

NERRS Science Collaborative Advisory Board • September 7, 2016

Successful Adaptation Indicators & Metrics: Update & Out-year Planning

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In Search of Good Indicators & Metrics (I&M)



City Resilience Framework

+ Lots and lots of one-off tracking, evaluative, indicator systems

- There's a lot of interest in academia, among funders, and among on-the-ground implementers of adaptation to identify, prioritize, track and utilize indicators and metrics to gauge the success of their adaptation efforts.
- These are just a few examples.

SAIM Project Goals

- **Test and enhance a framework** for assessing and analyzing successful Reserve adaptive management in the face of climate change
- **Develop and track meaningful indicators** of adaptation success.
- **Examine manageable approaches for tracking** SAIM can be set up to track progress toward a common vision and specific adaptation goals.

... And produce outputs from the project that serve the NERRS and wider coastal and adaptation communities

- Our goals emanate from prior work by Susi with stakeholders in different regions to define the key dimensions of adaptation success.
 - That work identified **six dimensions of adaptation success** related to adaptation processes, decisions, actions, outcomes, capacities, and overcoming barriers.
- We seek to work with individual NERRS to explore what kinds of indicators can beneficially guide and inform work towards successfully adapting to climate change.
- And to understand what's needed, practically, to track and utilize indicators over time.
- Our overarching goal is to ensure that the work with individual Reserves ultimately serve the entire system.

Work Completed to Date

- Webinars to whole system
- 3 workshops with 3 Cohort1 reserves (Year 1)
- 1 workshop complete, 2 to go (both at KBNERR) with Cohort2 reserves (Year 2)
- 1 peer-reviewed paper on adaptation I&M
- 1 cross-cohort meeting at Annual Meeting 2015; same in Williamsburg + professional sharing session
- Various presentations to and exchange of lessons with groups inside and outside of system
- Ongoing tracking of progress of Cohort1 (and now) reserves



The reserves engaged as part of cohort 1 were: Wells, Tijuana, and Hudson.

The reserves engaged as part of cohort 2 were: Jacques Cousteau and Kachemak Bay

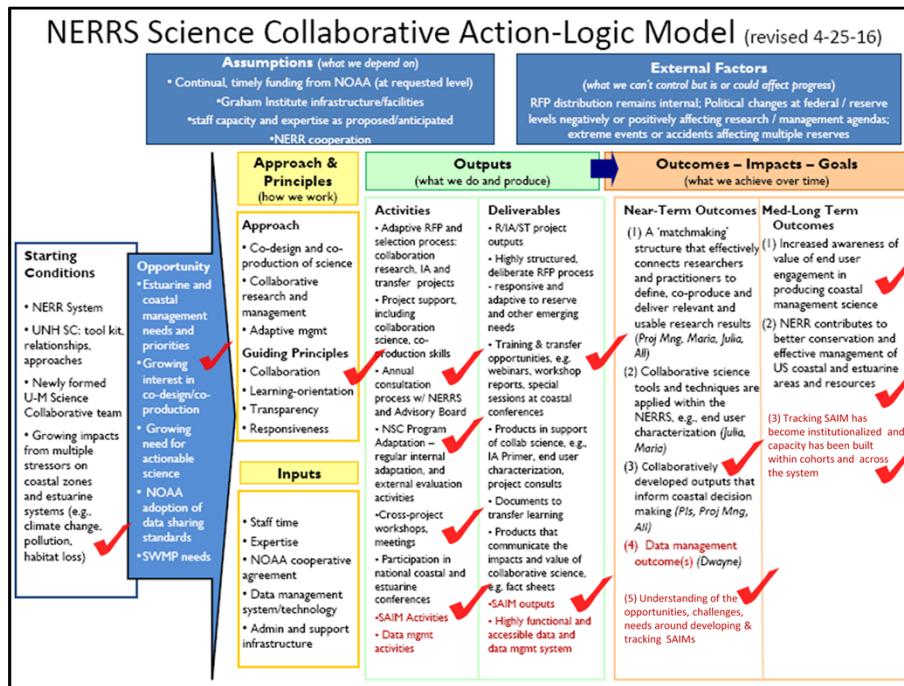
We have a first publication from this project, now available online:

Arnott, James C, Susanne C Moser, and Kristen A Goodrich. 2016 (in press). "Evaluation That Counts : A Review of Climate Change Adaptation Indicators & Metrics Using Lessons from Effective Evaluation and Science-Practice

Interaction." *Environmental Science and Policy*.
doi:10.1016/j.envsci.2016.06.017.

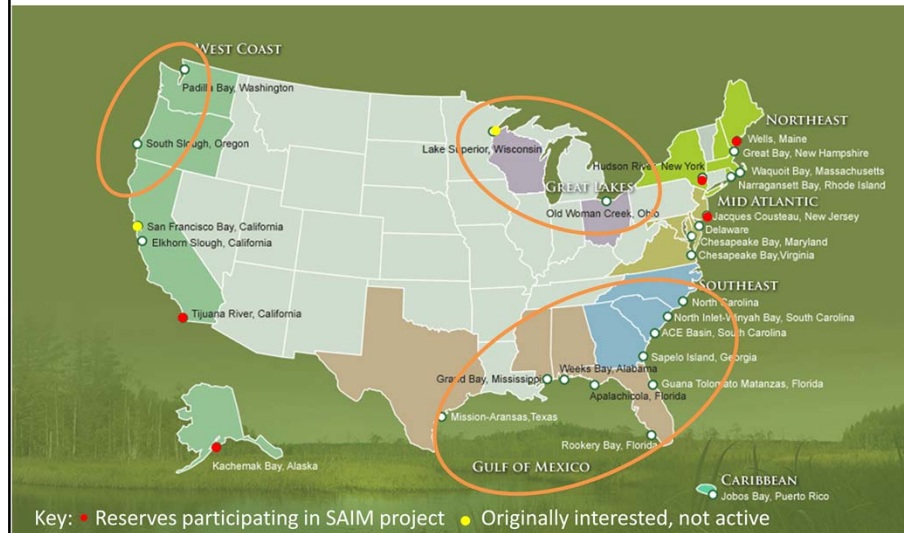
Directly available from:

<http://www.sciencedirect.com/science/article/pii/S1462901116303483>



- Our work contributes to the overall NSC goals (see red check marks for specific contributions aligned with the Science Collaborative Action-Logic model), including an intensive focus on collaborating with NERRS.

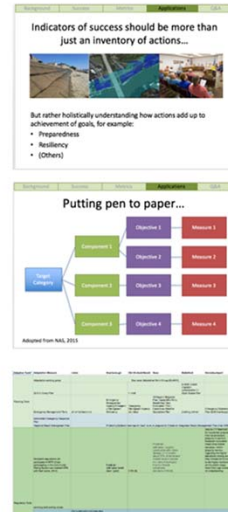
Geographic Imbalance



- Based on who responded to our initial webinar and invitation to collaborate, we have good representation in the Northeast, California and Alaska, but are missing partnerships in the SE, Great Lakes, and NW.
- The selection criteria initially emphasized:
 - Ongoing work on adaptation,
 - Interest in the question of adaptation success and identifying indicators and metrics, and
 - Reserve commitment to partnering with SAIM leads, including co-organizing a workshop and ongoing tracking of identified indicators over time.
- Observations to date suggest that participating reserves are enthusiastic about the project, happy to organize a workshop, but capacity to do ongoing tracking of indicators is extremely limited.

Capacity Constraints are Very Real

- Making sense of indicators & metrics holistically is an initial hurdle
- Selecting indicators requires more work on top of existing commitments
- And then there's the work of tracking, maintaining, let alone *using* I&M

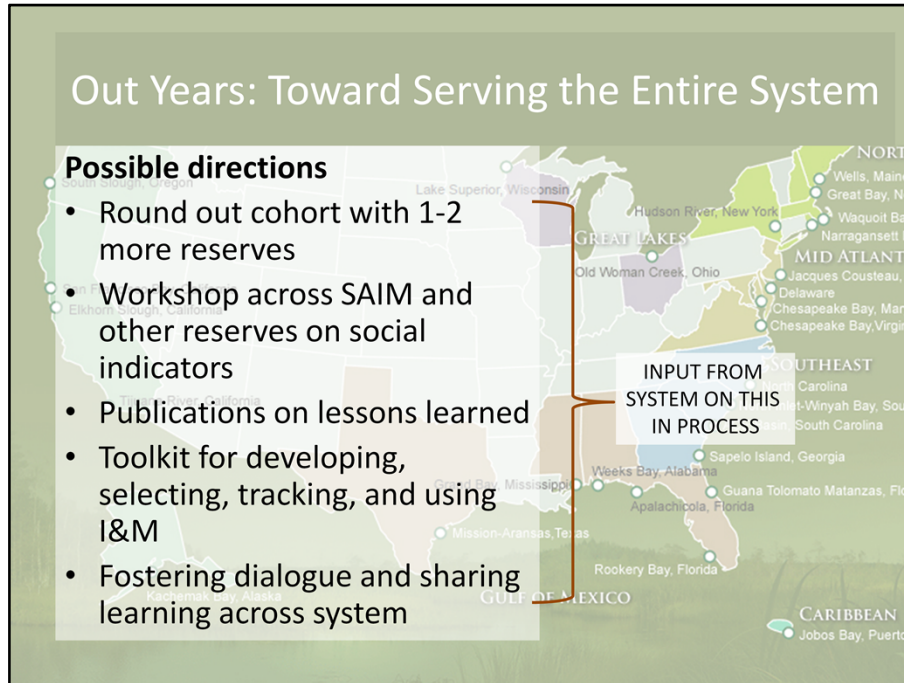


- We've learned that getting a handle on what meaningful indicators might look like (beyond inventories of actions undertaken) is challenging, and not completed quickly or easily.
- We've learned that actually selecting indicators can be more challenging.
- That's to say nothing of the challenge of tracking, maintaining, and using indicators. Still that has not stopped our intrepid cohort partners, like the Wells Reserve which has initiated a process to track activities of 10 communities in SE Maine over time.
- To facilitate our tracking of what participating reserves are doing post-workshop we've conducted regular phone check-ins and set up an online tracking survey.

Out Years: Toward Serving the Entire System

Possible directions

- Round out cohort with 1-2 more reserves
- Workshop across SAIM and other reserves on social indicators
- Publications on lessons learned
- Toolkit for developing, selecting, tracking, and using I&M
- Fostering dialogue and sharing learning across system



- At the NERRS/NERRA Annual Meeting 2016, we will again meet with all reserves to facilitate cross-reserve learning and explore future adaptations to the project plans. We also will share initial insights and findings at a Professional Sharing Session. This may generate interest from other reserves that are not currently participating.
- We are potentially interested in adding one or two additional reserves into our cohort of reserves that we work intensively with. The criteria would be the same as before: reserves that have existing adaptation activities underway that would benefit from in depth exploration of climate adaptation indicators and metrics (e.g., participating in a planning process with nearby communities, undertaking a process to evaluate adaptation within the NERR itself). In addition to the commitment to work with us, and track indicators over time, high priority would be given to reserves that can fill gaps in the geographically underrepresented regions.
- In other words, we think partnerships will work best when there's a clear way this focused discussion on indicators can add value, not extra work!
- We will also be seeking additional input on what kinds of tools and resources will be useful to the entire System, both from cohort members and the System as a whole.

Some Questions for Advisory Committee

- What would make this project valuable to the system as a whole?
- What would give it lasting impact?
- How important is greater diversity/geographic balance?

THANK YOU!

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