

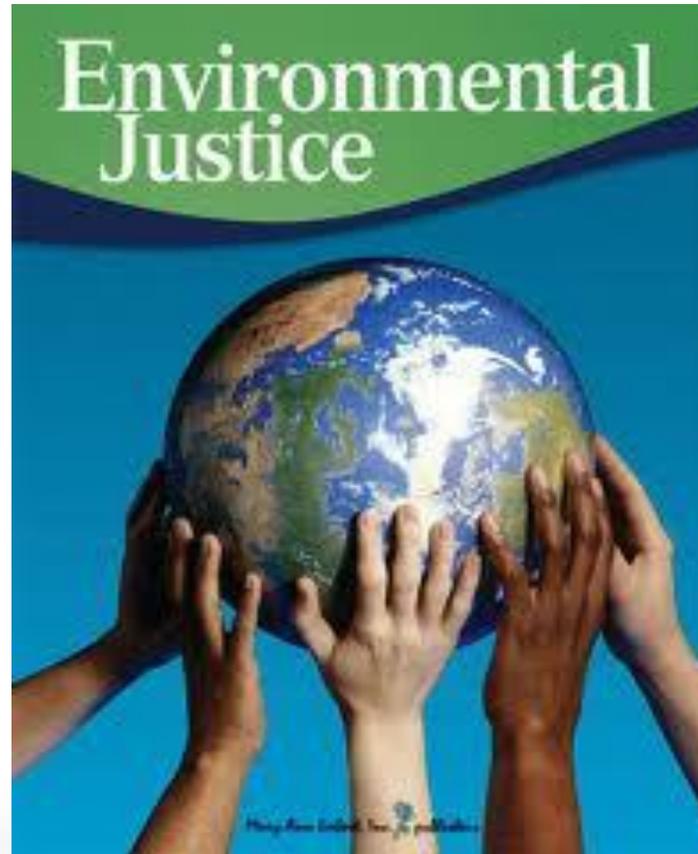


Environmental Justice Cross-Cutting Research Roadmap

US EPA Office of Research and Development

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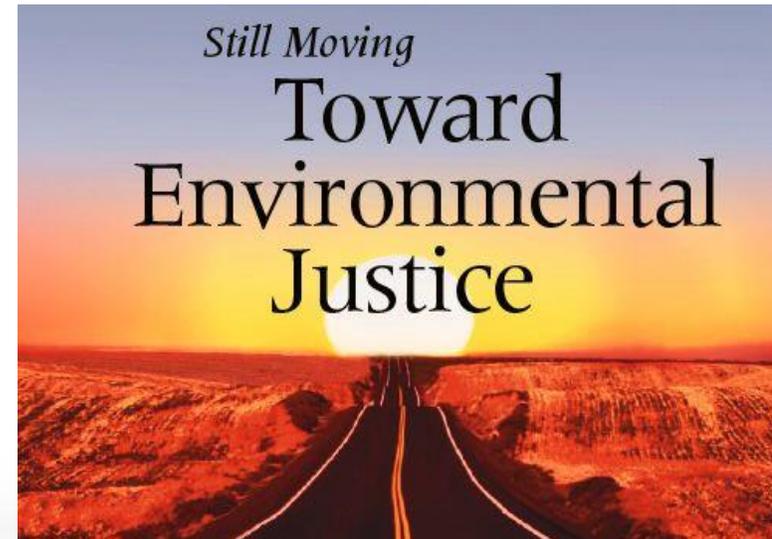
- **Problem Statement**
- **Scientific Challenges**
- **Current ORD Research**
- **Next Steps**





Significant Milestones

- **Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**
- **Plan EJ 2014**
- ***Draft* Technical Guidance for Assessing Environmental Justice in Regulatory Analysis**
- **EPA's 2014-2018 Strategic Plan – Working to Make a Visible Difference in Communities**



Environmental risks are often greater for overburdened populations



- **Differential exposures and proximity to sources**
- **Interactions of chemical and non-chemical modifiers**
- **Susceptibility influenced by social, economic, and other factors**



Key Stakeholder Input

- **Science of Disproportionate Impacts Analysis Symposium, 2010**
- **National Advisory Council for Environmental Policy and Technology (NACEPT), 2012**
- **National Environmental Justice Advisory Council (NEJAC) Research Work Group, 2014**
- **EPA Science Advisory Board and Board of Scientific Counselors (SAB-BOSC), 2014**



Science Challenges

- 1. Understand biological, social, spatial and environmental factors associated with vulnerable populations in communities to strengthen assessments of risks**
- 2. Develop decision support tools, information, mitigation and prevention strategies for EPA and community decision-making**
- 3. Engage communities to build scientific capacity by sharing and translating information, tools and technologies, and by conducting collaborative research**

Science Challenge 1

- **Evaluate near-source exposure to address spatial disparities in exposure and risk**
- **Characterize relationships between chemical and nonchemical modifiers to advance cumulative risk assessments**
- **Determine impacts of climate change on air quality, corresponding health effects and disparities among specific populations**



Science Challenge 2

- **Develop appropriate detection, monitoring, assessment, and information management tools**
- **Develop tools and data to advance cumulative risk assessments, and incorporate information on the impacts of chemical and nonchemical modifiers**
- **Develop ecosystem goods and services-related data and tools to analyze how decisions impact ecosystems, human health, and wellbeing**



Science Challenge 3

- **Goal is to support meaningful community outreach to build scientific capacity and promote purposeful scientific engagement with communities**
- **Community-based pilot studies involving the analysis of tools such as EnviroAtlas and C-FERST, and training on cumulative risk assessments and health impacts assessments**





Interagency Collaboration

- Partnering with National Institute of Minority Health and Health Disparities to fund ten Centers of Excellence
- Community partnerships to increase scientific capacity by developing community-led, culturally-tailored environmental health outreach initiatives and increasing community awareness

EPA-NIMHD Centers of Excellence on Environment and Health Disparities Research





ORD Research Programs

Science Challenges	ACE	SSWR	SHC	CSS	HS	HHRA
1. Understanding biological, social, spatial and environmental factors associated with vulnerable populations in communities	Contributing research program	Minimal contributions	Lead research program	Contributing research program	Minimal contributions	Contributing research program
2. Developing decision support tools, information, mitigation, and prevention strategies for EPA and community decision-making	Contributing research program	Contributing research program	Lead research program	Contributing research program	Contributing research program	Contributing research program
3. Engaging communities to build scientific capacity by sharing and translating information, tools and technologies, and by conducting collaborative research.	Contributing research program	Contributing research program	Lead research program	Contributing research program	Contributing research program	Contributing research program

* EJ Research activities draw from Children's Environmental Health and Climate Change Roadmaps

 Contributing research program  Lead research program  Minimal contributions

- **Consideration of SAB-BOSC and public input**
- **Continued discussions with Program partners**
- **Complete EJ Research Roadmap - 2014**
- **EJ Roadmap working group will work with National Research Programs to finalize the document in concert with the FY16-19 StRAP planning process**



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