An Interagency Workshop to Identify Gaps and Synergies to Address Climate-Driven Zoonotic Disease Risks

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Background/Objectives. As climate change drives ongoing changes to environments, land and resource usage, weather patterns, and population ecologies, zoonotic diseases are directly affected. Many infectious diseases are zoonotic, including those which are novel, re-emerging, and of pandemic concern. Due to the disruptive and costly nature of these diseases, multiple US Government (USG) agencies have missions towards building capabilities to address climate-driven zoonotic risk through integrating data and surveillance, modeling, and prioritization frameworks to develop informed preparedness strategies. Yet, as highly impactful diseases such as COVID-19 have shown, these capabilities are incomplete, asynchronous, and often duplicative across agencies. This hinders the USG's ability to prevent, detect, and respond to such threats. Reaching informed preparedness for these risks will require coordinated inter-agency efforts bringing together a myriad of scientific disciplines through all levels of government.

Towards the USG's objective of addressing the risks posed by zoonotic diseases in the face of climate change, Sandia National Laboratory (SNL) hosted an interagency workshop with USG personnel from Federal agencies and researchers from Federally Funded Research and Development Centers (FFRDC)s. Beginning a discourse around this issue and scoping next steps for addressing zoonotic disease threats amidst a changing climate was the goal of this workshop.

As an FFRDC, SNL is recognized by the USG as a trusted partner offering research and developmental excellence in science and technology. FFRDCs are relied upon to provide unique nonpartisan perspectives and fill advisory roles to address broad, abstract problems such as climate-driven zoonotic disease risk.

Here, we propose to present the key findings from this workshop, describe our next steps, and outline the role which FFRDCs will play as we capitalize on the momentum from this event.

Approach/Activities. To encourage open and trusted conversation between USG partners, this event was exclusively for government entities and FFRDCs. We convened nine Federal and independent entities: Departments of Agriculture, Commerce, Defense, Health and Human Services, Homeland Security, Interior, State, the Environmental Protection Agency, and the National Aeronautics and Space Administration. The workshop included an overview presentation from each agency and FFRDC, showcasing their mission, capabilities, and work in the climate-zoonotic disease space. We then facilitated focus group sessions centered on defining research questions, identifying synergies, and scoping next steps, followed by a group readout and discussion. SNL researchers analyzed the data and identified key takeaways.

Results/Lessons Learned. Key themes emerged, particularly regarding data. Data gaps, quality, accessibility, security, and integration were key focal points. A need for better, more comprehensive models was also identified. Participants highlighted the need for risk prioritization and identification of "tipping points" from health and national security perspectives. From this, we have planned the creation of a USG climate-zoonotic disease working group to

map agency specific effort and identify areas of collaboration. We are further planning follow-on workshops specific to the topics of data sharing and gaps, modeling, and surveillance.