



Making Waves in Equitable Coastal Resilience: A National Workshop on Social Equity and Coastal Resilience November 2022

Infrastructure Planning for Equitable Coastal Resilience

Summary: The infrastructure planning and implementation process is lengthy in terms of time and resources. In response to an articulated need, proposed solutions are considered and studied, stakeholder support gathered, funding and financing identified, and eventually adopted. There are different equity touchpoints: in the planning and implementation process; in terms of awareness of and ability to pursue projects; and in terms of who pays and who benefits.

Issues and Recommendations for Practice

① Limited public awareness of green infrastructure options and public engagement in the planning process

Preference and support for green infrastructure vary across stakeholder groups. What the government wants may not be what the community wants. Distrust in the process can reduce public support. Public engagement is critical to reducing mistrust, building support, and pursuing infrastructure projects that serve community needs. Raising awareness of infrastructure options, getting information out, and increasing engagement is a problem in every community.

Recommendation: Increase awareness about green infrastructure and grey-green approaches

- Identify and communicate the benefits of green infrastructure to communities but seek feedback and listen carefully for the level of support for these projects.
- Actively involve community members in identification and scoping of infrastructure projects.
- Provide as much information as feasible to residents. Do not assume that information is not necessary or desired by stakeholders.
- Seek diversity in the number of voices heard by using various communication channels.

② Capacity, resources, and administrative burdens

Localities have varying resourcing capacities to plan for, seek funding, and implement infrastructure projects. Hiring and retaining staff for infrastructure planning and implementation is challenging. Funding for green infrastructure is more accessible to communities that have plans, are organized, and have undertaken community-building efforts. The grant process and requirements can be arduous: lengthy application and review process, requirements for matching funds, and burdensome reporting and grant management. Some localities may not have the capacity to maintain green infrastructure once in place.

Recommendation: Provide funding to communities for green infrastructure projects

- Increase federal funding to allow more communities to pursue green infrastructure projects.
- For resource-constrained localities, provide resources to support grant preparation and submittal.
- Reduce the reporting requirements and other costs associated with grant programs.
- Allow groups of localities to apply for funding to encourage small localities to pool together.

③ Data and mapping needs

Data on natural and grey infrastructure are available, but less so for green infrastructure. Maps of green stormwater and other green infrastructure projects are needed to fill this data gap.

Recommendation: Collect and manage data on green infrastructure

- Create database of green infrastructure projects (description, location, owner, funder, benefits, costs, etc.) and include community/social data.
- Establish reporting requirements to make information on green infrastructure publicly available.

④ Inequities of relying on return on investment (ROI) analysis

Infrastructure ROI varies across geographies, population groups, and areas of risk. However, areas with lower property values have less chance of receiving funding for infrastructure projects that increase resilience when the ROI heavily considers property values. Thus, inequities may be exacerbated over time in low- or under-resourced communities.

Recommendation: Incorporate broader understanding of ROI and equity into project consideration

- Measure ROI using various factors beyond common property values.
- Incorporate equity considerations in the analysis of return on investment.

Research Questions

① Public perceptions

- How are grey and green infrastructure perceived by planners and decision makers?
- How are grey and green infrastructure perceived by the public?
- Is there public awareness of how green infrastructure reduces risk and increases resilience?
- How is equity considered in communication with the public about green infrastructure?

② Pathways to increasing green infrastructure

- What conditions must be in place to advance green infrastructure?
- How do we measure the benefits of green infrastructure?
- How do we communicate to the public the benefits of green infrastructure?

③ Funding and financing

- What funding and financing mechanisms are available for green/grey-green infrastructure?
- What is the appropriate balance of federal, state, and local funding for green infrastructure?
- How is equity considered in the funding of green infrastructure projects?
- What are the equity impacts of program requirements for matching funds?

④ Measuring benefits and ROI

- How is equity considered in the determination of benefits or costs of infrastructure projects?
- What types of returns may be expected for different infrastructure, for whom, and in what time frame?
- How does equity factor into the ROI or benefit-cost ratio?
- Is there agreement across different stakeholders on how equity is considered in understanding the costs, benefits, or ROI for infrastructure projects?
- How does ROI vary across vulnerable areas and across population groups?
- How do projected or expected benefits compare to what was achieved or realized?

⑤ Case studies

- What can we learn from case studies of successful planning and implementation for green and grey-green infrastructure projects?

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<https://sites.wp.odu.edu/workshop>

