johnson, Center Director, Center for Water and the Environment, Natural Resources Research Institute, University of Minnesota Duluth, Duluth, MN

Dr. Robert J. Johnston, Director of the George Perkins Marsh Institute and Professor, Department of Economics, Clark University, Worcester, MA

Dr. James R. Mihelcic, Professor, Civil and Environmental Engineering, University of South Florida, Tampa, FL

Dr. H. Keith Moo-Young*, Chancellor, Office of Chancellor, Washington State University, Tri-Cities, Richland, WA

Dr. Eileen Murphy, Director of Research and Grants, Ernest Mario School of Pharmacy, Rutgers University, Piscataway, NJ

Dr. James Opaluch, Professor and Chair, Department of Environmental and Natural Resource Economics, College of the Environment and Life Sciences, University of Rhode Island, Kingston, RI

Dr. Amanda Rodewald, Director of Conservation Science, Cornell Lab of Ornithology and Associate Professor, Department of Natural Resources, Department of Natural Resources, Cornell University, Ithaca, NY

Dr. Sujoy Roy, Director, Research and Development, Tetra Tech Inc., Lafayette, CA

CONSULTANTS

Dr. Sharan Campleman, Independent Consultant, Campbell, CA

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

Dr. Rebecca Parkin, Professorial Lecturer in Environmental and Occupational Health and in Epidemiology and Biostatistics, Environmental and Occupational Health, School of Public Health and Health Services, The George Washington University Medical Center, Washington, DC

Dr. Thomas L. Theis, Director, Institute for Environmental Science and Policy, University of Illinois at Chicago, Chicago, IL

Dr. Stephen Weisberg, Executive Director, Southern California Water Research Project Authority, Costa Mesa, CA

SCIENCE ADVISORY BOARD STAFF

Ms. Stephanie Sanzone, Designated Federal Officer, U.S. Environmental Protection Agency, Science Advisory Board (1400R), 1200 Pennsylvania Avenue, NW, Washington, DC

*Did not participate in this meeting.

Attachment B. Other Attendees

The following persons requested call-in information for the October 3, 2014, teleconference call of the SAB Advisory Panel on the ROE 2014.

Name	Affiliation
Jeff Frithsen	EPA Office of Research and Development
Maria Hegstad	Risk Policy Report
Amy Kopin	Detroit Diesel Corporation / Daimler Trucks North America
Christopher Lamie	Eastern Research Group
Maricruz Magowan	EPA
Kitty Miller	EPA Office of Water
Patricia Murphy	EPA
Katherine Nelson	Texas Commission on the Environment
Katherine Rembert	Stell Environmental Enterprises, Inc.
Seema Schappelle	EPA Office of Research and Development
Randy Showstack	Eos, Newspaper of the Earth and space sciences
Linda M. Wilson	NY State

Material Cited

All materials discussed at the meeting are available on the SAB website, at www.epa.gov/sab on the October 3, 2014 meeting page:

<http://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/b45b0c51878b53d885257d2a006f69b3!OpenDocument&Date=2014-10-03>

¹ Federal Register Notice announcing the meeting, 79 FR 52001-52002.

² Agenda for the Teleconference, October 3, 2014

³ Proposed Discussion Topics for October 3 ROE Panel Teleconference