

U.S. Environmental Protection Agency Board of Scientific Counselors

Executive Committee

Virtual Meeting Summary

June 02, 2022

Dates and Times: June 02, 2022, 12:00 p.m. to 5:30 p.m. Eastern time

Location: Virtual

Executive Summary

On June 02, 2022, the Environmental Protection Agency's (EPA)'s Board of Scientific Counselors (BOSC) Executive Committee (further referred to as the Committee or EC) convened in a virtual meeting. The goals of the one-day meeting were to discuss and deliberate on the Office of Research and Development's (ORD)'s Strategic Research Action Plans (StRAP). The meeting format allowed for presentations, open dialogue, Committee deliberations, questions, and EPA responses to questions.

The meeting consisted of opening remarks, introductions, and an overview of the previous meeting with the national program directors. The meeting also consisted of discussions on the following StRAP draft reports: Safe and Sustainable Water Resources (SSWR), Chemical Safety for Sustainability (CSS), Health and Environmental Risk Assessment (HERA), Homeland Security (HS), Air, Climate, and Energy (ACE), and Sustainable and Healthy Communities (SHC).

Dr. Bruce Rodan, Associate Director for Science, ORD, welcomed the Committee. Dr. Rodan highlighted the StRAP draft reports and described them as the foundation for research to improve air, water, land, toxic chemicals, homeland security, risk assessment, environmental justice (EJ), and climate change. He asked for comments about a coherent structure strategy for making progress during the 2023-2026 timeframe and requested BOSC members to help identify new emerging public or environmental health challenges.

Thursday, June 02, 2022

Deliberation on the Safe and Sustainable Water Resources StRAP Draft Report

Dr. Stephen Weisberg, CO-WG Lead and Executive Director of the Southern California Coastal Water Research Project Authority, initiated discussion on the first charge question and stated it was going in the right direction and is comprehensive and appropriate. Dr. Weisberg observed the stakeholder outreach was on different spatial scales, however he would have liked to see greater inclusion of NGOs. His first recommendation was to clarify what changes have already occurred to improve the document. His second recommendation was to include the administration's focus on climate change and an emphasis on the long-term.

Dr. Lucinda Johnson, EC Vice Chair and Director of Research Natural Resources Research Institute, University of Minnesota Duluth, discussed the second charge question regarding emerging challenges. Dr. Johnson recommended identifying partners who can help develop a horizon-scanning strategy to inform future activities. Dr. Johnson also provided examples of next

generation monitoring tools and highlighted multiple climate change issues which will need to be further examined and addressed.

Discussion topics included how the EPA and the ORD prioritize various StRAP components.

Deliberation on the Chemical Safety for Sustainability StRAP Draft Report

Dr. Richard Becker, Co-WG Lead and Senior Toxicologist and Director, American Chemistry Council, noted there was improved clarity in the CSS StRAP and reviewed Charge Question 1. The workgroup's first recommendation was to include additional details about the inter-relationships across the outputs, and timelines needed to achieve the outcome. The workgroup also recommended including a process framework to evaluate product uptake. Dr. Becker then discussed Charge Question 2 and recommended an improved horizon scanning approach. Dr. Justin Teeguarden, Co-WG Lead and Director and Chief Exposure Scientist, Pacific Northwest National Laboratory, asked EPA who would do the horizon scanning and emphasized leveraging the stakeholder work in horizon scanning. Dr. Becker recommended CSS to develop or articulate what they were doing in their horizon scanning process.

Following the presentation, Dr. Annette Guiseppi-Elie, CSS NPD, led a discussion of topics including how National Academies of Sciences, Engineering, and Medicine (NASEM) activity is helping the committee develop strategic horizon planning and the four-year cycle of operation.

Deliberation on the Health and Environmental Risk Assessment StRAP Draft Report

Dr. Derek Shendell, Co-WG Lead and Associate Professor of Environmental Health Sciences, Rutgers University School of Public Health, introduced the group. He stated there should be more details and specificity in the executive orders and noted gaps in the outcomes and endpoints of the new assessment methods (NAMs). Dr. Shendell commented that the human health endpoints should focus on susceptible barrier subgroups by age. Charge Question 1 recommendations included adding language for corporate factors affecting inequities, and that risk assessment tools should continue to be developed and applied. Dr. Shendell also recommended EPA include specific work products and develop monetary values for important health endpoints. Regarding Charge Question 2, Dr. Shendell recommended HERA develop more specific working relationships and enhance communication and collaboration with relevant institutions. He also recommended more clarity in the NAMs for chemicals.

Dr. Daland Juberg, Principal Consultant, Juberg Toxicology Consulting LLC, discussed the opportunity for ORD to develop methods with other program offices. Dr. Shendell concurred and stated ORD staff could better guide future energy policy and climate action health and environmental benefit analyses.

Dr. Samantha Jones, National Program Director, HERA Research Program, agreed that the thinking should be more overarching on the executive orders, as well as encouraging collaboration across the programs. She also stated HERA must balance needs, priorities, and what role the agency can play.

The discussion topics included a functional StRAP in 5 years, continuing to edit the recommendations to make them easier to read and understand, whether or not EPA should assign value to health endpoints, clarification on who does what, and narrowing the recommendations in the future.

Deliberation on the Homeland Security StRAP Draft Report

Dr. Monica Schoch-Spana, Co-WG Lead and Senior Scholar, Johns Hopkins Center for Health Security, introduced the workgroup members and described the draft process. She reviewed the HS program and the charge question strengths and highlights. Recommendations to Charge Question 1 included considering future staffing needs, testing and refactoring Remediation Data Repository (RADAR) products and developing a flow diagram. Regarding Charge Question 2, the group recommended HS revisit nuclear and radiological hazard tools to develop strategies to assess and evaluate long term impacts of contamination events, and to evaluate opportunities for climate-driven spread of diseases and the environmental impacts of war.

Dr. Shawn Ryan, National Program Director, Homeland Security Research Program (HSRP), noted the program strives to be responsive to input from the administration side and from boots on the ground. Current priorities include understanding HSRP's capabilities to address different responses within the StRAP. Regarding Charge Question 2, Dr. Ryan noted HS can examine its tools and make sure end users' needs are being met.

The discussion following included how much time the program has to complete research, updates to the flow diagram, opportunities for working and learning from other federal agencies, gathering more insight on how to advance response capabilities, and how EPA ORD might work with FEMA and Homeland Security.

Deliberation on the Air, Climate and Energy StRAP Draft Report

Dr. Patrick Kinney, Co-WG Lead and Professor of Environmental Health Sciences and Director, Columbia University, introduced workgroup members and the charge questions strengths and suggestions, and noted overlap between Charge Question 1 and 2. Regarding Charge Question 1, the workgroup suggested that ACE clearly describe the unique role of ORD in the Nation's collective climate change and energy research enterprise. Regarding Charge Question 2, the workgroup recommended given the complex interaction among air pollution, climate and energy in the context of extreme events, taking the science of systems thinking to a new level and the adaptation and mitigation strategies for climate change may have unintended consequences that bring harm to human and environmental health and perpetuate existing social inequities. The group considered developing guidance and tools that identify needs related to minimizing the likelihood of maladaptation.

Dr. Bryan Hubbell, National Program Director of Air and Energy Research Programs, noted EPA's strategic plan and its Science To Achieve Results (STAR) program examine the impacts of energy transition, landfill emissions, and vulnerable communities. Dr. Hubbell also commented on developing technologies to do carbon sequestration, and the working relationship with U.S. Global Change Research Program (USGCRP). He stated the goal is to support the ability of their program offices to complete missions through regulations of greenhouse gases, or through protecting air quality. He stated the importance of conducting research in a systems-oriented and integrated way to bring together natural scientists and engineers.

The discussion included comments on how the agency is attempting to collaborate on climate change research and how EPA fits into overall programs and efforts, incorporating community feedback in EPA's assessment, examining large agricultural contributors, reframing Charge Question 2 to be more actionable, and implementing a four-year plan/timeline.

Deliberation on the Sustainable and Healthy Communities StRAP Draft Report

Dr. Barrett Ristroph, Co-WG Lead and Principal, Ristroph Law, Planning and Research, introduced the workgroup members and reviewed the charge questions strengths and suggestions. Regarding Charge Question 1, the workgroup recommended SHC evaluate and ensure integration of cross-cutting concerns such as engaging tribes or strategic plan issues. Regarding Charge Question 2, the workgroup recommended SHC broaden non-chemical issues and create a more systematic methodology for horizon-scanning.

Dr. Tim Watkins, SHC National Program Director and Director of EPA's Center for Environmental Measurement and Modelling, described how SHC might investigate regulated chemicals and how to regulate them. SHC is considering collaborating with the Office of Land and Emergency Management and the Office of Resource Conservation Recovery. Dr. Watkins believes his office is addressing the evaluation of increasing community capacity, as well as increasing product evaluations. Dr. Watkins also stated EPA is working with the Office of Environmental Justice to figure out how ORD can contribute to this metric.

The discussion included valuing the social science part of SHC, environmental justice and industry, tackling the sustainability of carbon mitigation and regulated chemicals, and how SHC overlaps with other evaluations, programs, and efforts.

Closing Statement and Response

Dr. Bruce Rodan, Associate Director for Science, ORD, thanked everyone for their comments. He reviewed ORD's purpose of optimizing resources to protect human health and the environment and noted the groups' input is helpful to keep ORD focused. Dr. Paul Gilman, EC Chair and Chief Sustainability Officer, Covanta, agreed and thanked all the members who participated. Mr. Tom Tracy, Office of Science Advisory, Policy and Engagement, ORD, proposed each of the six groups have a draft report and he will format them by the next meeting on June 10th, 2022.

Meeting Agenda and Other Meeting Materials

The [agenda](https://www.epa.gov/bosc/bosc-executive-committee-meeting-june-2022)¹ and other meeting materials can be accessed at <https://www.epa.gov/bosc/bosc-executive-committee-meeting-june-2022>.

Meeting Participants

BOSC Executive Committee Members:

Paul Gilman, *Chair*
Lucinda Johnson, *Vice Chair*
Richard Becker
Laureen Monica Boles
G. Allen Burton
Michelle Crimi
Bart Croes
Gilbert Gee
Jay Golden
Katharine Jacobs
Daland Juberg
Rainer Lohmann
Jaime Madrigano
Ellen Mantus
Pamela McElwee
Jayne Morrow
Anjali Mulchandani
Olga Naidenko
Barrett Ristroph
Derek Shendell
Justin Teegarden
Dana Tulis
Stephen Weisberg
John White
Mahmoud Saleh
Kevin Teichman
George Thurston
Crystal Upperman
Tracey Woodruff

EPA Designated Federal Officer (DFO): Tom Tracy, *Office of Science Advisor, Policy, and Engagement*

Presenters:

Richard Becker, *Senior Toxicologist, American Chemistry Council*
Bart Croes, *Chief of Research (Retired), California Air Resources Board*
Paul Gilman, *Chief Sustainability Officer, Covanta*

¹ <https://www.epa.gov/system/files/documents/2022-05/BOSC%20StRAP%204%20Draft%20Reports%20-%20Final%20Draft%20Agenda.pdf>

Annette Guiseppi-Elie, *National Program Director, Chemical Safety for Sustainability Research Program*
 Bryan Hubbell, *National Program Director, Air Climate and Energy Research Program*
 Lucinda Johnson, *Director of Research, Natural Resources Research Institute, University of Minnesota Duluth*
 Samantha Jones, *National Program Director, Health and Environmental Risk Assessment Research Program*
 Daland Juberg, *Principal Consultant, Juberg Toxicology Consulting LLC*
 Patrick Kinney, *Professor, Boston University*
 Rainer Lohmann, *Professor of Oceanography, The University of Rhode Island*
 Paula Olsiewski, *Contributing Scholar, Johns Hopkins Center for Health Security*
 Barrett Ristroph, *Principal, Ristroph Law, Planning, and Research*
 Bruce Rodan, *Associate Director for Science, Office of Research and Development*
 Shawn Ryan, *National Program Director, Homeland Security Research Program*
 Monica Schoch-Spana, *Senior Scholar, Johns Hopkins Center for Health Security*
 Derek Shendell, *Associate Professor of Environmental Health, Rutgers University School of Public Health*
 Justin Teeguarden, *Director and Chief Exposure Scientist, Pacific Northwest National Laboratory*
 Suzanne van Drunick, *National Program Director, Safe and Sustainable Water Resources Research Program*
 Tim Watkins, *National Program Director, Sustainable and Health Communities Research Program*
 Stephen Weisberg, *Executive Director, Southern California Coastal Water Research Project Authority*

Other EPA Attendees:

Heidi Bethel	Samantha Jones	Anne Rea
Tim Collins	Taylor Lass	Mary Ross
Kacee Deener	Sang Don Lee	Kate Saili
Kathie Dionisio	Woo Hyoung Lee	Marie Schneider
Andrew Gillespie	Charles Maurice	Elizabeth Stanziano
Rick Greene	Sarah Mazur	Avery Tatters
Intaek Hahn	Mike Miller	Joe Williams
Cheryl Hawkins	Elizabeth Owens	

Other Attendees:

Rebecca Miserendino	Rachel Owen	Annette Rohr
Christina Chanes	Dinora Penalva-Arana	Michael Wichman
Carolyn Hanson	Ed Roehl	

Contractor Support:

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