GEO Health Community of Practice (CoP)
Community Telecon
November 14, 2023

In Attendance: 37 participants
John Haynes (NASA HQ), Juli Trtanj (NOAA), Helena Chapman (NASA HQ/BAH), Katia Kontar (NOAA/NESDIS/IIAD), Kim McMahon (NOAA NWS), Bryan Duncan (NASA GSFC), Tracey Dutcher (USDA liaison to DHS, Office of Health Security), Kim Locke (NASA GSFC), Sean McCartney (NASA GSFC), Emma Knowland (NASA GSFC/Morgan State Univ.), Helen Amos (NASA GSFC), Meryl Kruskopf (NASA SERVIR), Carl Malings (NASA GSFC & Morgan State Univ.), Bob Chen (CIESIN/Columbia Univ; NASA SEDAC), Steve Moran (BreezoMeter), Nathan Pavlovic (Sonoma Technology), Josh Colston (Univ. of Virginia School of Medicine), Jenny Bratburd (Univ. of Wisconsin-Madison), Ben Zaitchik (Johns Hopkins Univ.), Ian Coady (WorldPop, Univ. of Southampton), Basundhara Maji (Otto-Friedrich-Universität Bamberg, Germany), Stacie Dunkle (FAO), Erin Rees (Geomatics Unit, Public Health Agency of Canada), Richard Bellingham (Institute for Future Cities, University of Strathclyde), Carlos Barboza (Ministry of Public Health, Uruguay), Martin Montenegro (Escuela Politécnica de Litoral, Ecuador), Sebastian Diez (Argentina), Wanshu Nie, Cynthia Sitati, Luis Suarez, Michael Woodman, Mo32, Martin.

Summary Notes:
*Prepared by Helena Chapman (NASA HQ/BAH)

John Haynes (NASA HQ) opened the telecon by welcoming all participants.

John Haynes (NASA HQ) highlighted that the GEO Ministerial Summit 2023 (GEO Highlights 2023) was held from November 6-10 in Cape Town, South Africa, and that several CoP members – including Juli Trtanj (NOAA) and Antarpreet Jutla (Univ. of Florida) – were in attendance. Helena Chapman (NASA HQ/BAH) encouraged CoP members to share their One Health Day 2023 (recognized on November 3) activities on the One Health Commission’s global map website.

Juli Trtanj (NOAA) shared some highlights from the GEO Ministerial Summit 2023. First, she said that there was no official EO4Health side event, but Antar Jutla (Univ. of Florida) and Ali Akanda (Univ. of Rhode Island) presented a flash talk entitled, Earth Observations and Smartphones: Water and Health Risk for Decision Makers and Grassroots. Second, she said that the GEO leadership adopted the Post-2025 Strategy as well as agreed to add representatives to the governing board from the Americas and Africa regions. She wondered about our CoP next steps, especially since health reaches across all GEO portfolios of the Post-2025 Strategy. Third, she commented on three elements of the Global Heat Resilience Service, with a framework based on capacity building: 1) Developing forecasts: GEO aims to build upon the NIHHIS model as a heat resilience service that provides information (e.g. seasonal forecasts) to protect communities from intense heat. They are discussing how to make these forecasts relevant at regional scales, including developing outlooks and working with Met services and other entities to downscale information using satellite validation and in-situ data to expand seasonal forecasts. She commented that the CoP has the technical capacity to assist with the possibility of an operational service. 2) Working with communities: As a pilot application, she discussed working directly with leaders and community members (including competitions) to provide
guidance on how to map their urban heat islands with available resources. 3) Youth challenge: She recommended the creation of a youth challenge to develop sensors and technologies during urban heat campaigns. In general, she said that it is important to avoid any duplication of current services in product development, especially with extensive activities by the European Union. Finally, she said that AmeriGEO leaders would like to start early planning for AmeriGEO Week 2024, which marks perfect timing with a planned NOAA-funded urban heat mapping activity in Chile in January 2024.

Helena Chapman (NASA HQ/BAH) asked about GEO Ministerial Week’s All about Jazz exhibit: Bad Bloom Vibes and Changing Cholera’s Tune. Juli Trtanj (NOAA) commented that the exhibit pillars had cholera and WASH stories, which were well received by attendees. She recommended that CoP members continue to share the Global Heat Impacts and Solutions Survey, to assess heat impacts and solutions worldwide, which targets global policy makers and communities to help provide a rapid assessment of the gaps and opportunities for the emerging Global Heat Resilience Service. She said that Esri has requested preliminary survey data to share findings at their interactive space at COP28.

Helen Amos (NASA GSFC) asked about future GEO engagement opportunities for CoP members. Juli Trtanj (NOAA) highlighted that CoP members can learn more about the Global Heat Survey activities with the Heat Small Work Group as well as the two post-2025 incubators (Global Ecosystems Atlas, Global Heat Resilience Service). Ben Zaitchik (Johns Hopkins Univ.) shared that the Heat Work Group would have their bimonthly telecon on November 15 at 11:00AM EST.

Carl Malings (NASA GSFC/Morgan State Univ.) and Nathan Pavlovic (Sonoma Technology) introduced Bryan Duncan (NASA GSFC) and Susan Anenberg (George Washington Univ.).

Bryan Duncan (NASA GSFC) discussed how satellite remote sensing data can be integrated into the standard operations of low- and middle-income countries and the importance to work with stakeholders and scale up stakeholder engagement. He provided an example of the HAQAST Tiger Team, where they are enabling stakeholder access and utilization of data products for health and air quality applications, as they aim to develop a “guidance directory” for stakeholders.

Susan Anenberg (George Washington Univ.) presented concrete examples of past and ongoing research applications that use satellite observations to support public health surveillance and environmental policy planning at global, national, and urban scales. She highlighted the Air Quality and Health in Cities: A State of Global Air Report 2022, described a case study related to health and air pollution disparities in Washington DC, and discussed PM2.5 disparities in 2019 using different PM2.5 datasets.

Carl Malings (NASA GSFC/Morgan State Univ.) and Nathan Pavlovic (Sonoma Technology) opened the telecon for collective discussion.

John Haynes (NASA) shared the recent NASA web feature entitled, Air Quality in DC, as part of the Earth Information Center, and the recent launch of the Fifth National Climate Assessment.

Juli Trtanj (NOAA) asked if Susan Anenberg’s research incorporated any heat parameters to link associations between impacts between heat and air pollution. Susan Anenberg (George Washington Univ.) said that they have not yet incorporated heat parameters, but they have had conversations with the CoP Heat Work Group about incorporating these variables. She commented that her team prepared a systematic review of the epidemiological literature and concluded that air pollution and heat have synergistic effects on health outcomes.
Bob Chen (CIESIN/Columbia Univ; NASA SEDAC) wondered if their team was interested in comparing systematic validation with other air quality datasets (e.g. Harvard School of Public Health). Susan Anenberg (George Washington Univ.) said that their analysis depended on selected published studies that compared datasets broadly (e.g. one U.S. region or nationally). She mentioned that not all datasets are up-to-date to obtain similar analyses, noting that PM can have interannual variability on wildfire smoke. Bob Chen (CIESIN/Columbia Univ; NASA SEDAC) commented that data could be compared more easily per region, which can help examine the described air quality issues, and noted that picking one dataset randomly will have specific limitations.

Helen Amos (NASA GSFC) asked if the Washington DC government has indicated their next steps, after considering these research findings and guidance documents. Richard Bellingham (Institute for Future Cities, University of Strathclyde) asked how they are engaging with policy and decision-makers in cities. Susan Anenberg (George Washington Univ.) said that their team is working closely with the Washington DC government. She noted that Kelly Crawford (Department of Energy) is a HAQAST Ambassador, who has worked extensively in the field, including informing Washington DC government actions to improve air quality in at-risk neighborhoods.

Sebastian Diez asked if there are opportunities to engage with Bryan Duncan (NASA GSFC) and his team, and as he is originally from Argentina and working in Chile, he has noted similar air pollution differences between medium- and large-sized cities. Bryan Duncan (NASA GSFC) said that although air pollution levels are high in urban environments in Latin America and Africa, rural areas are exposed to harmful levels due to the agricultural fire season. He agreed that satellite data will be an instrumental tool that can be applied to many situations, including training opportunities for LMIC researchers to use satellite data to understand how air pollution is affecting their health on a seasonal basis. He commented that Ana Prados (Univ. of Maryland Baltimore County) is working with stakeholders in Latin America (aprados@umbc.edu).

John Haynes (NASA HQ) and Juli Trtanj (NOAA) thanked CoP members for their continued contributions to the field and engagement in the group discussion. They agreed that these teleconferences provide an opportunity to share information, connect researchers, and leverage resources that can amplify current activities using Earth observations for public health applications.

John Haynes (NASA HQ) closed the teleconference and mentioned that the next community teleconference will be scheduled for Tuesday, November 28, 2023 at 8:30AM EST (GMT-5).

Adjourned: 9:30AM EST (GMT-5)