Resilience Metrics

Case Study: Building Capacity to Track Indicators and Metrics

How small Hudson River communities can leverage outside resources

Overview

Small communities, especially those that have recently experienced storm damage, recognize the need for adaptation. Yet, individual small towns along the Hudson River estuary do not have the capacity to adopt or continually track indicators and metrics.

The potential exists for small communities to work with local and regional NGOs—possibly with State support—to track useful indicators. Communities have successfully sought funding and partners to assess adaptation needs and develop adaptation plans. Moreover, State grant programs have been developed to foster both adaptation planning and implementation.

This aerial photo of Piermont village and surrounding marsh exemplifies the vulnerability of Hudson River Valley communities to sea-level rise and storm-related flooding.

Background

New York State has promoted local action on climate change since 2009 through its Climate Smart Communities (CSC) program, which encourages communities to pledge to reduce greenhouse gas emissions and take steps to adapt to climate change.

In 2014, the State launched a CSC Certification program. The program aims to engage and educate local governments in New York State, provide a robust framework to guide their climate action efforts, and recognize their achievements as they make progress.

Today the program provides specific guidance on over 100 climate mitigation and adaptation actions. Registered communities earn points toward certification for each action they complete. Certified communities are more competitive grant applicants, among many other benefits.

After a series of large storms hit hard in 2011 and 2012, the Hudson River Estuary

This case study was created to serve as a reference for individuals interested in indicators and metrics to help communities define and track progress on their climate adaptation goals. Additional background and resources are available on the website: www.ResilienceMetrics.org. This website was developed in partnership with the National Estuarine Research Reserve System with funding from NOAA.

Job Aids

- Job Aid: Handout on Indicators
- Job Aid: Choosing and Prioritizing Indicators & Metrics to Track
- Job Aid: Assessing and Tracking Good Adaptation Outcomes Over Time
- Job Aid: Strategies to Minimize Monitoring Costs & Ensure M&E Gets Done

Resources

- New York State Climate Smart Communities Program: https://climatesmart.ny.gov/
- Resilience Roadmap: Planning for Piermont's Future: https://www.scenichudson.org/wp-content/uploads/legacy/files/Piermont%20Waterfront%20Resilience%20Task%20Force%20Final%20Report.pdf
- City of Kingston Tidal Waterfront Flooding Task Force: https://www.kingston-ny.gov/waterfrontfloodingtaskforce
- Planning for Rising Waters: Final Report of the City of Kingston Tidal Waterfront Flooding Task Force: https://www.kingston-ny.gov/filestorage/8463/10432/10440/10479/12782/10486/10490/Kingston_Tidal_Waterfront_Flooding_Task_Force_-_Final_Report.pdf

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Program, Scenic Hudson, the Consensus Building Institute, and the Hudson River National Estuarine Research Reserve (HRNERR) Coastal Training Program worked with the City of Kingston (23,000 residents) to identify its assets, climate vulnerabilities, and opportunities to increase the city's resilience to climate change. Funding followed in 2013-2014 for three smaller towns and villages along the 152-mile tidal Hudson River to develop desirable visions of the future, assess climate change-related risks, and begin to think about how to realize adaptation.

These efforts resulted in resilience plans. While each included a vision for the community's future and a suite of proposed actions, they all lacked metrics and indicators for communities to track their progress.

The Successful Adaptation Indicators and Metrics (SAIM) project came at an opportune time, in September 2015. Designed by HRNERR, state agency staff and project partners, the goal was to help the adaptation planning teams from these and other communities turn their visions for a desirable future into concrete, measurable goals, complete with progress-tracking mechanisms.

Outcomes

With the impact of the storms still fresh and anticipating the State requiring consideration of sea-level rise, storm surge, and changing flooding risk in waterfront development and infrastructure projects, communities were clearly focused on the need for adaptation. However the task of implementing adaptation projects and tracking progress seemed nearly insurmountable, especially to those small villages on the Hudson that don't even have full-time staff for that work. Under such capacity constraints, it is nearly impossible to connect today's adaptation work to the vision for a better tomorrow.

The SAIM workshop began with participants turning their lofty visions into concrete goals. They worked backwards from the ultimate desired outcomes to the present to identify specific important milestones along the way. Brainstorming indicators of adaptation success was invigorating and freeing for some ("we don't have time to think about these things usually") and overwhelming for others, who felt they needed more expertise to propose indicators for what they really wanted to know ("Doubting myself stops me from proposing indicators, like: how do you measure *not degrading the environment any further*?").

Stakeholders discussed how tracking indicators and metrics would need to meet several conditions to work in their context:

- Tracking would need to be tied to an incentive, e.g., getting access to State funding if progress can be shown;
- Indicators would need to be meaningful to those tracking them, not just to the State, to gain and maintain buy-in from those having to do the work;
- Indicators would need to be fed back to someone who actually cares to know about them and/or they need to make a real difference, i.e., there had to be reason and purpose behind tracking them;
- NGOs or consultants working with small towns would need to help writing indicator-tracking related work into proposals to get the necessary funds;

- There would need to be training in what to track and how to track it;
- Monitoring would have to be ongoing, not just a one-time thing; and
- For indicators to be really impactful in decision-making, and for the information "to have teeth," relevant policies or code would need to be formally adopted.

The workshop made clear that at the time, individual small towns along the Hudson would not have the capacity to adopt and continually track indicators and metrics. But working with local and regional NGOs, and possibly with State support, some useful indicators could be tracked.

Nevertheless, workshop participants found the discussion about adaptation success and how to measure progress profoundly useful. They identified more concrete goals consistent with the previously established vision; they also surfaced their previously unspoken "theories of change" (assumptions about how certain actions would lead to notable outcomes) and learned from each other's theories of change.

Thus, even if tracking indicators is not going forward immediately, stakeholders were critically engaged and felt they improved their thinking about how to move forward on adaptation.

Since then, the four initial Hudson River communities have made progress implementing projects identified in their climate adaptation roadmaps. State grant programs now support climate adaptation work, including funding to enable other Hudson River communities to undertake similar assessments of vulnerability and adaptation potential.