GEO Health Community of Practice (CoP)
Telecon: Infectious Diseases
May 18, 2021

In Attendance: 28 participants
John Haynes (NASA), Juli Trtanj (NOAA), Helena Chapman (NASA HQ/BAH), Laura Judd (NASA Langley), Trisha Castranio (NIEHS/NIH), Cynthia Hall (NASA Earth Science Data Systems), Dorian Janney (NASA Goddard), Binita KC (BES DISC/NASA Goddard), Allan Auclair (USDA APHIS Policy and Program Development, retired), Steven Rekant (USDA One Health Coordination), Mike Gremillion (U. of Alabama), Assaf Anyamba (USRA/NASA Goddard), Helen Amos (NASA Goddard/SSAI), Sushel Unninayar (NASA/GSFC & GESTAR/MSU), Cascade Tuholske (Earth Institute/CIESIN at Columbia U.), Dana Yakabowskas (NY State Department of Health), Ben Zaitchik (Johns Hopkins U.), Josh Colston (U. of Virginia), Amir Sapkota (U. of Maryland), Antar Jutla (U. of Florida), Eric Coker (U. of Florida), Ana Watson (U. of Calgary), Osuolale Olayinka (Elizade U., Nigeria), Adrian Guzmán (Mexican Space Agency), Katerina Kyratzi (National Observatory of Athens, Greece; EuroGEO Action Group for Epidemics), Andreas Skouloudis (iSteep; ex-JRC European Commission), Reyna Duron (UNITEC, Honduras), Luis Chaves (Costa Rica).

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

John Haynes (NASA HQ) and Juli Trtanj (NOAA) opened the telecon by welcoming all participants. They invited CoP members to provide brief updates on upcoming conferences and related activities.

John Haynes (NASA HQ) shared that Senator Bill Nelson was sworn in as the NASA administrator on May 3, 2021 (NASA web feature: NASA Administrator Bill Nelson). Then, he mentioned that GEO has been preparing for the 26th UN Climate Change Conference (COP26), which be held in Glasgow from November 1-12, 2021. The new GEO Climate Coordinator (Geneva) is Sara Venturini, who is working to coordinate discussions between GEO and UN Climate Change Secretariat and the UK leadership on COP26 preparations. He reminded CoP members that we may be approached by the GEO Secretariat to provide expertise or feedback regarding the intersections of health and climate change. Finally, he stated that the US Congress and Executive Branch are looking into climate change topics including the use of Earth observations. He shared that Karen St. Germain (Director, NASA Earth Science Division) and Gavin Schmidt (NASA Senior Climate Advisor) provided their expertise to the US Congress’ Subcommittee on Space and Aeronautics Committee on Science, Space, and Technology on May 18, 2021.

Juli Trtanj (NOAA) reminded CoP members about Hunter Jones (NOAA) presentation on the last telecon, where he described the community-led summer campaign by NOAA’s National Integrated Heat Information System and partners, to map the hottest parts of cities in 11 states across the United States (NOAA and Communities to Map Heat Inequities in 11 States). Then, she said that the WMO COVID-19 Task Team are planning on conducting a series of roundtable discussions, which will lead to a larger scientific meeting on infectious diseases and climate services in September 2021. She said that the first webinar, Compound Hazards, will be held on Thursday, June 3, 2021 from 8:00-10:00AM EDT (GMT-4), focusing on lessons learned about extreme heat events in the context of COVID-19 and other infectious disease epidemics.
Ben Zaitchik (Johns Hopkins U.) mentioned that CoP members have a comprehensive understanding of how Earth observations can strengthen forecasting and predictions for action, whether COVID-19 or other environmental health concerns like disaster preparedness. As a community, he said that we are working together toward strengthening these activities. He encouraged CoP members and their colleagues with this expertise to contact him to become involved in these activities.

Juli Trtanj (NOAA) mentioned that the WMO/WHO Study Group on Integrated Health Services will be planning a series of region-focused engagements with official WMO health focal points within Met services. She said that WHO has targeted specific question on climate focal points. Moving forward, she shared that the WMO will be collecting draft policy and guidance papers until June 2021. She said that she will share additional details with CoP members when expertise would help develop workshops and other activities.

Helena Chapman (NASA HQ/BAH) thanked CoP members for sharing their conferences, webinars, scientific resources, and job opportunities for the CoP listserv. She mentioned that AmeriGEO Week 2021, which will be held from August 23-27, 2021, will support the 90-minute Health session on August 24, 2021 from 9:00-10:30AM EDT (GMT-4). The AmeriGEO team has disseminated the call for abstracts – oral and poster presentations – which will be open until June 15, 2021. She said that she, John, and Juli regularly attend these weekly planning meetings, and they will continue to share event details as information becomes available. Then, she reminded CoP members of few upcoming events: 1) American Meteorological Society’s webinar on Fostering International Collaborations with Spanish-speaking Countries on May 19, 2021 from 2:00-3:00PM EDT (GMT-4); 2) One Health Academy’s webinar on One Health Informatics: Connecting Earth Observations with Public Health Surveillance to Forecast Disease Outbreaks on May 19, 2021 from 7:00-8:00PM EDT (GMT-4); and 3) NASEM Geographic Sciences Committee’s webinar on Disaster Response During a Pandemic on May 20, 2021 from 12:00-3:30PM EDT (GMT-4).

John Haynes (NASA HQ) shared the NASA Spinoff web feature, Saharan Dust Forecasts Minimize Health Risks in the Caribbean, highlighting the research of Pablo Méndez-Lázaro (U. of Puerto Rico Medical Sciences Campus). Helena Chapman (NASA HQ/BAH) shared the recent NASA Health and Air Quality Applications web feature, Dust Storms and Valley Fever in the American West, describing the research applications of Daniel Tong (George Mason U.) and team.

Helena Chapman (NASA HQ/BAH) introduced Antar Jutla (U. of Florida), who presented an update from the Infectious Diseases Small Work Group. He reported that 22 CoP members joined the last monthly Zoom call on April 5, 2021, and they had a fruitful discussion on establishing needs and knowledge gaps, including: 1) need to understand evolutionary processes (e.g. immune system, mutations), but recognizing that Earth observations are not useful for all pathogens; 2) need to create a space for actionable knowledge base within geosciences, noting the value of a white paper; 3) questions around personalized medicine; and 4) knowledge gaps within the medicine and public health disciplines, aiming to identify effective communication channels. He noted that it will be important to build trust for multidisciplinary collaborations and bridge the use of Earth observations into actions that can strengthen decision-making. He said that he will share details about the upcoming June telecon via the CoP listserv.
Juli Trtanj (NOAA) applauded the Infectious Diseases Small Work Group for seeking ways to create greater synergy across products and services. She wondered if there are simple tasks that can be completed, such as a map with experimental forecasts, that can provide a comprehensive portrayal of infectious disease applications. Antar Jutla (U. of Florida) confirmed that they did not have time to discuss this element in the past telecon, but they will include this topic in the next telecon.

Helena Chapman (NASA HQ/BAH) introduced Assaf Anyamba (USRA/NASA Goddard), who provided an overview of his research that prepares global risk maps of chikungunya risk and predicts outbreaks up to three months in advance (CHIKRisk App). He shared an overview of historical occurrence data on the ProMED portal and other sources (Armed Forces Health Surveillance Branch, PAHO, scientific literature) as well as climate and ancillary Earth observation data. He mentioned that these data aided in the current mapping efforts to forecast chikungunya risk.

Juli Trtanj (NOAA) said that it has been challenging to build and sustain partnerships during the COVID-19 pandemic. She asked about the nature of engagement with the Department of Defense and PAHO and how we can highlight this research application at the global level. Assaf Anyamba (USRA/NASA Goddard) agreed that partnerships and sustained funding can be challenging, especially with competitive funding opportunities and current focus on COVID-19 response efforts. He highlighted the value of building relationships with the public health community (CDC, WHO, PAHO), recognizing that many health partners have been deployed to COVID-19 response efforts.

Adrian Guzman (AEM) expressed his interest in exploring the use of Earth observations for personalized medicine. He shared the web portal with the COVID-19 cases in Mexico. He noted that during the H1N1 outbreak, the local government (Mexico City) were proactive and used social networks to help citizens make self-diagnoses from home.

Reyna Durón (UNITEC, Honduras) mentioned that their team continues to monitor chikungunya statistics, but since the health system has focused efforts on COVID-19 surveillance, diagnostic testing and monitoring of dengue, chikungunya, and zika has diminished. As a result, she said that the diminished incidence rates offer a false sense that these diseases are less frequent in Honduras. Steven Rekant (USDA One Health Coordination) shared the CHIKRisk App link. Dorian Janney (NASA Goddard) applauded Assaf Anyamba (USRA/NASA Goddard) for his research that continues to evolve and be such a huge help to all of humanity. Helena Chapman (NASA HQ/BAH) commented that his presentation utilized clear graphics that can strengthen scientific communication to audiences.

John Haynes (NASA HQ) thanked Antar Jutla (U. of Florida) for his continued leadership of the Infectious Diseases Small Work Group and Assaf Anyamba (USRA/NASA Goddard) for sharing his project update that highlights the use of Earth observations for societal benefit.

John Haynes (NASA HQ) and Juli Trtanj (NOAA) thanked CoP members for their continued contributions to the field and engagement in the group discussion. He agreed that this telecon had provided 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 telecon and mentioned that the next telecon will be scheduled for Tuesday, June 15th at 8:30AM EDT (GMT-4). This telecon will focus on infectious and vector-borne disease research applications.

Adjourned: 10:00AM EDT (GMT-4)