

CONCURRENT SESSION 2 – INSIGHTS AND APPLICATIONS OF SOCIAL SCIENCE TO DECONTAMINATION

Questions and Answers

- **Anonymous:** Question for Brittany: Do culturally informed cleanups save financial resources because of better understanding/communication/outcomes?
 - **Brittany Kiessling, U.S. EPA:** That is something we do not have a ton of evidence about yet but is an interesting avenue to explore further. The data we have so far will point to this. We heard in interviews and in the survey, there was time saved with resolving conflict with community members. They took the time to get to know them, communicate EPA's role, and what was going on. That helped to mediate issues and expedited things long-term. The up-front cost might be a little more because of a larger time investment. We see evidence that it will save time in the end and expedite cleanups.
- **Anonymous:** Question for the Equitable Resilience Builder (ERB) Tool: What scale does the tool provide information for, e.g., census block, block group?
 - **Emily Eisenhauer, U.S. EPA Post Doc:** Since there are already several data and mapping tools out there, we are not actually including that data within the tool itself. We are providing links and guidance to the most user-friendly tools so that individuals can explore which tools are the most relevant for their location. The case studies we are conducting in the coming year are at the municipal scale.
 - **Christian Wells, University of South Florida:** I am familiar with a lot of tools, and they are all at different scales. In the tool you are developing, maybe there could be guidance on how individuals could navigate those different scales. I do not think everyone understands that they are aggregated differently and therefore come to different conclusions.
 - **Emily Eisenhauer, U.S. EPA Post Doc:** I agree. We are developing this for individuals who do not necessarily have experience working with this type of data; those are the exact issues we will be looking for in the case studies. We want to provide ways of doing this that incorporate data that is out there already but draw on the local knowledge and experiences. This is just as important as working with existing datasets.
- **Anonymous:** Question for Kate and Dan: Do next steps for your project expand out how other "at-risk" populations might have challenges with the PRISM protocol?
 - **Kate McCarthy-Barnett, U.S. Department of Homeland Security/Federal Emergency Management Agency:** In terms of examining different populations and impact of the guidance, we are starting to look at seniors, individuals with disabilities, individuals with chronic health conditions, and those who do not speak English as a first language. Our goal with the research and partnering with organizations is to expand based on the equity framework that Dan discussed.
 - **Dan McElhinney, U.S. Department of Homeland Security/Federal Emergency Management Agency:** We must figure out what is happening with the durable medical supplies and those service animals. If we cannot reunite the at-risk population with their support, then we are causing a whole logistics strain that is unintended. We are going to try to get populations through faster using pictographs. This will help solve issues for individuals hard of hearing or do not speak English as

their first language, but it does not serve people who are visually impaired. We must look at how we try to encompass as large of a population as possible when providing guidance to first responders.

- **Anonymous:** To all presenters: What best practices do you recommend in communicating modeling results (i.e., highly technical details with lots of uncertainty) with communities to integrate community feedback but not cause confusion?
 - **Christian Wells, University of South Florida:** I am working on another project with similar water and sanitation issues and we are working with computer engineers to design games and simulations that individuals can play. These are designed to share information about complex systems and collect data on how individuals play the games and how they understand the systems. One way to communicate complex results is through gaming.
 - **Brittany Kiessling, U.S. EPA:** Through interviews with practitioners discussing the challenges of science translation, you cannot assume what people know. You need to determine their baseline knowledge before you speak to them. You do not want to break the trust. We heard it was important to gauge the audience, their level of education, what is common in their community, what terms do they know, what kind of environmental processes could they be familiar with, and get a sense of this information first before explaining technical processes.
 - **Dan McElhinney, U.S. Department of Homeland Security/Federal Emergency Management Agency:** We find it is helpful to find who the trusted leaders are in the community and discuss with them ahead of time, explain what we are trying to do, and ask them what kind of messaging would help. We also ask them to provide messaging for us. Particularly, when we were trying to reach populations that do not speak English, we went to the consulate general officers because they have a lot of community involvement with those population groups that are serviced through those offices. Using different groups, different organizations, and different leaders, they can break down the information and discuss how it is benefitting them and what they need to know from it.
- **Weston Solutions, Inc.:** Question for Christian: Now that your team has identified key findings, how are they being used to empower the community to seek out resources outside of their immediate county/city counterparts?
 - **Christian Wells, University of South Florida:** It is important in these community engaged projects to provide technical assistance to identify problems and help individuals develop solutions to the problems. We work closely to help individuals apply for state and federal resources. In Florida, it is the Department of Environmental Protection, and federally, we help individuals apply to different EPA resources. We help individuals apply for the Environmental Justice Problem Solving Grant and other grants. If the infrastructure bill gets passed in Congress, we anticipate federal flow down resources.
- **Anonymous:** Question for Brittany (Part 2): I am curious about the methods you used to create the guidance document. Can you speak a little more about how you analyzed the interview and survey data, i.e., how that information was incorporated into the guidance document?
 - **Brittany Kiessling, U.S. EPA:** We used a mixed methods approach because we had a combination of qualitative and quantitative data. We used qualitative data analysis methods where we pulled themes from text. We also found best practices that practitioners discussed and how that was connected to their idea of successful engagement with communities. We conducted a quantitative analysis of the survey and examined the numbers associated with site types. We asked practitioners if they worked in environmental justice communities and looked at the prevalence of individuals working in environmental justice communities as well as urban and rural communities. We overlaid those findings with our own cultural knowledge and

understanding. We applied some of the innovative concepts coming out of social science, where there is attention to social vulnerability and how communities have these contextual differences in geography and history. Most of the report is straight from the practitioners' mouths on what is working best, with the addition of cultural ideas.

- **U.S. Nuclear Regulatory Commission:** Question for Brittany: How do you determine the type of decisions that you can let communities make, and which ones might be inappropriate for them to make? How do you best weigh community desires and needs in the decision-making process?
 - **Brittany Kiessling, U.S. EPA:** Being clear with the public about what EPA's roles and responsibilities are and about where there are intervention points and what is in the purview of what is happening. Also, looking to see where there are spaces for public engagement. With superfund cleanups, there are mandated processes where EPA must talk to the public. Those are great opportunities where EPA workers can gather insights and opinions. I think it is important to not overpromise what EPA can do for communities. It is important to be a good listener to determine the public's needs and values. What do people want to see in their community? What kind of land use? I think that we still have some policies that could be shifted to give more to communities.
 - **Emily Eisenhauer, U.S. EPA Post Doc:** We all hear that listening is important when working with communities. Our EPA regions find that there are a lot of things that might not fall within the scope of the decision-making or a specific activity. They look to what kind of relationships can be built with other resources and other federal agencies. I think it is important because for building trust and meeting peoples' needs, you need to look at peoples' decisions and actions holistically. People's lives are not segregated into sectors. Water affects health, which is affected by education, housing, and jobs. These things are interrelated. The framework of resilience and our work to address climate provides a way to see the interconnections. Listening to that and figuring out how we can leverage resources and build relationships to address these challenges is important.
 - **U.S. Nuclear Regulatory Commission:** Question for Brittany: Regarding culturally informed cleanups and costs, I think many times this can be more expensive. For instance, Fukushima disaster farmers wanted greater cleanup effort (i.e., topsoil removal), which produced a lot more costly waste.
 - **Brittany Kiessling, U.S. EPA:** I think a lot of this upfront cost might be greater, but you also must think about the long-term cost. In the Fukushima example, perhaps that added a lot of expense because the cleanup levels had to be adjusted, but was there more time saved overall? We do not have a lot of hard evidence yet to support what some of the examples are. You could think about other types of resources that are served aside from economics. Money always speaks the loudest, but you can think about the resources that are saved and the healthcare outcomes that are achieved. There is a lot to explore in this area.
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