Sea Grant NEW YORK

Natural and Nature-based Features
Case Study #9

Example of a community structured dialogue. Photo credit: Don Nelson

Cultivating Equitable Collaboration for Natural Infrastructure Planning

Project Overview:
Dr. Don Nelson's team developed an equity-focused framework for Natural and Nature-Based Features (NNBF) project planning as it relates to water quality and resource policy. This framework elevates vulnerable and underserved populations, bringing a wide range of community voices to the table and incorporating their perspectives into the knowledge-making process.

Key Takeaways

Equity is widely recognized to have three primary domains.

- Distributional equity addresses the distribution of benefits and harms
- Procedural equity addresses access to decision-making processes
- Recognitional equity addresses the recognition of different experiences and ways of knowing

Centering equity across these three domains when incorporating resident perspectives and feedback into project design and implementation creates trust and increases the success of the project.

Project Context

Many communities have been completely dismissed or actively ignored in the implementation of environmental projects in the past, especially when there are barriers to technical understanding, or when local or non-technical knowledge has not been valued or used. This history contributes to ongoing distrust and a continued sense of exclusion, which can impede the incorporation of community concerns and insights into new NNBF projects. Yet a culture of dismissing non-technical knowledge continues to persist among engineers, other researchers, and practitioners. This is an issue related to procedural equity: whose data and whose knowledge is valued and respected? What do choices about what sources of data to include mean for who gets a seat at the table?

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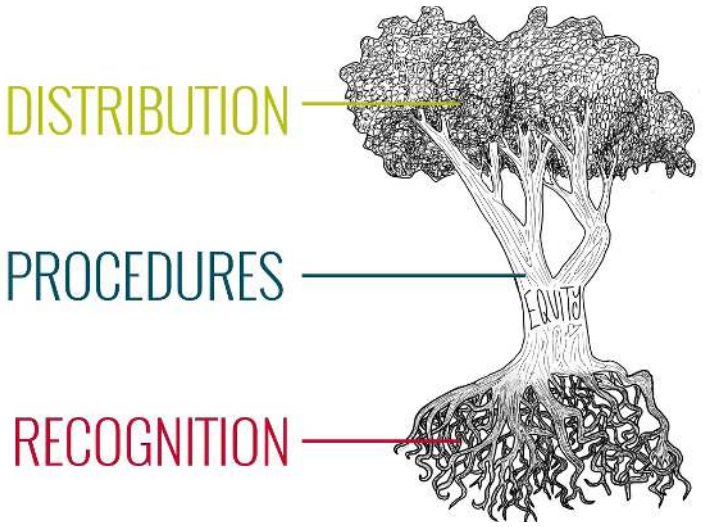
Tool Highlight

Equity tree: The equity tree enables practitioners and researchers to visualize how different domains of equity intersect and reinforce each other.



Equity, like a tree, is made up of three interconnected and dynamic elements: distributional equity (the crown), procedural equity (the trunk), and recognitional equity (the root system). The dimensions of equity and the parts of a tree impact the other dimensions and parts, respectively, and contribute to the functioning of the whole. Working to improve equity across a single dimension does not guarantee that equity across the other dimensions will improve, just as tending to the leaves or branches of a tree would not guarantee that the root system is able to absorb enough nutrients from the soil. (Credit: Seigerman et al. 2023)

Results

Dr. Nelson's team outlined a definition of equity specific to water quality and resource projects. The team then linked this definition to concrete examples of equity considerations in a matrix of qualitative and quantitative metrics that can be applied to a standard project planning framework.

Implications for Practice

Conducting structured dialogues with communities prior to working together helps understand different values and how a project can address community-identified needs, contributing to project success. Structured dialogues, with engineers and technical communities of practice prior to working together, set the stage for more productive engagement with diverse ways of knowing later on in the process.

Featured Researcher: Dr. Don Nelson

Dr. Don Nelson is an ecological anthropologist who works at the intersection of social and environmental change and human well-being. Dr. Nelson's research focuses on the human dimensions of climate variability and impacts, disaster risk reduction, the role of scientific information in resource management, and how social and political relations shape decision-making and policy outcomes.

Resources

- Dr. Nelson's Lab Website
- Dr. Nelson's UGA Page
- Dr. Nelson's Google Scholar
- Seigerman et al. (2022) Operationalizing equity for integrated water resources management.
- Feggin et al. (2021) Infrastructure investment must incorporate Nature's lessons in a rapidly changing world.
- Nelson et al. (2020) From hubris to humility: Transcending original sin in managing hydroclimatic risk.
- Nelson et al. (2020) Challenges to realizing the potential of nature-based solutions.

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About SRIJB (https://srijb.org/): The SRIJB is a CUNY-wide institute created through a partnership amongst the National Park Service, the City of New York, and the City University of New York (CUNY). Our mission is to produce integrated knowledge that increases biodiversity, well-being, and adaptive capacity in coastal communities and waters surrounding Jamaica Bay and New York City. The Institute is hosted and supported by Brooklyn College and works closely with member organizations including NY Sea Grant, the Jamaica Bay Rockaway Parks Conservancy, and the Jamaica Bay Ecowatchers.

New York Sea Grant (NYSG) (www.nyseagrant.org) is a partnership program of the State University of New York, Cornell University, and the National Oceanic and Atmospheric Administration that delivers science-based solutions for environmental stewardship, economic vitality, and resilience across New York's Marine and Great Lakes regions.