

# Community-University Research Partnerships for Environmental Justice

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Community-university research partnerships can be empowering for all parties, but only if they are based on the principles of mutual respect, shared power and reciprocal learning. This is especially important in partnerships with communities that have been historically underserved and marginalized. The UC Davis Center for Regional Change is dedicated to building community-university research partnerships to develop solutions-oriented that can inform policy and advocacy to build healthy, prosperous, sustainable and equitable regions in California and beyond. This presentation shares the process and outcomes to date of an action research project on drinking water access in Disadvantaged Unincorporated Communities (DUCs) in California's San Joaquin Valley. Residents in DUCs typically lack access to clean, affordable, and abundant water supplies for drinking and sanitation uses. The CRC has partnered with a diverse range of water justice advocates to design and implement this study to ensure that it is relevant their policy advocacy goals.

**Keywords:** environmental justice, community-university research partnerships, human right to water

**Session Title:** Community-Based Participatory Research

**Speaker Biography:** Jonathan London is an educator, researcher, and community-builder with experience in participatory research, rural community development, and community engaged planning. He holds a B.A. in Environmental Studies from Brown University; a Master's Degree in City and Regional Planning; and a Ph.D. in Environmental Science Policy and Management from UC Berkeley. Jonathan's research addresses conflicts and collaboration in natural resource and environmental management, with a particular emphasis on environmental justice in rural communities. Jonathan also directs the UC Davis Center for Regional Change, which serves as a catalyst for multi-disciplinary research that informs efforts to build healthy, prosperous, equitable, and sustainable regions in California and beyond.

# Community Environmental Monitoring as a Tool to Address Health Disparities

Catalina Garzón-Galvis, Senior Health Educator, California Environmental Health Tracking Program, catalina.garzon@cdph.ca.gov

Community environmental monitoring can be a powerful tool for documenting environmental health conditions and supporting public health actions to address health disparities. As a form of citizen science, community environmental monitoring can engage local residents and other impacted stakeholders in collecting, analyzing, and disseminating data about environmental and health conditions. Community environmental monitoring that applies a participatory research approach can increase the relevance of research questions, demystify and democratize the production of scientific knowledge, support innovations in environmental sensors and other data collection technologies, lead to improved regulatory monitoring and enforcement, and impact policies that promote and protect health. Several examples of community and stakeholder engagement in environmental monitoring projects at various stages of development will be shared to help illustrate the strengths and limitations of this approach. We will discuss the creation of community air monitoring networks in California's Imperial Valley and Coachella Valley in partnership with community-based organizations in order to provide real-time information on particulate matter levels that can support public health actions to reduce exposure. We will also share our efforts to crowdsource a statewide map of service area boundaries for drinking water systems in collaboration with local water boards and state agencies, which is a key step in our objective to map drinking water quality throughout the state. Applications and implications of the outcomes of these projects to support public health actions to improve air and water quality as well as to address related health disparities will be discussed. Ways to optimize and sustain meaningful community and stakeholder engagement via collaborative partnerships with academically-credentialed researchers throughout the research and project development process will also be emphasized.

**Keywords:** Citizen science, participatory research, air quality monitoring, drinking water systems

**Session Title:** Community-Based Participatory Research

**Speaker Biography:** Catalina Garzón-Galvis is Senior Health Educator with the California Environmental Health Tracking Program of the Public Health Institute. Garzón-Galvis has over fifteen years of experience in leadership development, popular education, participatory research, training and technical assistance on environmental health and justice issues. Her work has included coordinating community-based planning, participatory action research, and participatory curriculum development partnerships with community-based organizations and coalitions on issues including youth justice, park conditions, freight transport planning, and climate change adaptation. She holds a Master's Degree in City and Regional Planning from UC Berkeley and is a PhD Candidate in the Department of Environmental Science, Policy and Management at UCB, where she is focusing her dissertation on Community-Based Participatory Research partnerships for environmental justice in the San Francisco Bay Area. Garzón-Galvis is the 2010 recipient of

the Thomas I. Yamashita Prize, which honors scholars whose work serves as a bridge between academia and communities.

## How the West Oakland Environmental Indicators Project Got Involved with Citizen Science

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West Oakland Environmental Indicators Project (WOEIP) came together as a way to educate residents to learn the power of Community Base Participatory Research (CBPR), starting in 2002. By having indicators as tools to measure and strengthen base assessments and the disparities of issues or concerns, this new method came about addressing lack of resources and tools in West Oakland.

Coming together as a group to use CBPR, we as community of residents, with the support of a research partner, the Pacific Institute, wrote the following reports: Neighborhood Knowledge of Change (2002), Clearing the Air (2004), and Pay with our Health (2006).

Each year following a CBRP publication, WOEIP participated and engaged residents in on-the-ground training such as counting trucks to know how many travelled to West Oakland, counting trees to know the relationship with air quality and to protect them from toxic air pollution, doing indoor and outdoor studies with room air monitors, and working with senior citizens living near the three freeways of West Oakland.

Then 2006 or 2007, WOEIP through the participation of regulatory agencies, learned that all the agencies' air monitors were three floors off the ground, which to WOEIP was not a measure of air quality nor where people were who daily suffer from air pollution that comes from the Port of Oakland or three freeways surrounding West Oakland.

Intel had a pro-type project development in Berkeley in 2008 and had heard of WOEIP doing on-the-ground air monitoring. Through WOEIP connecting with Intel, they gave WOEIP technology assistance in the use of the TSI Dusk Tracker. WOEIP starting training residents, youth, and EJ groups in the City of Oakland how to use TSI. Unknowingly by having used the equipment to test air quality, WOEIP had been engaging in Citizen Science and in 2013, WOEIP received the White House Champion of Change Science award.

**Keywords:** citizen science equity environmental justice community participatory research West Oakland

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**Speaker Biography:** Ms. Margaret Gordon is co-founder and co-director of the West Oakland Environmental Indicators Project (EIP). EIP works with neighborhood organizations, physicians, researchers, and public officials to ensure West Oakland residents have a clean environment, safe neighborhoods, and access to economic opportunity. Gordon's expertise has earned her roles on the California Environmental Health Tracking Projects Alameda County Pilot Project, the West Oakland Project Area Committee, and the Bay Area Air Quality Management District's Community Air Risk Evaluation Program. Governor Schwarzenegger appointed Gordon to the

Cabinet Level Goods Movement Working Group. She is an at-large member of the state Air Resources Board's Environmental Justice Advisory Committee, and co-chairs the planning process for the Port of Oakland Maritime Air Quality Improvement Plan. Gordon won the Purpose Prize, Bay Area Business Roundtable Spotlight Award, Healthy Communities Oakland Environmentalist Award, the ACLU Grover Dyer Award, and the Multi Ethic Hall of Fame Humanitarian Award.