

Deborah L. Swackhamer, Ph.D.  
Chair, Board of Scientific Counselors  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460

Dear Dr. Swackhamer:

Amidst the unfolding changes to the BOSC membership, I wanted to take this opportunity to thank you and the members of the Board of Scientific Counselors (BOSC) for the thoughtful observations, advice, and comments on the efforts of the EPA Office of Research and Development (ORD) to further integrate social sciences into our research programs. We are especially appreciative of the efforts of former BOSC members Dr. Robert Richardson and Dr. Courtney Flint, who worked with ORD in developing its first social science training workshop, and provided thoughtful feedback as we moved forward in planning our approach for integrating social sciences.

ORD had asked the BOSC to provide feedback and advice on our recent efforts to build social science capacity in ORD and to lay the foundations for future interdisciplinary research that brings together social and environmental sciences. We agree with the recommendations of the BOSC, and are pleased that the BOSC is supportive of our overall efforts. We look forward to continued interactions as we implement our plans to further integrate social sciences into our research efforts.

Enclosed with this letter are our responses to the comments and recommendations in your February 2017 letter. The entirety of the BOSC letter is included below, with our responses to the recommendations highlighted in red.

Again, thank you for your leadership of the BOSC, and we would welcome your conveying this appreciation to the other BOSC members, current and former.

Sincerely,

Robert Kavlock, PhD  
Acting Assistant Administrator

February 9, 2017

Robert Kavlock, PhD

Acting Assistant Administrator Office of Research and Development

U.S. Environmental Protection Agency

Dear Bob,

This letter is to provide you with the observations and comments of the Board of Scientific Counselors (BOSC) on social science integration into EPA research based on our meeting in Research Triangle Park (RTP), Raleigh-Durham, NC, held January 11-13, 2017.

The integration of social science is essential for addressing the environmental and health challenges that are the focal points of ORD's National Programs. We applaud ORD's strong commitment to this mission and the leadership you provide for the Agency as a whole. While ORD's social science integration initiatives to date are impressive and ambitious, we suggest that weaving in the dynamic and complex nature of social dimensions into ongoing environmental and health science efforts will require long-term commitment and patience. Interdisciplinarity is inherently challenging and requires major shifts in thinking and learning as well as practice.

We also note that not every project in ORD needs or would benefit from the integration of social sciences. ORD already produces impressive and impactful research in the more traditional sciences. The addition of social sciences in an integrative fashion is intended to enhance the good research that already takes place, and can serve as a coordination point across ORD. We highlight four major points related to the issue of social science integration that we observed.

First, we are delighted and strongly support the appointment of Dr. Bryan Hubbell to the newly created position of Senior Advisor focused on social sciences. Dr. Hubbell has a great knowledge of and enthusiasm for the uses of social science and how it can improve EPA research. His charge to create the capacity and infrastructure to support social science integration in research reflects ORD's commitment to the social sciences. His White Paper that lays out a framework for how to meet this charge has been reviewed by two of our members and they not only found it very thoughtful, they encourage it to be finalized and widely disseminated to the EPA research community. By creating this Senior Social Science Advisor position, ORD has positioned critical leadership for the road ahead.

Second, we are pleased with the design and implementation of the workshop ("Social Science Bootcamp") held on October 4-5, 2016 in RTP. Two BOSC members, Courtney Flint (University of Utah) and Robert Richardson (Michigan State University), designed and led the workshop. They were pleased with the level of engagement and interest of the scientists that attended, as well as the integration of workshop content into Cross-Cutting Roadmaps and other National Program efforts described in subsequent interactions. **We recommend that the Draft Workshop Summary be finalized as a shorter Executive Summary to be subsequently disseminated to the research community in EPA. Further, we recommend that similar workshops be provided for other audiences within EPA, such as the other National Programs, and Regional and Program Office scientific staff.**

***EPA Response:** EPA agrees with the BOSC and is developing a short communique on the results of the workshop that will be made available to the EPA research community through the ORD intranet site.*

*EPA also recognizes the potential value of providing training in the social sciences and their application to environmental problems more broadly across ORD and to staff in regional and other EPA program offices. As an initial step, we have made the webinar portion of the workshop, conducted by former BOSC members Drs. Flint and Richardson, available on the ORD Social Sciences Toolbox intranet site, which is accessible to all EPA staff. The webinar materials provide an excellent overview of the range of social science theories and methods, and their relevance to environmental science questions. ORD will continue to engage via monthly meetings of the EPA Social-Environmental Science Exchange and the monthly cross-EPA social science coordination call with regional and other EPA program offices to evaluate the most appropriate ways to use workshops and other training materials to educate EPA staff in the potential applications of social sciences for improved environmental protection.*

Third, we note that while the integration of social science is still nascent within ORD, there is already a comfort level within the National Program leadership of having contributions of social scientists at all stages of research design, including the critical starting point of problem formulation. This seems the case across each of the National Programs as well as the crosscutting programs. This cultural shift needs to be nurtured and encouraged and we believe that BOSC can play a role in this. The Air, Climate and Energy (ACE) program has deeply engaged the integration of social science in the past two years and the BOSC subcommittee review in 2016 focused on this topic. **We recommend that all of the other research programs determine priority research areas where social science can be most effectively integrated, and engage BOSC as needed to review these efforts.** Within the coming year, **we specifically recommend that BOSC review the SHC program's efforts to integrate social science** as part of their annual review cycle, since they are also making progress with integration. Sharing the successes and lessons learned would benefit all national research programs.

***EPA Response:** ORD appreciates this suggestion and has already begun identifying areas in the current research programs where integration of social sciences can lead to enhanced research outcomes. An early assessment identified research projects from four of the National Research Programs that we are considering for pilot efforts over the next year. These pilot projects include a study of social determinants of health in Philadelphia, a study of interactions between social and environmental stressors and their impacts on human health and wellbeing, a study of environmental health messaging and integration of environmental health evidence into health care practice, and a study of socially-relevant indicators of biological responses to nutrients. ORD will continue to evaluate the research programs for additional opportunities to integrate social sciences and will report back to the BOSC on these efforts at future meetings.*

The Social Environmental Science Exchange (SESE) established in 2016 is a promising vehicle for providing internal dialogue on the integration of social science in EPA research. **We recommend that BOSC review this program for meeting ORD's needs.**

***EPA Response:** The Social-Environmental Science Exchange (SESE) meets on a monthly basis with goals of connecting social and natural scientists, sharing information and resources, educating members on social science methods and insights, and facilitating collaborative interdisciplinary social-environmental research. Recent webinars have included presentations on interdisciplinary research synthesis and case studies of social science research. A key planned activity of the SESE is the hosting of facilitated dialogues that leverage social science expertise throughout EPA to crowdsource interdisciplinary problem formulation and research design processes.*

*During these dialogues, our intention is that environmental scientists post the problem or challenge*

*they are seeking to address through the research. A trained facilitator will initiate a dialogue between social science experts, environmental scientists, and stakeholders in the problem to explore the nature of the problem and develop a set of key research questions which span the social and environmental science disciplines. Based on those key questions, the dialogue can then turn to a discussion of social, demographic, and economic considerations and the social science theories that can guide a conceptual model of the research question. Based on the conceptual model, the discussion can be oriented toward identifying specific social science disciplines, theories, methods, tools, and data that might be best suited to engage in an interdisciplinary project to address the key questions.*

*We anticipate that the output of the dialogue will be a report synthesizing the discussions, as well as identification of potential collaborators and resources. Participating researchers should be able to use the outputs to develop an interdisciplinary research plan, as well as having access to an expanded network of interested social scientists.*

*These dialogues will be piloted over the next year using research projects identified by the National Programs, subject to resource availability. Members of the SESE will serve as facilitators and subject matter experts for the dialogues. We will report back to the BOSC on the results of these pilots at an upcoming EC meeting.*

In short, we commend your significant efforts in this area and stand ready and eager to encourage further progress in this important aspect of your research programs.

Sincerely,

Deborah L. Swackhamer, PhD  
Chair, Board of Scientific Counselors