Advances in personal sensor technologies and increased access to personal biological testing and public web-based information such as pooled community-level data, among other emerging capabilities, increasingly enable people and communities to gather and use data about their own environmental exposures. These trends are enhanced by the growing value that society places on open and transparent data and research. The increased availability and access to personal environmental exposure data raises a wide range of questions about why and how lay publics assess the information they collect to inform personal decisions about their health. Such questions include: What motivates someone to gather their own environmental exposure data? How do these data inform their personal decisions? What are the implications of data gathered in this manner for risk communication and engagement practices of the science community? Do government, academic, or commercial research institutions that provide public access to these new technologies and capabilities have a responsibility to communicate and engage with individuals or communities about the implications of their data and any potential risks?

ON NOVEMBER 16–17, 2016, the Standing Committee on Emerging Science for Environmental Health Decisions will convene a 2-day workshop to explore the nuanced implications of citizen access to individual-level environmental exposure data. The workshop will bring together environmental health researchers, social scientists, business and consumer representatives, and science policy experts, and other professionals at the forefront of emerging technologies, ethics, science communication, and public engagement. Workshop participants will provide an overview of the trends, tests, technologies, and other emerging capabilities that enable access to individual-level environmental exposure data, and discuss their implications for risk communication, public engagement, and decision making, and key considerations for both scientists and citizens.
AGENDA

WEDNESDAY, NOV. 16, 2016, 9:00AM–5:05PM

AN OVERVIEW OF TRENDS, TECHNOLOGIES, AND MOTIVATIONS

9:00  Welcome – Linda Birnbaum, National Institute of Environmental Health Sciences
9:10  Opening Remarks – Melissa Perry†, George Washington University
9:20  Increased Access to Personal Data: Converging Trends and the Questions They Raise – Michael Snyder, Stanford University
10:00 Emerging Capabilities in Personal Environmental Exposure Measurement: What's Out There and What Can We Learn from Them? – Edmund Seto, University of Washington
10:40 Mobilizing the Science of Science Communication: Providing Environmental Health Information that People Need, Want, and Use – Baruch Fischhoff, Carnegie Mellon University
11:30  Break (lunch is available for purchase at the 3rd floor cafeteria)

LEARNING FROM INDIVIDUAL EXPERIENCES WITH MEASURING PERSONAL ENVIRONMENTAL EXPOSURES

12:30  Opening Reflections – David Ewing Duncan†, Freelance Science Journalist
12:40  Panel Discussion
   Phil Brown, Northeastern University
   Dawn Nafus, Intel
   Amy Pruden, Virginia Tech
   Additional panelist to be determined

EXPLORING THE NEXUS OF EMERGING CAPABILITIES IN PERSONAL EXPOSURE MEASUREMENTS WITH EMERGING SCIENCE ON COMMUNICATION AND ENGAGEMENT

   Moderator: Gary Miller‡, Emory University
1:40  What Science Says about Best Practices in Communication and Engagement – Sara Yeo†, The University of Utah
2:10  Case Study: AirCasting, A Platform to Record, Map, and Share Environmental Health Data Using a Smartphone – Michael Heimbinder, HabitatMap

2:25  Panel Discussion: HabitatMap
   Phil Brown, Northeastern University
   Baruch Fischhoff, Carnegie Mellon University
   Michael Heimbinder, HabitatMap
   Miranda Loh, Institute of Occupational Medicine
   Edmund Seto, University of Washington
   Judy Qualters, Centers for Disease Control and Prevention
3:30  Break
3:45  Case Study: Speck Sensor, A Direct-to-Consumer Indoor Particulate Matter Monitor – Gabrielle Wong-Parodi, Carnegie Mellon University
4:00  Panel Discussion: Speck Sensor
   Ann Bostrom, University of Washington
   Kevin Elliott*, Michigan State University
   Gary Ginsberg*, Connecticut Department of Public Health
   Miranda Loh, Institute of Occupational Medicine
   Gabrielle Wong-Parodi, Carnegie Mellon University
5:00  Day 1 Wrap-Up – Gary Miller‡, Emory University
5:05  Adjourn Day 1

THURSDAY, NOV. 17, 2016, 9:00AM–12:15PM

PREPARING THE ENVIRONMENTAL HEALTH COMMUNITY FOR EMERGING CAPABILITIES IN PERSONAL ENVIRONMENTAL EXPOSURE MEASUREMENTS

9:10  Panel Discussion on Practical Considerations and Mechanisms
   Moderator: Kimberly Thigpen Tart, National Institute of Environmental Health Sciences
   Ann Bostrom, University of Washington
   Phil Brown, Northeastern University
   Marian G. McCord, North Carolina State University
   Amy Pruden, Virginia Tech
   Michael Snyder, Stanford University

(continued)
10:45  Panel Discussion: Responsibilities, Institutional Policies, and Regulations

Moderator: Lindsay Stanek, Environmental Protection Agency
Peter Briss, Centers for Disease Control and Prevention
Kevin Elliott, Michigan State University
Symma Finn, National Institute of Environmental Health Sciences
Jennifer Orme-Zavaleta, Environmental Protection Agency
Judy Qualters, Centers for Disease Control and Prevention

THURSDAY, NOV. 17, 2016, 9:00AM–12:15PM
(CONTINUED)

11:55  Closing Thoughts: Lessons Learned, Major Themes and Potential Actions for Moving Forward
–Melissa Perry*, George Washington University

12:15  Adjourn (Members of the ESEH Standing Committee and the Government Liaison Group Re-Convene at 1:30)

1:30 – 3:00pm  Members and liaisons of ESEHD Standing Committee reconvene (Room 100)

FOR MORE INFORMATION AND TO REGISTER,
PLEASE VISIT HTTP://DELS.NAS.EDU/ENVIROHEALTH
EMERGING SCIENCE WORKSHOPS ARE FREE AND
OPEN TO THE PUBLIC.

At the request of the National Institute for Environmental Health Sciences, the National Academies formed the Standing Committee on Use of Emerging Science for Environmental Health Decisions to facilitate communication among government, industry, environmental groups, and the academic community about scientific advances that may be used in the identification, quantification, and control of environmental impacts on human health.