



Exploring and Overcoming Implementation Barriers to Catalyze Meaningful Adaptation Action

Track 3 Intro Webinar | July 14, 2021



CAF 2021: The Grand Adaptation Challenge



Advancing Equitable Adaptation



Integrated Planning for Holistic Solutions



Catalyzing Meaningful Adaptation Action

Track 3 Facilitators



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Director of Programs
Center for Creative
Land Recycling



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Senior Facilitator and
Vice President
Kearns & West



Melodie Grubbs

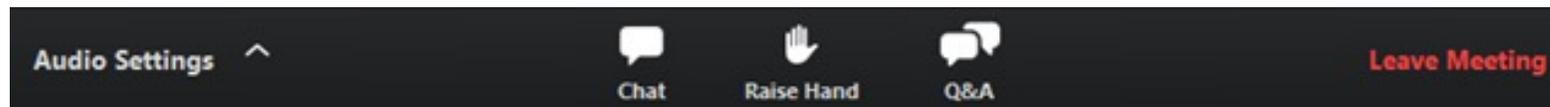
Science, Research &
Policy Specialist
USC Sea Grant Program

Webinar Agenda



Q&A

- Submit questions for panelists through the Q&A module at any point during the webinar.
- Upvote questions that you are interested in hearing responses to.



Chat

- Engage in a dialogue with your peers – share resources, case studies, and your ideas.
- Chat **Julia Kim** or **Kelsey Wolf-Cloud** if you encounter technical issues.

Catalyzing Meaningful Adaptation Action

Year after year, we have been seeing more communities assess climate vulnerabilities, develop adaptation plans, and begin **implementing adaptation strategies**.

However, there are **many barriers** that must be overcome in order to **catalyze meaningful and equitable adaptation** at the pace and scale demanded by the climate crisis.

Key Adaptation Implementation Challenges



Funding



Effective Collaboration
Building Capacity



Legal



Balancing Near-term
and Long-term



Lack of
Resilience Metrics

Introducing Our Presenters...



Juliette Finzi-Hart

ICARP Program Manager

Governor's Office of
Planning and Research



Maureen Frank

Deputy County Administrator

Tuolumne County



Susan Silber

Founder and Director

NorCal Resilience
Network



Dr. Susi Moser

Director

Susanne Moser
Research & Consulting



Integrated Climate Adaptation and Resiliency Program Helping Communities Adapt: Planning, Finance & Insurance

JULIETTE FINZI HART AND ICARP TEAM!
CA ADAPTATION FORUM | JULY 2021

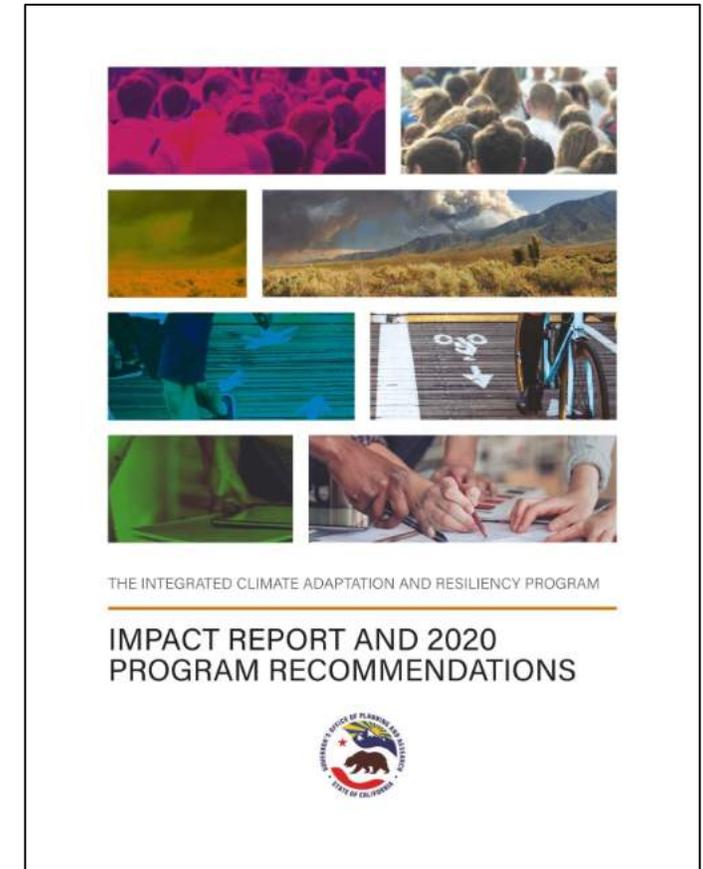
Integrated Climate Adaptation and Resiliency Program

ICARP advances a climate-resilient California for all.

ICARP has a statutory directive to drive a cohesive, coordinated response to climate change impacts across local, regional and state efforts, **prioritizing equity** and integrating **mitigation with adaptation**, via:

1. The Adaptation Clearinghouse
2. The Technical Advisory Council

See 2020 Impact Report at opr.ca.gov/planning/icarp/



Technical Advisory Council

Charge:

“Support OPR’s goals to facilitate coordination among state, regional, and local agency efforts to adapt to the impacts of climate change”

Membership:

- State agencies
- Regional, local, and tribal governments
- CBOs and non-profits
- Boundary organizations
- Private sector companies



opr.ca.gov/planning/icarp/tac/council-members.html

Adaptation Clearinghouse

The Adaptation Clearinghouse is the State of California's consolidated searchable database of resources for local, regional and statewide climate adaptation planning and decision-making. Search and explore resources for adaptation and resiliency efforts in California. [Learn more.](#)



ResilientCA.org

CALIFORNIA ADAPTATION CLEARINGHOUSE



Climate Adaptation and Local Implementation

Agencies face multiple “financing” challenges...

Survey question on perceived barriers to adaptation efforts – top four

- Lack of funding to implement
- Insufficient staff resources to analyze relevant information
- Current pressing issues are all consuming
- Lack of funding to prepare a plan



Moser, S., J. Finzi Hart, A. Newton Mann, N. Sadrpour, P. Grifman. 2018. **Growing Effort, Growing Challenge: Findings from the 2016 CA Coastal Adaptation Needs Assessment Survey**. California's Fourth Climate Change Assessment. Publication number: CCCA4-EXT-2018-009.

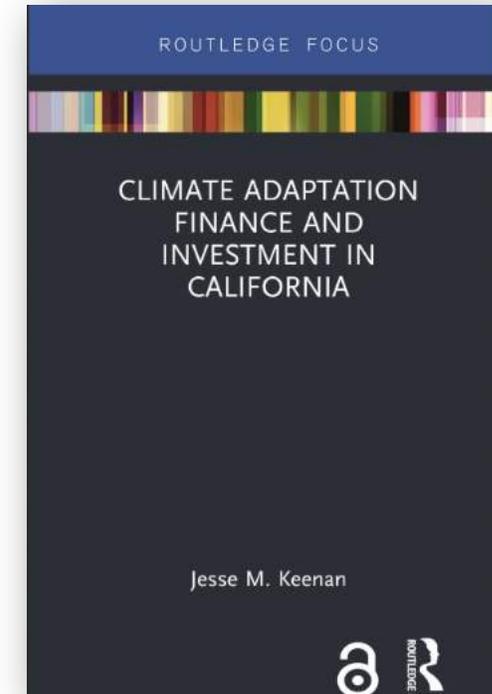
Climate Adaptation and Finance Investment in California

Funding sources covered

- Loans, Insurance & Incentives
- Taxes, Assessments, Charges & Fees
- Public Sector Grants, Loans, Insurance and Incentives

Chapter 3: survey of funding sources

- Local
- Public and private utilities
- State government
- Federal government
- Civic and private sectors
- Alternative funding models



Keenan, J.M. (2018). *Climate Adaptation Finance and Investment in California*. London, UK.: Routledge.

<https://resilientca.org/topics/investing-in-adaptation/>

Climate Adaptation and Finance Investment in California

Existing Gaps / Areas of Need:

- Standard assessment approaches to determine right funding options
- Ensuring investment in equitable outcomes

Key Takeaways:

- Need revenue stream if going to rely on financing mechanisms other than grants
- Need to incorporate climate projections and uncertainty into standard accounting and disclosure processes, especially in asset management

Table 9: SPARCC Capital Screening Evaluation Criteria (2018)

	Racial Equity	Health	Climate
Project measurably improves social determinants of health and would be expected to reduce racial disparities in health outcomes.	Red	Red	Red
Project addresses other environmental determinants of health and would be expected to reduce racial disparities in preventable illness.	Red	Red	White
Project responds to specific health needs of the community.	White	Red	White
Project is designed to impact racial equity outcomes identified by collaborative table or a community informed plan.	Red	White	White
Community is engaged in the design of the project and/or project is consistent with an existing community informed plan.	Red	White	White
Community is incorporated into the ownership, governance, and/or asset building aspects of the project.	Red	White	White
Project team has identified potential negative unintended racial equity outcomes and has developed strategy for mitigation.	Red	Red	Red
Project features a resilient and/or sustainable design with attention to energy and water efficiency.	White	White	Red
Project increases active or public transport options for residents and/or adds key neighborhood features and amenities.	Red	Red	Red
Project strengthens community members' resilience against impacts of climate change, emergencies, and natural disasters.	Red	Red	Red
Project is informed by analysis of relevant data during and after development process in order to leverage project's impact.	Red	Red	Red
Project demonstrates consistency with collaborative table's work plan and theory of change.	Red	Red	Red

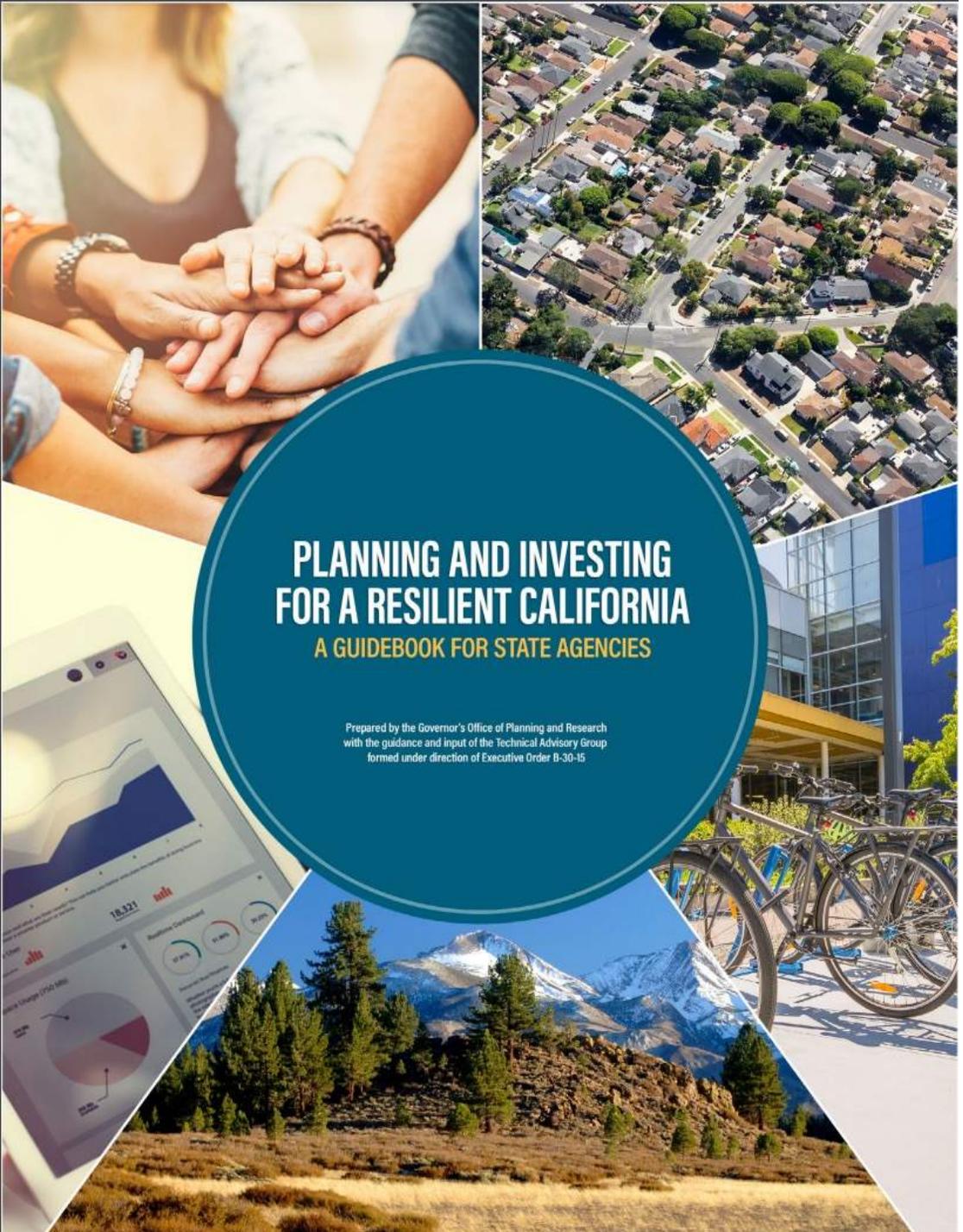
Keenan, J.M. (2018). *Climate Adaptation Finance and Investment in California*. London, UK.: Routledge.

<https://resilientca.org/topics/investing-in-adaptation/>

Operationalizing climate risk

- Executive Order N-19-19: State Investments and Assets
- CA Climate Risk Disclosure Advisory Group
- Coalition for Climate Resilience Investments





**PLANNING AND INVESTING
FOR A RESILIENT CALIFORNIA**
A GUIDEBOOK FOR STATE AGENCIES

Prepared by the Governor's Office of Planning and Research
with the guidance and input of the Technical Advisory Group
formed under direction of Executive Order B-30-15

Planning and Investing for a Resilient California

Currently being updated, too!

https://opr.ca.gov/docs/20180313-Building_a_Resilient_CA.pdf

Climate & Insurance

CA Department of Insurance / ICARP Climate Insurance Sub-Group

- Insurance & Planning Primers
- Landscape-scale adaptation strategies and risk analysis
 - E.g., fire breaks, coastal wetlands





2021 State Climate Adaptation Strategy

Building Resilience and Reducing Risks

EXTREME HEAT | WILDFIRE | DROUGHT | FLOODS | SEA LEVEL RISE

Draft Priorities

The Strategy should drive action toward critical priorities:



Strengthen protections for climate vulnerable communities



Advance public health and safety under a changing climate



Build a climate resilient economy



Accelerate nature-based climate solutions



Make decisions based on best available climate science



Leverage resources for climate action through partnerships and collaboration

Timeline

Q1 Internal coordination

Q2 Stakeholder engagement

- Regional Workshops (June)
- Tribal Outreach and Engagement (Summer)
- Extreme Heat Workshops (Summer)

Q3 Draft strategy released, public comment and workshops

Q4 Final strategy released



Thank you!

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

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[Sign up](#) for ICARP email updates

County Of Tuolumne

2021 California Adaption Forum

Grant Projects, Partnerships, and Implementation

Grant Projects, Partnerships, and Implementation

- Funding opportunities come fast and unexpected
- Be prepared before you get that grant notice
- Climate change and climate hazards are still new concepts for some people

Grant Projects, Partnerships, and Implementation

- Start the conservation now with your Board, Elected Officials, and Community
- The topic of Climate change and responding to climate hazards can be overwhelming Where do you start?
- Remember that responding to and mitigating the effects of climate change means different things to different people

Grant Projects, Partnerships, and Implementation

- Work to develop your communities' goals/concepts now so when funding applications come along you are ready to:
 - Define the Project
 - Tell your Story
 - Engage Partners
 - Write the Grant Application(s)

Grant Projects, Partnerships, and Implementation

- Get BUY-IN
- Buy-In is important for the:
 - Creation of the Project
 - Implementation of the Project
 - Stainability of the Project

Grant Projects, Partnerships, and Implementation

- Recently Tuolumne County partnered with the State in the National Disaster Resilience Competition (NDRC). This is a climate hazard related grant program.
- In 2013, Tuolumne County experienced the devastating Rim Fire (257,317 acres)
- In our County we know that another major wildland fire is not a matter of “if” it is a matter of “when”
- It was important to us to become more resilient ... but what did that mean

Grant Projects, Partnerships, and Implementation

- Through listening sessions, we asked our residents what a resilient community meant to them.
- What we heard was the following:
 - Need for better response/recovery to and from emergencies
 - Need for a healthier forest
 - Need for a better economy that capitalizes on our natural assets

Grant Projects, Partnerships, and Implementation

- From these listening sessions the State, Federal and Local Agencies started working on the NDRC grant and developed the “Community and Watershed Resilience Program”.
- This program consists of the following three pillars:
 - Forest and Watershed Health
 - Biomass Utilization Facility
 - Community Resilience Center Project

Grant Projects, Partnerships, and Implementation

- After receiving grant funds for this project, County knew that the only way the concept of a Community Resilient Center was going to be successful was to have BUY-IN.
- First step was to develop an organizational structure.
- In developing the organizational structure our goals were to:
 - Create a structure that was both streamlined and inclusive
 - Ensure all segments of our community had a voice in the process
 - Complete the project on time and within budget

Grant Projects, Partnerships, and Implementation

- County developed the following Committees:
 - Advisory Team
 - Community Stakeholder Advisor Committee
 - Operational Stakeholders Advisory Committee
 - Community at Large

Grant Projects, Partnerships, and Implementation

- Next step was to develop the goals we wanted to achieve with each of these centers.
- First goal for both buildings was to create a safe place to go during an emergency event.
- Second goal was unique to the two communities in which the Centers were going to be located.
 - **Groveland:** To create a facility to foster social cohesion and community resiliency.
 - **Tuolumne City:** To create a facility that fosters economic revitalization and economic resiliency.

Grant Projects, Partnerships, and Implementation

- The CRC Projects are truly a community driven project...
 - Goals of centers were developed by the Community
 - Design of centers incorporated these goals
 - Agencies we partnered with to provide services were requested by the community
- Several committee members are now partners in the project- providing services/programs, donations and additional grant support.
- Construction on both Centers started May 3, 2021, with completion anticipated late July 2022.

Groveland Community Resilience Center



Tuolumne City Community Resilience Center



Grant Projects, Partnerships, and Implementation

- Key Take Aways...
 - Talk to your community about concepts, ideas, and goals ahead of project funding
 - Buy-In from Elected Officials and your Community vital
 - Develop a committee structure that is streamlined and inclusive
 - Do not be afraid to put negative people on your committee

Grant Projects, Partnerships, and Implementation

- Keep people engaged all the way through the project
- Do not give up... it might take several times....
- Sometimes easier to implement project incrementally
- Do not be afraid to reach out to co-workers for assistance

TU  **LUMNE**
C O U N T Y

California Adaptation Forum
Exploring and Overcoming Implementation Barriers to Catalyze
Meaningful Adaptation Action

Susan Silber
NorCal Resilience Network





THE NORCAL RESILIENCE NETWORK

is catalyzing a Just Transition
to an equitable and regenerative region
by supporting and activating community-based and
ecological solutions in Northern California.

ROOTED IN
RACIAL AND SOCIAL JUSTICE
AND JUST TRANSITION PRINCIPLES





Community Resilience

“Social networks—the horizontal and vertical ties that connect us to others—are our most important defense against disasters.” Daniel P. Aldrich



alamy stock photo



1.

Circle of
Collaborators

2.

Resilience Hubs
Initiative

3.

Fundraising



NorCal Resilience Programs

+ Resilience Hubs, Spaces & Blocks



Community-driven gathering places which are demonstrations for climate solutions, and serve to coordinate & exchange communication, distribute resources, and support community programming both during emergencies and year-round.

Resilience Hubs



Resilient Spaces



Resilient Blocks & Neighborhoods



RESILIENCE HUBS

NorCal Resilience Definition: Resilience Hubs are community-serving facilities augmented to support residents & community members during disasters, while serving as demonstration sites for climate and nature-based, regenerative solutions year-round. The sites coordinate & exchange communication, distribute resources, and support community programming.

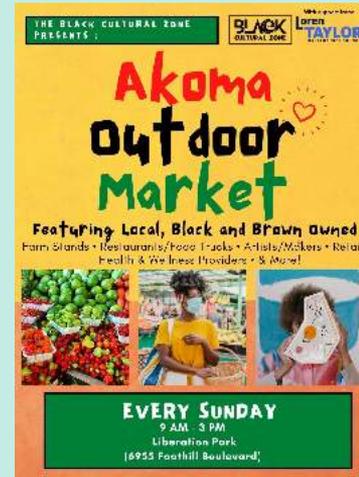
Places of worship, libraries, schools, community centers (youth, senior, recreation), apartment complexes, co-housing/intentional communities



RESILIENT SPACES

Community spaces (*without buildings*) that are intended to enhance or support community resilience through disaster preparedness, climate solutions and community programming

Community gardens, parks, open spaces, smaller businesses, schools, unhoused encampments with a community resilience focus, tiny home villages, *apartment complexes*



RESILIENT BLOCKS & NEIGHBORHOODS

Resilient Blocks & Neighborhoods: neighborhood-based approach; neighbors working together to build resilience



Steps to Create Your Fire Safe Council



1. Talk to Your Neighbors

- See who is already doing what
- Recruit interested community members



2. Make Connections

- Contact MCFSC; collaborate with other residents & stakeholders
- Pool knowledge and get others engaged



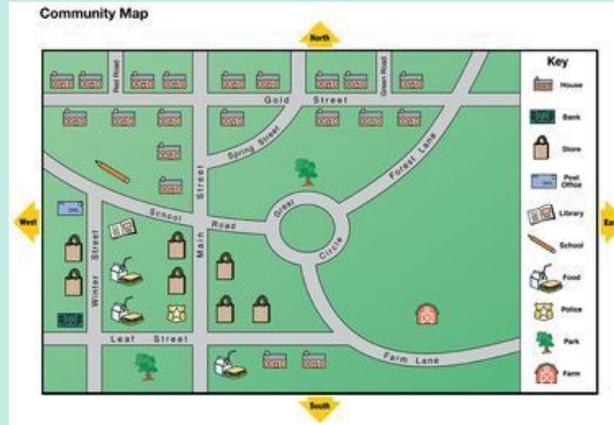
3. Create a Plan

- Identify goals and objectives
- Assess where you are at and where you want to go



4. Implement the Plan

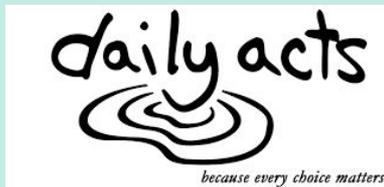
- Demonstration projects
- Gain and maintain momentum



Non Site-based Partners

Circle of Collaborators: Community Resilience Practitioners who are supporting the development of community resilience hubs, spaces & blocks

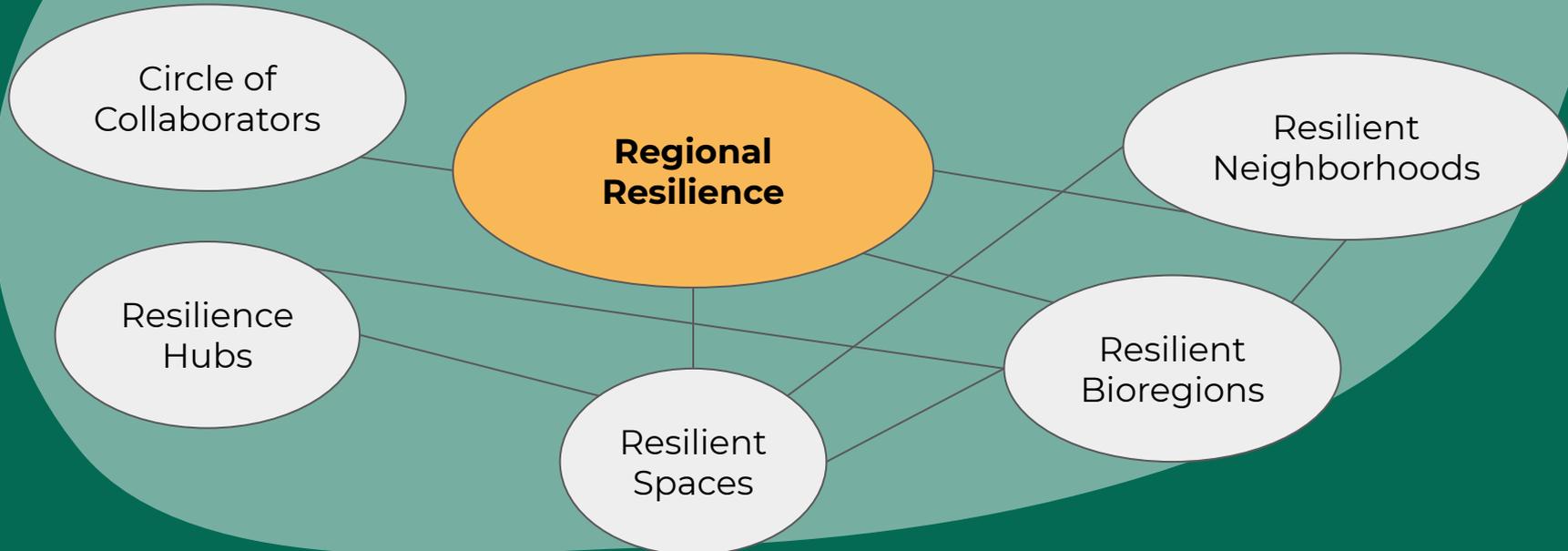
- ❖ Businesses: solar installers, water conservation infrastructure, earthquake retrofitting
- ❖ Nonprofits and Community Groups: community organizing, workshops, skill shares, policy work, stories



NorCal Resilience Network Resilience Hubs Initiative



Creating a network of hubs, spaces, blocks, neighborhoods and bioregions in Northern California





CHALLENGE

Allocating limited resources to address a multitude of climate impacts and community needs, centering equity and vulnerable communities

Funding Need: Disaster Preparedness supplies and infrastructure





Funding Need: Assessments & Training

Eg: site assessments, community visioning sessions, training workshops & sessions

- ❖ **Training sessions by sector:** recreation centers, youth centers, senior centers, libraries, unhoused encampments, community gardens, schools, apartment complexes, co-housing/intentional communities
- ❖ **Training sessions by bioregion:** resilience hubs, spaces & blocks + nonprofit organizations/community groups
- ❖ Skill Shares





Funding Need: Programming & Projects

Eg: Mutual Aid Projects, garden work days, free fridges, anti-racism workshops, skill shares,

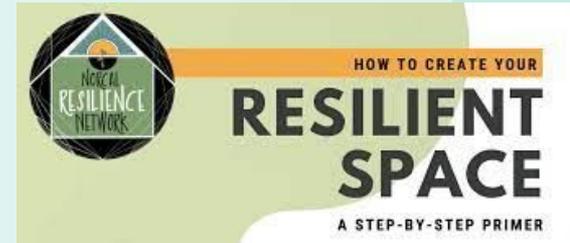
community block parties





Funding Need: Sharing Best Practices & Collaborating Across Hubs & Bioregions

Eg: monthly meetings, quarterly convenings, resource web pages, stories, cross-sector collaborations between NBO's and governmental agencies





Our Vision

“Just Resilience Fund”

GOALS:

- ❖ To create **intermediary fund(s) with both private and public dollars**, that redistributes funds to place-based projects and community groups, prioritizing smaller projects for resilience hubs, spaces and blocks in vulnerable communities
 - Run by Strategic Growth Council or specific foundations in various bioregions
- ❖ To implement an equitable, community-based and democratic process to distribute the funds
 - Grants read by community members





How can the Problems Become the Solutions?

The Challenges:

90% of foundation dollars go to 10% of organizations; very little funding for grassroots organizations and projects

\$75 billion dollar surplus in CA, but government funding rarely “trickles down” to the grassroots

Much of state funding for “resilience hubs” will likely be just for disaster preparedness and bigger resilience hubs projects, rather than holistic vision and grassroots projects

Our Solutions

→ The Just Resilience Fund will prioritize funds for grassroots organizations and projects, with a more accessible application.

→ Redistribute funds from government agencies and municipalities (eg, EBMUD funding) to the hubs, spaces and blocks.

→ Funds can be used for a variety of needs, from infrastructure to capacity building to community building events.







CHALLENGE

Effective Collaboration across jurisdictions,
sectors and organization type





Our Approach

- Co-create training and visioning sessions for resilience hubs, spaces & blocks: by sector, by bioregion, by topic (libraries! Recreation centers! East Oakland!)

Support coalition-building: Create cross-sector working groups, by topic (food, water, energy!)

Support regular convenings to build trust and relationships across silos and sectors (zoom calls, in-person convenings, cross-sector panel discussions)

For local governments: build staff time for community engagement into every job description. Support private/public partnerships.





Local businesses

Governmental
agencies and
jurisdictions

Nonprofit
organizations &
Community
Groups

***RESILIENCE HUBS: PARTNERS
IN THE ECOSYSTEM***

Multi-Sector Networks:
run by a coalition of
CBO's & local
governments

Volunteers





CHALLENGE

Public & Political Support





OUR APPROACH

Promote/share stories about the co-benefits of adaptation programs.

Violence prevention, food security, building bridges across differences, youth development





OUR YOUTH ARE LEARNING EXPERIENTIAL SKILLS OF ECOSTEWARDSHIP, HEALING, SELF-CARE, AND BUILDING COMMUNITY CAPITAL AS THEY MOVE THROUGH THEIR TRANSITIONAL HOUSING SITUATIONS AND BECOME READY FOR LIFE AS YOUNG ADULTS AFTER COVID.”



DREAM YOUTH CLINIC
OUTDOOR CLINIC COMMUNITY GARDEN
COME PLANT WITH US!!
Saturday, September 19th 10a-2pm



“We thought it would be a great space for our young people to be able to build something that they care about. Our youth in shelters live such transient lives. I want our garden to be a visible anchor of stability—a space they can tend and relax in and bring friends to.”

La Colina Community Circle (El Sobrante neighborhood)



Neighbors potting up volunteer seedlings





Building resilience, building community



*Swale-ing the
neighborhood
With work parties*



Disaster
Preparedness





susan@norcalresilience.org

Resilience Metrics

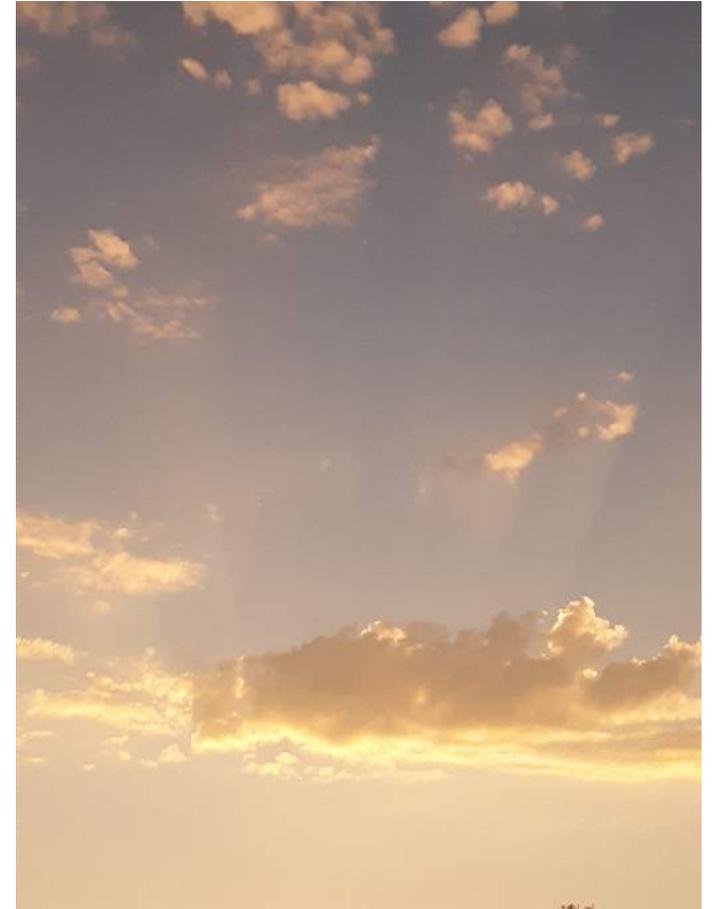
Making Tracking Adaptation Progress & Success Work for You

Susanne C. Moser, Ph.D.



Key Take-aways

- *Tracking adaptation progress and success - done right - helps*
 - improve adaptation planning and implementation
 - fundraising
 - public engagement and communication
 - accountability
 - learning over time
- Developing and using adaptation indicators and metrics should be *integrated throughout the entire planning and implementation cycle*, not just be considered an activity "at the end."
- Tracking adaptation progress must be realistic; and indeed, there are *ways to leverage existing processes and capacities* to make it affordable, efficient and well worth the investment.



The Typical Approach



against the

The Raging Performance Machine

Indicators

Relevance

Outputs

Goals

Data

Ratings

Progress

Performance

Quality

Reelection

Budgets

Data System

Management System

Effectiveness

Constituents

STANDARDS

Measures

S.M.A.R.T.

Reporting Cycle

Process

Success

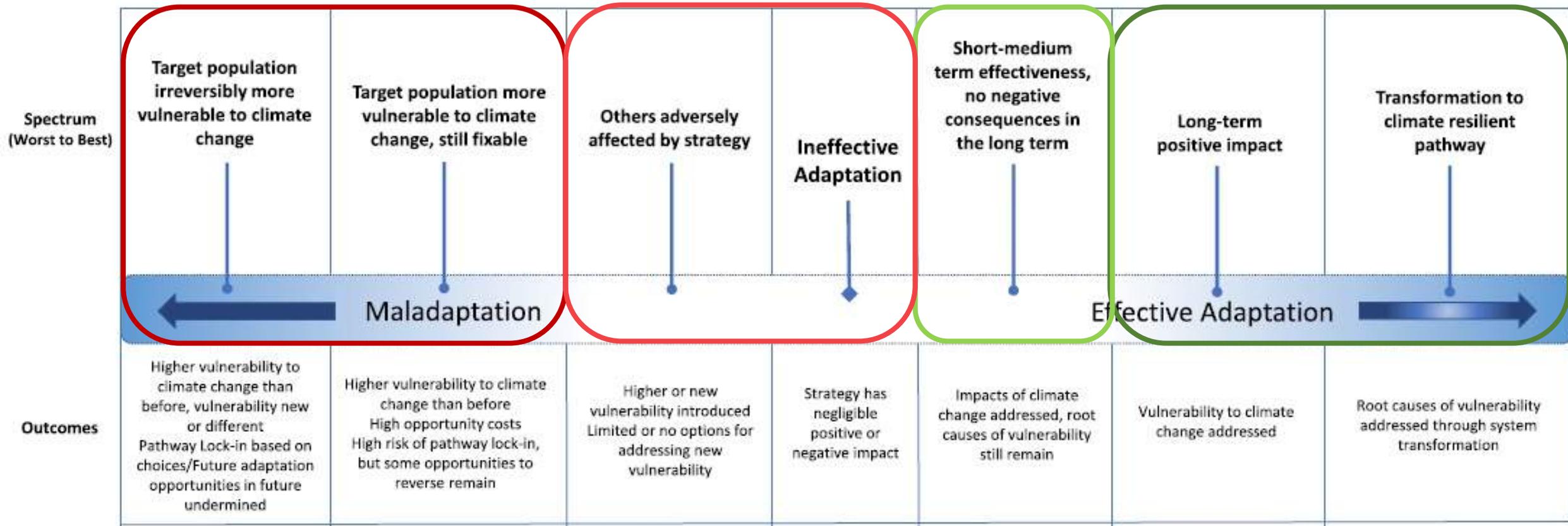
Outcomes

Targets

Where Do Our Efforts Fall on the Spectrum from Successful Adaptation to Maladaptation?

@ Minimum:
"do no harm"

Ideally:
"do better"



Four Projects To Find Some Answers

Identifying the Key Dimensions of Adaptation Success

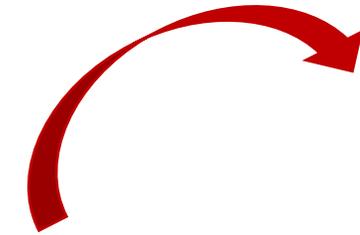


Sea Grant
Washington

Oregon

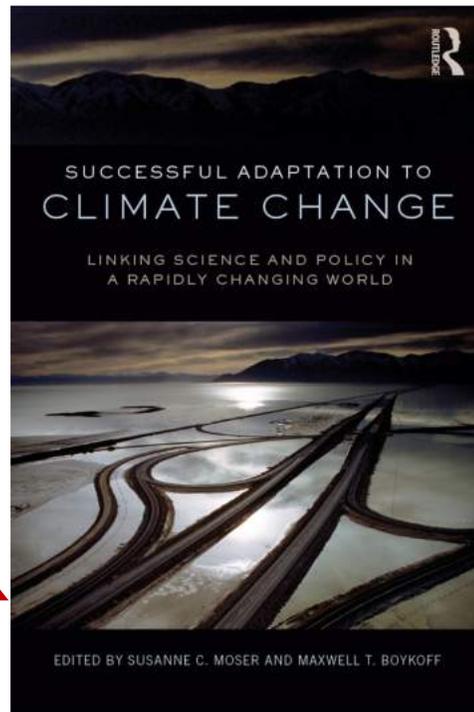
California

University of
Southern California



Book:

What do we know about successful adaptation?



SAIM Project with 5 Reserves: Indicators & Metrics



- Wells
- Hudson
- Jacques Cousteau
- Tijuana River
- Kachemak Bay

Catalyst project: Toolkit Development





About this Project

MAIN MENU

- + [Getting Started](#)
- + [Adaptation & Resilience](#)
- + [Indicators & Metrics](#)
- + [Applications](#)
- + [Resources](#)
- + [About](#)

Welcome to Resilience Metrics!

Welcome to *Resilience in the Face of Climate Change: Envisioning Success - Measuring Progress!*

The information, tools, and resources offered here aim to be helpful to those who have embarked on the journey of addressing the challenges related to extreme climatic and weather events and changing environmental conditions.

If you are interested in preparedness, adaptation, and resilience-building for a changing climate, you are in the right place.

If you are wondering what "adaptation success" looks like and how you might track your progress toward it, we offer ways to think about that and tools to help you find tailored answers.

Our focus is on defining and tracking adaptation success and progress.

For those interested in other adaptation-related topics and challenges, we point to related sites and tools along the way.

If you are ready to jump directly into working with indicators, click on the relevant icons. If you're not sure where to begin or find what you need, check out this [list of diagnostic questions](#), start at the [Getting Started](#) page or take our [diagnostic quiz](#) to find your entry point.

If you are ready to jump in on the work of developing and using indicators and metrics, you can directly go here:

- [Bounding and Assessing Context](#)
- [Visioning Success](#)
- [Exploring & Identifying Indicators](#)
- [Selecting Indicators & Identifying Metrics](#)
- [Tracking Indicators & Metrics](#)
- [Using Indicators & Metrics](#)

Why Think About Adaptation Success?

- Why Measure Progress?

Overarching: Responsibility for safeguarding people, economy, infrastructure, cultural assets, environment

1. Communication and public engagement

- Communicating hope and desirable goal to work towards
- Defining a common vision among diverse stakeholders

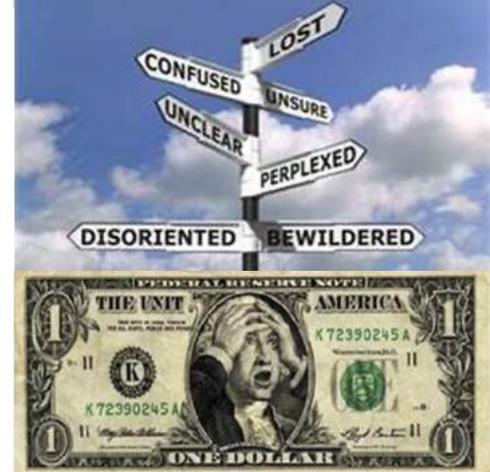
2. Deliberate planning and decision-making

- Setting clear goals, aligning means and ends (internal consistency)
- Best fit with other policy goals (external consistency)

3. Justification of adaptation expenditures

4. Accountability/good governance

5. Support for learning and adaptive management



Standard vs. Targeted Indicators?

Standard

- Easy/ier
- Possibly drawing on data that already are collected for other purposes
- Would allow comparison across jurisdictions
- Context-insensitive
- Likely less meaningful/telling
- Don't fit most projects

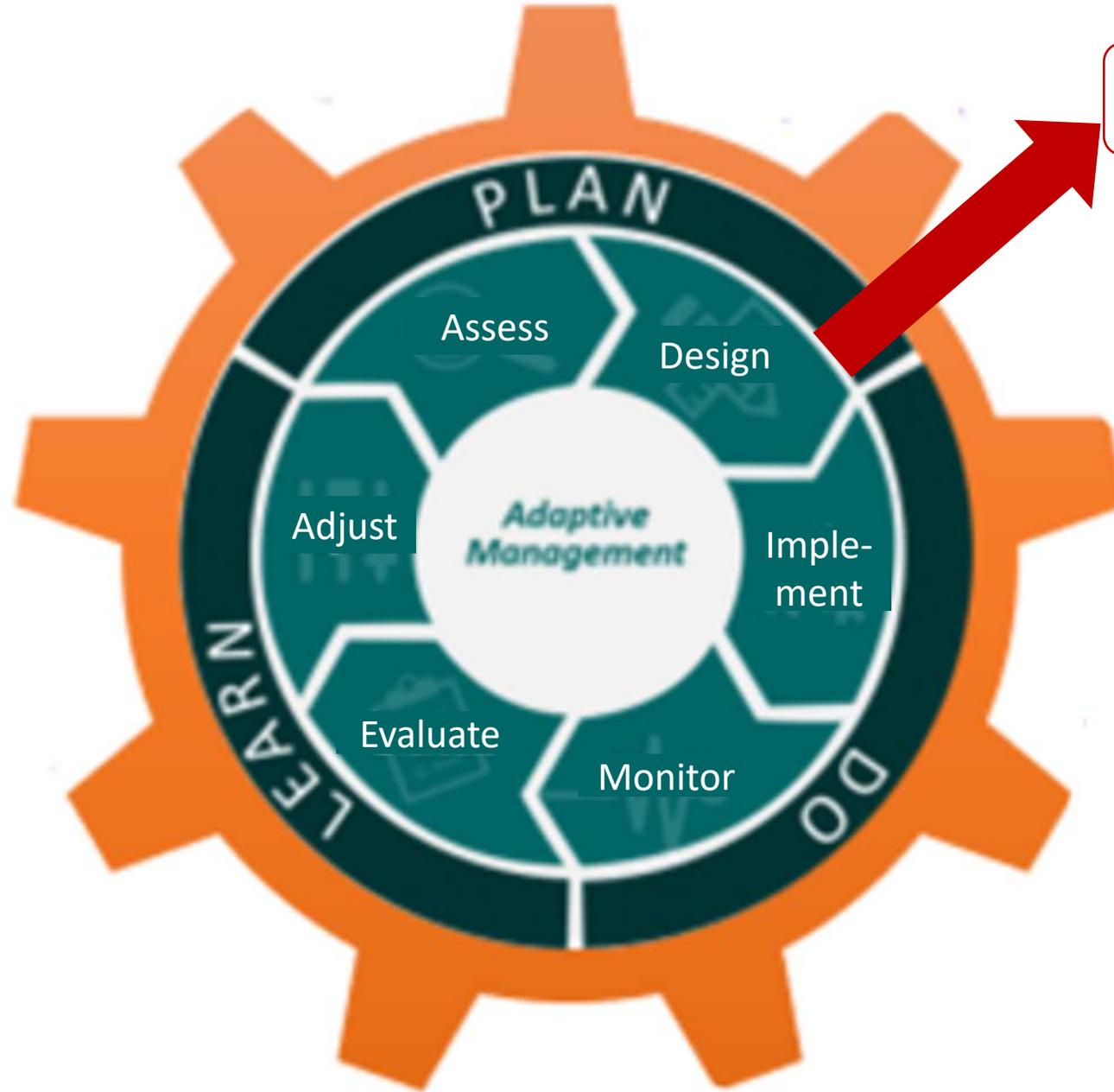
Targeted

- Require effort to identify and track by adapting entity
- May require new tracking
- Makes comparison more difficult
- Context-specific
- Most helpful to inform and guide your efforts, to your stakeholders
- Directly applicable to your project

Embed Indicator Development and Use Throughout the Adaptation Process



Start From Wherever You Are



View Edit Revisions

- MAIN MENU**
- + Getting Started
 - + Adaptation & Resilience
 - + Indicators & Metrics**
 - > Introduction
 - > Bounding and Assessing Context
 - > Visioning Success
 - > Exploring & Identifying Indicators
 - > Selecting Indicators & Metrics
 - > Monitoring Indicators & Metrics
 - > Using Indicators & Metrics
 - + Applications
 - + Resources
 - + About

Indicators & Metrics

Users of this site come from a variety of professions and have a wide range of backgrounds, training, practices, resources, and industry standards. Please use the tools offered here to complement your context-specific resources, approaches and processes. We hope they help you build your capacity.

• [Overview of tools, job aids, and case studies available here](#)

Whether you are a...

- Planner
- Natural resources manager
- Engineer
- Business supply-chain manager



"I recently began new collaborative research about building a more resilient

Six Key Steps in the Process of Indicator Development & Use

The purpose and key considerations for each step in the process of indicator development and use are described below. Users can read them all in sequence or click on the relevant links of interest for their current work:

- [Bounding and Assessing Context](#)
- [Visioning Success](#)
- [Exploring & Identifying Indicators & Metrics](#)
- [Selecting Indicators & Metrics](#)
- [Monitoring Indicators & Metrics](#)
- [Using Indicators & Metrics](#)

that exist.

- **Planning:** This phase includes developing goals and specific objectives, as well as determining alternative ways to reach those goals.
- **Implementation:** This phase includes making decisions, obtaining financial, political, and public support, and implementing the plan.

Research Scientist
Climate Assessment for the Southwest

Step-by-step explanation and guidance through the process

Do-it-yourself facilitation tools, job aids, resources

Case examples: How we did it

Lists of indicators



Job Aid: Sample Indicators and Metrics of Adaptation Success and Progress: Social Aspects

This list constitutes a sample of possible indicators and metrics that point to climate adaptation success and/or progress. It is derived from work with communities in Maine, New York, New Jersey, California and Alaska. For a larger list of indicators and possible metrics brainstormed by these communities, look for a searchable Excel spreadsheet in the Resources section of www.resiliencemetrics.org, called "SAIM Project_Indicator Brainstorm.xlsx" (status January 2020). Indicators can be searched by adaptation strategy, location, sector, or the six dimensions of adaptation success described at www.resiliencemetrics.org. This list is not refined, ranked or vetted by any scientific or governance entity although some indicators are in use. The list is solely offered to support other users' creative thinking and brainstorming of indicators/metrics that suit their unique situations.

Strategy	Indicator	Metrics	Dimension of Success						
Build capacity of stakeholders to carry out specific adaptation-related tasks	Adaptive capacity	Degree of learning (self-assessed, post training survey); intention to use learned knowledge/skills (expressed, post-training survey); frequency of training commensurate with rate of staff turn-over		x					
Improve pace and completeness of disaster recovery	Availability of sufficient emergency shelters	# and type of shelters used/not needed for speedy recovery (e.g., use of schools can delay recovery); # of shelter spaces			x			x	
Raise awareness about flood risks and response options	Awareness of flood response options	% of HH that received information on how to build resilience; attendance of public meetings on adaptation planning; # of surveyed residents who are aware of risks and response options		x				x	
Increase community disaster preparedness	Community preparedness	# of participants in emergency preparedness trainings		x				x	
Maintain adaptation efforts (even after/in absence of another extreme event)	Complacency (or absence of)	Stable/declining # of actively maintained flood insurance policies; declining outreach efforts; downgraded priority of adaptation actions (rankings on agenda of city council)			x			x	
Develop adaptation strategies for Reserve/ ecosystems that are sensitive to cultural preservation needs/ access by Native Americans	Culture-sensitive adaptation planning	Cultural group interested in working with ecological group (yes // no // emerging); significant archeological sites are being protected; # of adaptation design meetings attended by Cultural Resources specialist; cultural resources stewardship program developed (yes // no // in progress)	x		x			x	x



This job aid 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.

What Else Can the Toolkit Help With?

- What is a good indicator?
- What is a good adaptation process?
- What is a good adaptation decision?
- What is a good adaptation outcome?
- How do we get the right people in the room?
- How do we build trust?
- How do we deal with trade-offs?
- How do you prioritize indicator tracking?
- How do we minimize costs for developing and tracking indicators?
- How do we communicate adaptation progress/success?

Etc.



Job Aid: Strategies to Minimize Monitoring Costs & Ensure that Monitoring and Evaluation Gets Done

Strategies to Minimize Monitoring & Evaluation Costs

To minimize costs and staff time for tracking the identified indicators and metrics, a number of strategies can be used:

- **Government data** – Identify existing data monitoring efforts that produce data of interest (e.g., ongoing government-/taxpayer-funded data collection such as the Census, Bureau of Labor Statistics, or ongoing monitoring in federal or state-owned nature reserves);
- **Academic/expert monitoring** – Draw on long-term monitoring by academic or non-profit institutions (e.g., long-term ecological research stations, ongoing monitoring on protected land);
- **Citizen science** – Use data collected through citizen science (e.g., the Audubon Society's bird counts);
- **Local science institutions** – Make use of data collected by local science institutions (e.g., aquariums, science centers);
- **Partnerships** – Partner with teachers and researchers at local high schools, colleges and universities who may share interests, have necessary expertise and data collection equipment as well as eager students to conduct the data collection; many students find applied work that makes a real-world contribution exciting and meaningful;
- **Use or modify existing data collection/reporting** – Adjust existing or integrate additional data collection into already existing monitoring and reporting systems (e.g., annual reporting, post-workshop surveys, performance reviews);
- **Simplicity** – Keep data collection as simple as possible (e.g., use online/electronic data collection for simple compilation, integration, analysis, and display; but pen and paper will always do);

Strategies to Ensure Monitoring & Evaluation Get Done

To ensure that monitoring of identified indicators and metrics gets done, a number of strategies can be used:

- **Reporting requirements and mandates** – Some funding, regulatory and public health programs mandate reporting, such as for air and water quality, the incidence of certain diseases and so on. While not originally designed for adaptation, maintenance of certain public health and environmental conditions even as climate change worsens may be important outcome indicators that is already being tracked;
- **Policy and budget directives** – Directives from an organization's leadership or from higher-level authorities typically carry with them the obligation to regularly (e.g., quarterly, annually or event-driven) report back on achievements or progress toward set targets; thus, to the extent adaptation efforts are formalized in a policy, plan or associated budgets, tracking of certain data becomes part of people's day-to-day work;
- **"Carrots and sticks" and other incentive-based approaches** – Insurance programs, credit rating systems and other incentive-based programs encourage tracking in that achievements of certain standards, levels of protection or engaging in resilience-building measures can lower costs, insurance premiums, or involve reputational benefits that decision-makers see as advantageous for their operation;



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Selected Resources:

Toolkit for developing tailored metrics (at any scale, any sector, w/ resources): www.resiliencemetrics.org

UKCIP Monitoring and Evaluation guidance (tailored): www.ukcip.org.uk/wp-content/PDFs/UKCIP-AdaptME.pdf

Scotland Adapts: A Capability Framework for a Climate Ready Public Sector (standard dimensions):
www.adaptationscotland.org.uk/how-adapt/tools-and-resources/capability-framework-climate-ready-public-sector

International Platform for Adaptation Metrics (in process): <https://adaptationmetrics.org/ipam-mapping-project>



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Thank you!

Track 3 Arc

“Deep dive” on implementation challenges and potential solutions

Workshop #1
July 26th

Workshop #2
August 19th

Workshop #3
September 30th

Outcomes Webinar
October 21st

Share your thoughts on your hopes for outcomes!