Learning from Advancing Gulf Coast Environmental Justice Leadership & Engagement in Open Science (AGEJLE-OS)

Authors: Nathan Morrow, Tulane University of Louisiana, New Orleans, LA, United States, David Padgett, Tennessee State University, Nashville, TN, United States, Morewell Gasseller, Xavier University of Louisiana, Physics, New Orleans, LA, United States, Reginald Archer, PhD, GISP, Tennessee State University, Agricultural & Environmental Sciences, Nashville, TN, United States and Bernard Singleton, Dillard University, New Orleans, United States

The Advancing Gulf Coast Environmental Justice Leadership & Engagement in Open Science (AGEJLE-OS) project aimed to advance community-led, academically supported open science by leveraging NASA's Earth observation data and conducting research with environmental justice communities and networks on the Gulf Coast. AGEJLE-OS organized a series of convenings that brought together cohorts led by Open Science-Environmental Justice (OS-EJ) champions. These facilitated gatherings allowed mixed groups of community and academic institution-based Equity and Environmental Justice (EEJ) researchers to work through NASA's Transform to Open Science (TOPS) Open Science 101 curriculum and certification exams. The convenings were also designed to foster a supportive environment for dialogue and partnership, with facilitated sharing of knowledge and resources, identifying regional EEJ priorities, and developing collaborative strategies to address EEJ priority research and research funding opportunities. TOPS-certified cohort leaders then supported 4 to 5 additional community-based or junior EEJ researchers in completing TOPS certification. These cohorts applied open science principles, approaches, and tools to develop research proposals.

The project exceeded its targets, achieving more than 25 TOPS certifications and generating 5 research proposals. The cohorts attracted participants from a wide range of ages, with EEJ activists primarily consisting of either engaged youth or older members of EEJ organizations, including a 74-year-old park ranger. Both undergraduate and graduate students participated in cohorts, often led by their professors. A series of accessibility challenges were identified during the certification process. Both older and younger participants experienced a range of technical challenges with the Open Science 101 e-learning platform, which significantly distracted from the learning

process. Generally, the content was not well aligned with the priority research or ways of working with EEJ community-led research. In this paper, we describe the lessons learned and how they may be applied to co-design, with EEJ community-led researchers, a new or alternative certification approach based on tools, approaches, and ways of working that overlap between EEJ and open science research.

Super Additive: Advancing Health Forecasting with Cumulative Effects of Extreme Heat, Humidity, and Air Pollution in the Lower 9th Ward Neighborhood of New Orleans

Advancing Climate Resilience Capacity of the Sankofa Wetland Park, the Lower Ninth Ward, and Surrounding Communities

Advancing Fenceline Community Resilience to Heat, Humidity, and Air Pollution Co-exposure in Saint James Parish (ARC-Saint James)

Communiversity Open Science Tool for Environmental Justice Assessment and Mapping (COSTEJAM)

Sankofa Community Development Corporation's Community Driven Investments for Change