

American Geophysical Union Fall Meeting December 12th, 2022

SY36B-06 - Open Source Science as a Service; Learning from the Communiversity-model for equitable and sustainable engagement with underserved and environmental justice communities

Abstract

Scientific agencies are increasing efforts to involve a diversity of Americans in researching solutions to the challenges, beginning with Climate Change, that affect their lives. Policy makers and agency leaders recognize more inclusive science processes promote greater consensus around the evidence base for policy formation that in turn advances collective action. Environmental Justice (EJ) leaders have pioneered participatory engagement models, such as the Deep South Center for Environmental Justices' "Communiversity Model." The Communiversity Model represents an innovative approach for understanding and assessing environmental issues with emphasis on specific problems that exist due to the disproportionate impact on minority communities. The approach is unique in that it fosters collaboration with, and equal partnership between, communities and universities. The partnership promotes bilateral understanding and mutual respect between community residents and academicians. The Communiversity approach helps to engage, offer technical assistance, and build the capacity of underserved and Environmental Justice (EJ) communities. At the same time, Open source science projects have consistently harnessed the enthusiasm of volunteer communities to produce high quality solutions to address a shared challenge. However, both EJ and Open Source communities face challenges in equitable incentives and rewards for participation. The NASA-funded EJ research project -- Assessment of the Gulf Coast Environmental Justice Landscape for Equity (AGEJL-4-Equity) -- convened four environmental justice networks and "Communiversity" proved a flexible format to reflect on the potential of NASA Open Source Science and data products. This research into the links between Open Source Science, equity, and environmental justice engaging with an evidence-based process leveraging Open, Earth, and related geospatial, historical/political or socio-economic science may demonstrate practical pathways for realizing sustainable and more equitable program benefits for underserved communities that we have termed "Open Source Science as a Service".