Social Science Methods and Tools in Climate Adaptation





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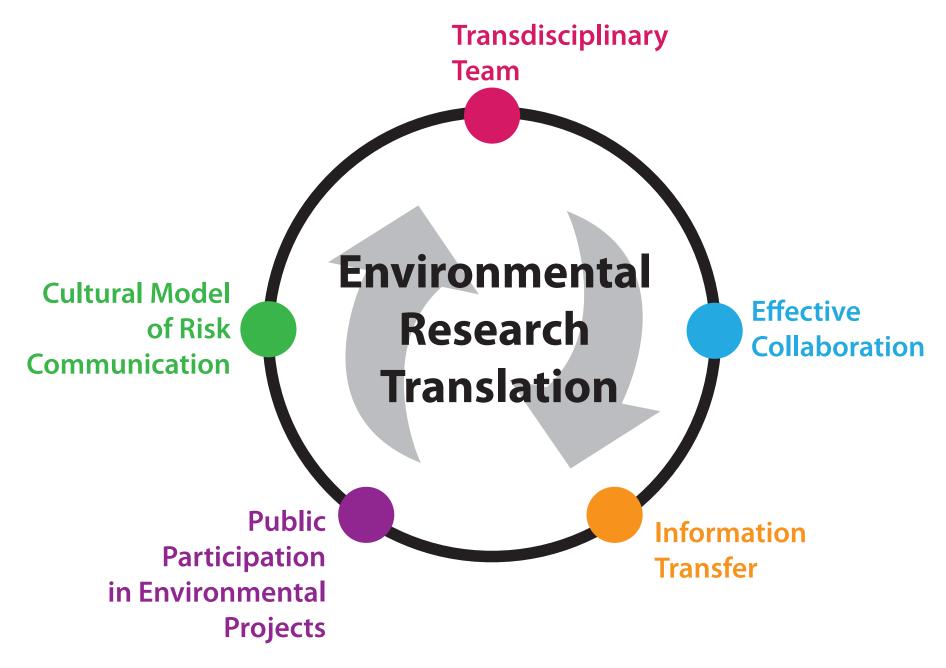
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M.D. Ramirez-Andreotta et al. (2014). Environmental Research Translation: Enhancing interactions with communities at contaminated sites, Science of the Total Environment 497–498: 651-664.

How should these steps be implemented?

What are the outcomes of this work?



Israel et al., 1998; Pandya, 2012; Ramirez-Andreotta et al., 2015; Brody et al., 2014

Expected Outcomes for Citizen Science Participants How do we know? Knowledge Research **Publications** findings **Skills** Identity **Science** Legislation **Individual** Advances in: Scientific Action Relationships **Increases** understanding understanding of: Techniques for Process/scientific method collecting, analyzing, Social-Improved stewardship managing and **Ecological** Opportunity to deepen networking data Increases in: relationship with natural world Access and use of data to address Scientific literacy environmental degradation Ownership of knowledge Participation/engagement in policy and expertise Resource management strategies Skills and social resources

Citations: Shirk, J. L., H. L. Ballard, C. C. Wilderman, T. Phillips, A. Wiggins, R. Jordan, E. McCallie, M. Minarchek, B. V. Lewenstein, M. E. Krasny, and R. Bonney. 2012. Public participation in scientific research: a framework for deliberate design. Ecology and Society 17(2): 29. 1. Brown, P., Brody, J.G., Morello-Forsch, R., Tovar, J., Zota, AR, Rudel, RA. 2012. Measuring the Success of Community Science: The Northern California Household Exposure Study. Environmental Health Perspectives, 120 (3), 326-331.

Rapid detection/direct response to

to put knowledge into

action

Strategic interventions

environmental problems

Reporting data back to participants

Personal Exposure Report-Back Ethics Study (R01ES017514,PI: Brown and Brody):

- Examining how researchers report back data, Institutional Review Boards evaluate such protocols
- 2. how participants understand and use results
- 3. Using this information to develop best practices for results communication.

What people want to know

Description

What did you find? What did you look for?

How much?

Analysis/Comparison

Is that high?

Is that safe?

What should I focus on?

Where did the chemical come from?

Recommendation

What can/should I do?

Ramirez-Andreotta MD et al. 2015. Building a co-created CS program with gardeners neighboring a Superfund site: The Gardenroots case study. International Public Health Journal, 7(1):139-153; Ramirez-Andreotta MD et al. Improving Environmental Health Literacy and Justice through Environmental Exposure Results Communication. 2016. Int. J. Environ. Res. Public Health 2016, 13, 690; doi:10.3390/ijerph13070690

Redefining how to conduct an exposure assessment

Collecting data via public participation, focus groups, and 1:1 interviews and comparing site specific data with US EPA Exposure Handbook

What do you think needs to be added to the exposure assessment process?

What do you eat and grow in your garden?

How much do you eat in your garden?





Citizen Participation in Risk Assessment and Communication