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NJ Climate Adaptation Alliance

Stakeholder Engagement Report: Environmental Groups

Climate Change Preparedness in New Jersey

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Introduction

With support from the Kresge Foundation, the New Jersey Climate Adaptation Alliance (Alliance) is developing a compendium of state and local public policy recommendations to enhance climate change preparedness in New Jersey. As part of that effort, the Alliance solicited insights and recommendations through various methods to understand how specific sectors in New Jersey perceive climate change impacts and how these sectors are prepared for the potential effects. This process will help the Alliance identify specific policy changes that are needed within the environmental sector so that it can better prepare and respond to needs that may result from a changing climate.

Background: Environment

New Jersey is home to a diverse ecology, including a 127-mile long coastal shoreline, several large rivers, oak/hickory forests in the north of the state, and pine forests in the south. New Jersey is also home to numerous organizations committed to the protection and preservation of New Jersey's environment. These organizations include NY/NJ Baykeeper, the New Jersey Audubon Society, the Association of New Jersey Environmental Commissions, the American Littoral Society, the New Jersey Highlands Coalition, Stony Brook Millstone Watershed Association, the Pinelands Preservation Alliance, and Raritan Headwaters, among others. This paper is intended to represent the views and opinions of various stakeholders in the environmental sector in New Jersey.

Approach

The Alliance reached out through its members and partners to key stakeholder groups within each of the targeted sectors to solicit opinions and facilitate discussions on climate adaptation in New Jersey. As part of the stakeholder outreach, Rutgers University hosted a listening session in March 2014 with regional and statewide environmental groups to gather input on public policy recommendations this group believes are needed to better prepare New Jersey for a changing climate. The individuals attending the listening session represented diverse interests ranging from coastal to uplands to the energy sector. This group reviewed "Resilience. Preparing New Jersey for Climate Change: A Gap Analysis from the New Jersey Climate Adaptation Alliance," in order to discuss environmental perspectives related to the following sectors: Agriculture, Coastal Communities, Natural Resources, Energy, and Water Resources. [1]

Discussion

The environmental representatives understood that the focus of the Alliance recommendations was on adaptation; however, they felt that carbon emissions reduction must be addressed in the future, regardless of connection with adaptation measures. The group also noted that the Rutgers University surveys conducted after Hurricane Sandy indicated strong public support for restrictive land use policies designed to address climate

[1] New Jersey Climate Adaptation Alliance (NJCAA). 2013. *Resilience. Preparing New Jersey for Climate Change: A Gap Analysis from the New Jersey Climate Adaptation Alliance*. Edited by Matt Campo, Marjorie Kaplan, Jeanne Herb. New Brunswick, New Jersey: Rutgers University.

preparedness and that such public support should drive the nature of the Alliance recommendations. [2]

Stakeholders suggested that the existing utility business model could not support an electric system that is decreasingly reliant on fossil fuels without commensurate investment in renewable energy and distributed generation projects. They suggested that hardening of the system is necessary, but is not the only tool for increasing resilience. Furthermore, the group discussed that the Board of Public Utilities should establish a proceeding to lay the groundwork for a new utility paradigm that will provide a clean, reliable and resilient energy infrastructure.

Environmental stakeholders also discussed the difference between the inland effects and coastal effects of Hurricane Sandy. Inland communities experienced a significant amount of forest damage and damages to electric infrastructure. They further suggested that there is a knowledge gap in understanding the impacts of extreme events, and specifically impacts from Hurricane Sandy, on the state's forests. Stakeholders also communicated concerns about the location of utility infrastructure (e.g., pipeline, power distribution, etc.) and the perceived lack of a comprehensive plan that locates future infrastructure in areas that are more resilient and less disruptive to natural systems.

The group indicated that the use of emissions offsets as a vehicle to generate revenue for adaptation implementation should only be a secondary consideration to implementation of robust emissions reductions efforts. Any offsets effort demands rigid scientifically based standards and must have a strong nexus to the impacted community. In other words, the stakeholders felt that in order for offsets to be effective in increasing community resilience, any offset mechanisms must be structured to ensure that communities most at risk from climate change impacts receive the greatest benefits from the offsets.

Climate Change Policy Concerns

The group discussed policy gaps and causes for concern in several areas. Most of these gaps were subsequently used to develop the recommendations summarized in the next section.

Water Resources

Stakeholders felt that climate change could seriously and negatively impact water resources in New Jersey. Pollution is a concern, given many wastewater treatment plants are located in low-lying areas and are vulnerable to extreme weather events and sea level rise. The potential exists for sea level rise impacts to contaminate fresh water aquifers with salt water. Droughts could stress existing reservoirs and regional droughts could increase demand for New Jersey's water from neighboring states. Stakeholders were not aware of any existing policy to manage the export of water from the state and suggested that this might be an important area of further research for the Alliance. Additionally, stakeholders perceived a lack of policies that could effectively prevent municipalities routing their storm-water runoff onto neighboring municipalities, potentially exacerbating flooding conditions.

[2] Greenberg, M. R., Weiner, M. D., Noland, R., Herb, J., Kaplan, M. and Broccoli, A. J. (2014), Public Support for Policies to Reduce Risk After Hurricane Sandy. Risk Analysis. doi: 10.1111/risa.12203

Energy and the Environment
Stakeholders concerns centered on a perceived lack of comprehensive planning that accounts for the resiliency of utility systems, particularly pipeline systems. Stakeholders also felt that increasing the adoption of solar as a source of electricity would both lower emissions and make the electric system in New Jersey more resilient.

Data and Research
Environmental stakeholders were concerned about the lack of data and research about the effects of natural disasters on the different ecological systems of the state. They felt more information is needed regarding coastal impacts, but especially inland impacts that have not been well studied.

Policy Recommendations

Consistency in Direction and Coordination in Government Programs and Agencies
Stakeholders discussed several examples that they perceived to display a lack of coordination between or within government agencies such as the Office of Emergency Management, the Department of Environmental Protection, the Department of Community Affairs, and the Governor's Office of Recovery and Rebuilding. Stakeholders felt that there is a lack of clear direction on climate change issues from the state as a whole. Their perceptions were illustrated through an anecdote regarding a state agency "upselling" municipalities to natural gas generators, despite several municipalities desiring to invest in solar.

Participants felt that NJDEP should address coordination between its departments responsible for wildlife management, especially related to the development of clear policies regarding the restoration of flora and fauna populations after disasters.

Participants suggested that New Jersey's Energy Master Plan could address the perceived gap in comprehensive planning for the need for and location of pipelines and utility lines. Emergency response protocols also suffer from a possible lack of big-picture planning, and there is a need for improved communications about potential contamination in floodwaters, including raw sewage, oil, and hazardous substances.

Proactive Policy
Participants in the discussion frequently cited the need for New Jersey to act now to ensure that policy takes into account expected changes in the future. Stakeholders indicated that the state's Water Supply Master Plan needs to be updated to reflect sea level rise, with regulations and policies to ensure that the changes are implemented following shortly thereafter. Though policies exist for the use of water from individual reservoirs, there is currently no set policy on the export of water from New Jersey to neighboring states, which could face worsening drought conditions.

Participants suggested that New Jersey should require cumulative impact analyses that include climate change to ensure that state action does not disproportionately affect people who are already negatively impacted.

The group suggested that New Jersey's electrical infrastructure could take advantage of opportunities for greater resiliency through renewable technologies and distributed power systems. Solar installations could be "harbors" after the storm when the grid goes down. Micro-grids should be encouraged, and utilities should include solar as part of any resiliency initiative. NJFree, a coalition of individuals and organizations committed to improving sustainability policy in New Jersey[3], should serve as a starting point for developing energy efficiency and home solar policies.

In relation to proactive planning, participants were most concerned about stormwater and flood planning policies. Flood maps need to be updated and linked to local ordinances; better data is needed for this. Communities need to build to future conditions, rather than present conditions. Grants given out for Hazard Mitigation Planning should be more strongly tied to the incorporation of all climate change impacts, such as heat waves and drought, rather just one impact, such as flooding. There is also a need for a regulatory response and strong guidance from government, including stronger flood hazard regulations and local stream corridor and steep slope ordinances that exceed current state requirements.

Participants believe that the state needs to enforce its existing stormwater and floodplain regulations; this applies to both new development and redevelopment. Older developments that pre-date stormwater regulation have created a significant and unmitigated "stormwater legacy." Regulations should be modified to require reductions in runoff and increases in infiltration. The group also recommended implementing an impervious cover tax and improving stormwater runoff systems. Regional planning is needed to ensure that upstream towns do not disregard downstream towns when developing.

Other proactive policies desired by the group include a constitutional dedication of the Clean Energy Fund, rejoining the Regional Greenhouse Gas Initiative, implementation of the existing Global Warming Response Act, and improved policies to protect upland forests.

Emissions Reduction Recommendations

The group discussed several policies that overlap between adaptation and climate change mitigation (emissions reduction). Existing building codes should be brought up to date in order to increase energy efficiency. Resiliency plans should consider carbon footprints. The State should move forward with offshore wind development, through enforcement of the Energy Master Plan and the promulgation of rules. Lastly, the state should pair up processes for multiplier effects, for example, integrating green infrastructure into development and redevelopment to reduce flooding issues.

[3] NJ Free, part of the Mid Atlantic Solar Energy Industries Association https://mseia.net/solar/nj-free/