

# Some Examples and Lessons Learned about M&E Across the US

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*Context*



# Current Context

- **COP26**

- Can we/should we identify quantifiable metrics?
- Top-down pressure for, bottom-up push against, a standard (set of) goals/indicators/metrics

- **Global Stocktake** (2023 and every 5 years thereafter)

- What to measure?
- How to integrate diverse data sources?
- How to aggregate?

- **Federal Adaptation Plans & Biden Admin efforts**

- **State and local resilience work**



# 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





*Measuring  
what and how*

# What Does Success Look Like to You?



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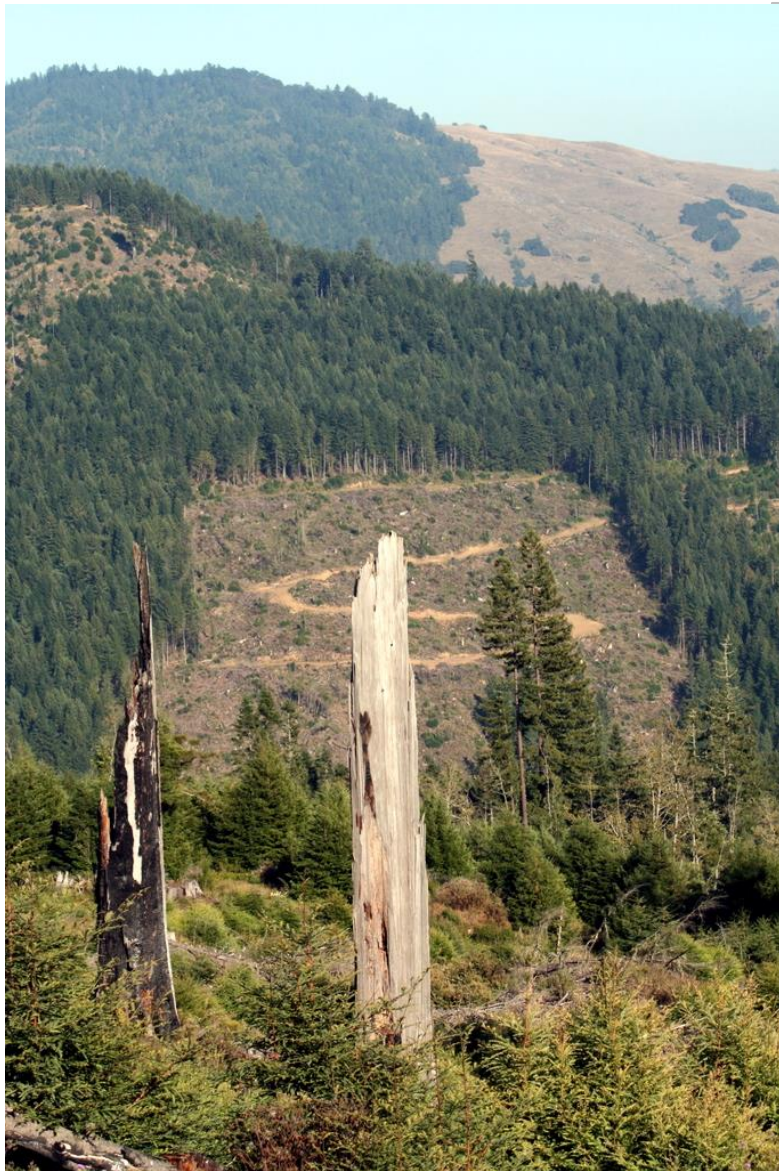
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# Some Thorny Questions To Consider

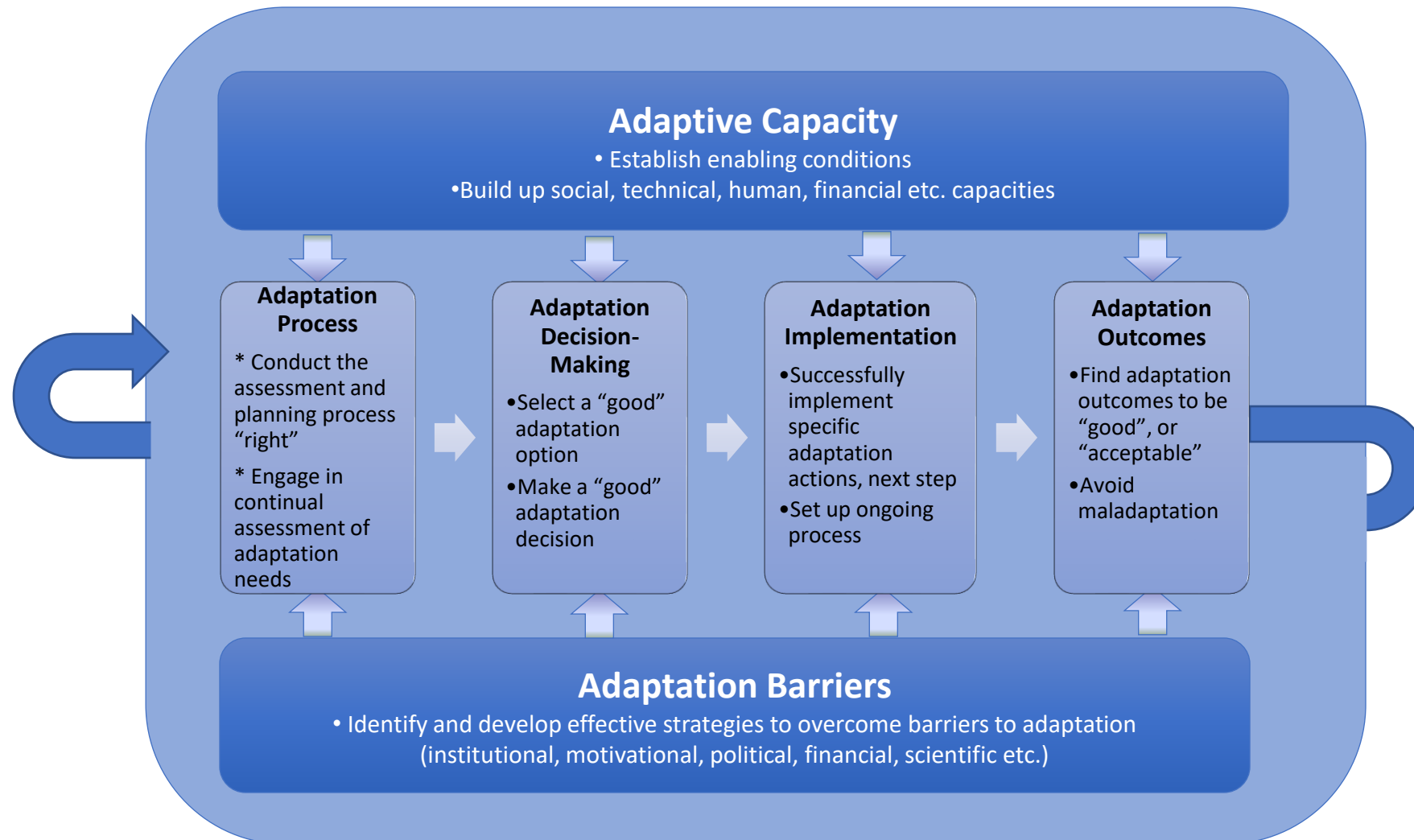
- How much can science help here or is it all subjective and political?
- What is the right scale at which to consider success?
- How and how much do we integrate across sectors, policies and programs, and across scales?
- How do we address trade-offs?
- When should we declare success (or not)?
- How much is success about process vs. capacity building vs. taking action vs. some ultimate outcome?
- If you can't see it, is it not a success?
- How should we measure success?
- And who gets to say?

# Success in Practitioners' Minds

- “Hahaha. I don’t know...”
- **Capacity** – getting to a place to start; being able to adapt
- **Actions** – that something gets done
- **Barriers** – removing obstacles in the way of action
- **Process** – how something gets done, who is involved, and keeping at it
- **Decisions** – who is involved, how things get decided
- **Outcomes** – how it’ll look, achieving what we want



# Six Dimensions of Adaptation Success



# Measuring Success – with Purpose!

Purpose	Six Dimensions of Adaptation Success					
	Process	Decisions	Action	Outcomes	Capacity	Barriers
<b>Communication/ Engagement</b>	Inclusivity, meaningful influence	Transpa- rency	Progress/ actions taken	Common vision	Facilitation, Skill	Reach
<b>Deliberate planning &amp; decisions</b>	Standards of good planning	Use of best avail. science	Timeliness, decisions made	Minimizing negative impacts		
<b>Justification of \$ expenditures &amp; requests</b>	Conside- ration of non- \$ impacts	Benefit-cost ratio, cost effective- ness, robust	Timeliness, efficiency	Clear targets	Investment in capacity	Creative financing, leveraging of funds
<b>Accountability/ Good governance</b>	Inclusivity	Transpa- rency	Progress/ actions taken	Accomplish- ments, savings, benefits	Capacity needed/ built	Barriers encountered/ overcome
<b>Learning support/ Adaptive mgmt.</b>	Monitoring & Evaluation	Transpar- ency	Progress/ actions taken	Targets (not) met	No-fear learning culture	Incentives for risk taking,

# Resilience Metrics for What?

## • Goal 1: Tracking the performance of the adapting entity

- Is Agency A doing what it said it would do in its adaptation plan?
- Is Politician B doing what she promised when she ran for office on climate resilience?
- Is Country C delivering on its pledge to pay \$x billion for adaptation projects

Performance (whether?) •  
Input and Action-focused

## • Goal 2: Tracking the effectiveness of adaptation strategies

- Is the natural buffer working as designed/expected?
- Was the setback sufficient to protect against expected storms?
- Are disadvantaged communities receiving any benefits from x,y,z program?
- Has public engagement improved?
- Are we better prepared now?

Effectiveness (how well?) • Process,  
Action, Output and Outcome-focused

## • Goal 3: Tracking the extent of adaptation finance and actions

- Do communities have access to the funding, capacity, assistance they need?
- Are we doing enough?
- Are we focusing on all key risks/vulnerability hotspots?
- Are we ready for the unexpected, cascading disasters, and/or compounding crises?

Adequacy (how much?) • Barriers,  
Input, Capacity, Outcome-focused

# Challenges in Measuring Success



- **Methodological**

- No standard set of indicators/criteria
- Context-specificity
- Cause-and-effect relationship extremely difficult to establish
- Input metrics alone are inadequate
- Outcome indicators alone are insufficient (time delays)
- Need to look at distributional effects
- High-quality data, data gaps
- Double-counting
- Need for multiple approaches to triangulate

- **Conceptual**

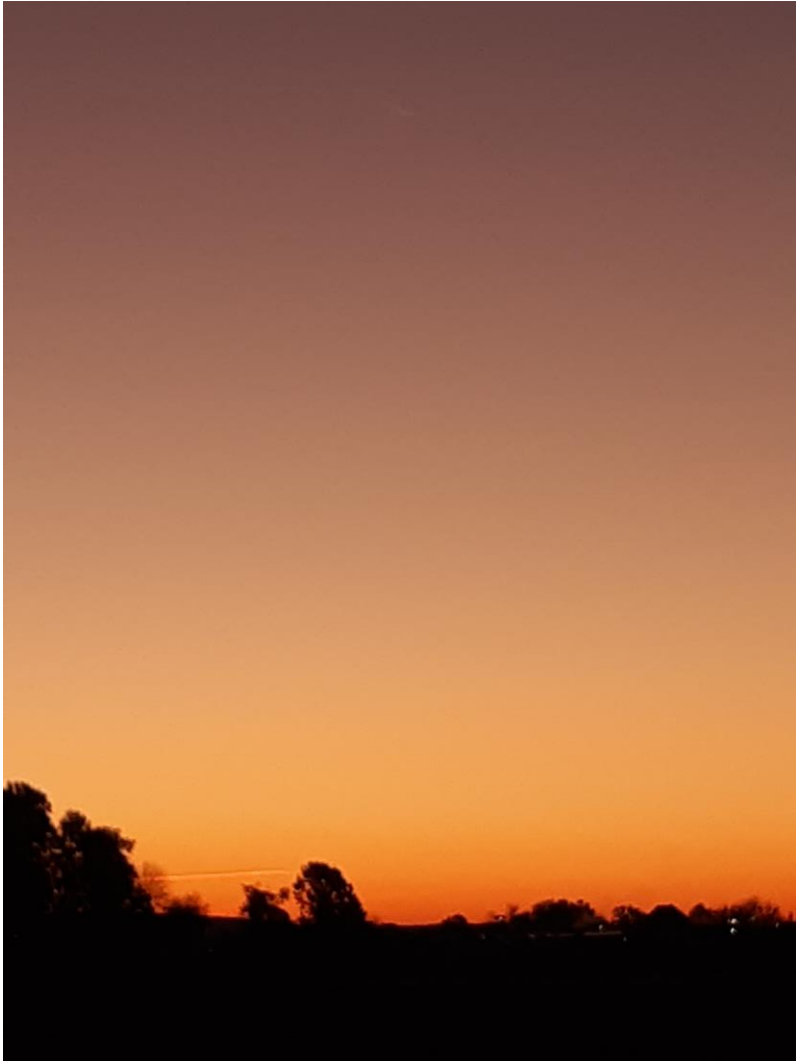
- Lack of agreement on adaptation, finance, capacity building
- Different understanding/use of key terms (e.g., performance, effectiveness, adequacy, success)

- **Empirical/practical**

- Lack of adaptation databases, use of M&E
- Capacity constraints
- Frequency of monitoring
- Lack of funding

- **Political**

- Values informing “success” are inevitably subjective and contested
- Limited disclosure of M&E results
- Political sensitivities
- Selection/manipulation of results
- Handling of trade-offs
- Professional image of “succeeding” or “failing”



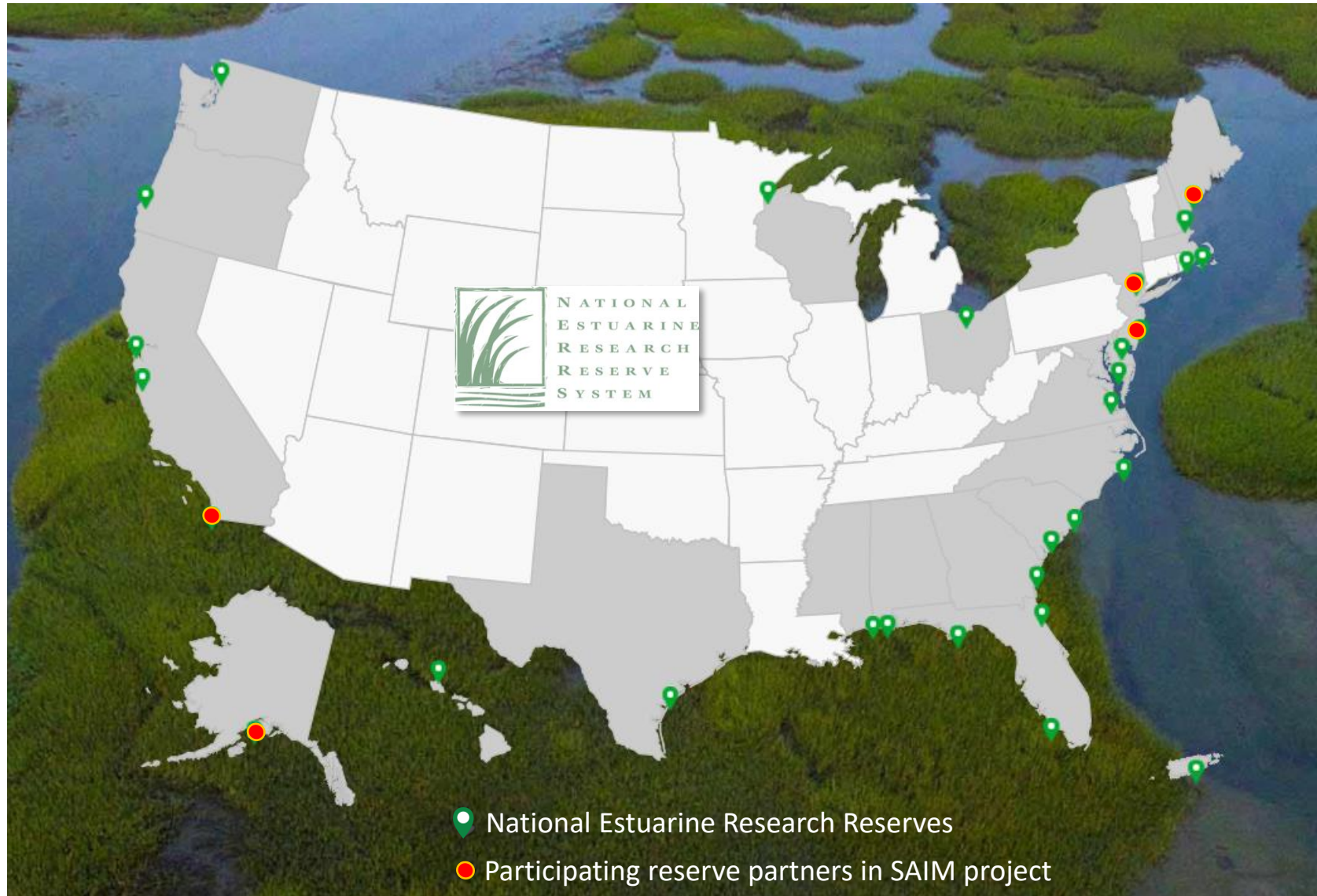
## Indicators Development & Use

- *Case Study*

# Many Are Now Working on Adaptation Metrics

International Development Agencies (e.g., GIZ, Care, Oxfam, IIED)	Rating Agencies (e.g., S&P, Moody's)	EU & individual countries, coalitions (e.g., UK, AUS, Climate Vulnerable Forum)	National Climate Assessment (National Indicator System)	Fed. agencies (FEMA-CRS, NIST, DHS-EPA, NOAA-RISA, <i>not</i> in Resilience Toolkit)	Interntl' Urban Networks (STAR, RC100, USDN, ISC, C40, ICLEI, UCCRN)
International NGOs (e.g., IPAM)	World Bank's Resilience Index	Risk Disclosure efforts (IDF, G30, TFCRD)	Individual state efforts (e.g., NY, CA)	Federal interagency efforts (MitFLG, CEQ)	Individual cities/local governments (e.g., NYC, Honolulu)
UN agencies (UNEP, UNDP, UNDRR, UNFCCC-AC etc.)	Global Environmental Facility & other Funds	Financial services industry	US Climate Alliance (coalition of states)	US NGOs (local to national, e.g., ASAP)	Academic research (NRC, individual researchers)

# INDICATORS FROM THE BOTTOM UP: *Working with National Estuarine Research Reserve System*



Wells



Hudson River



Jacques Cousteau

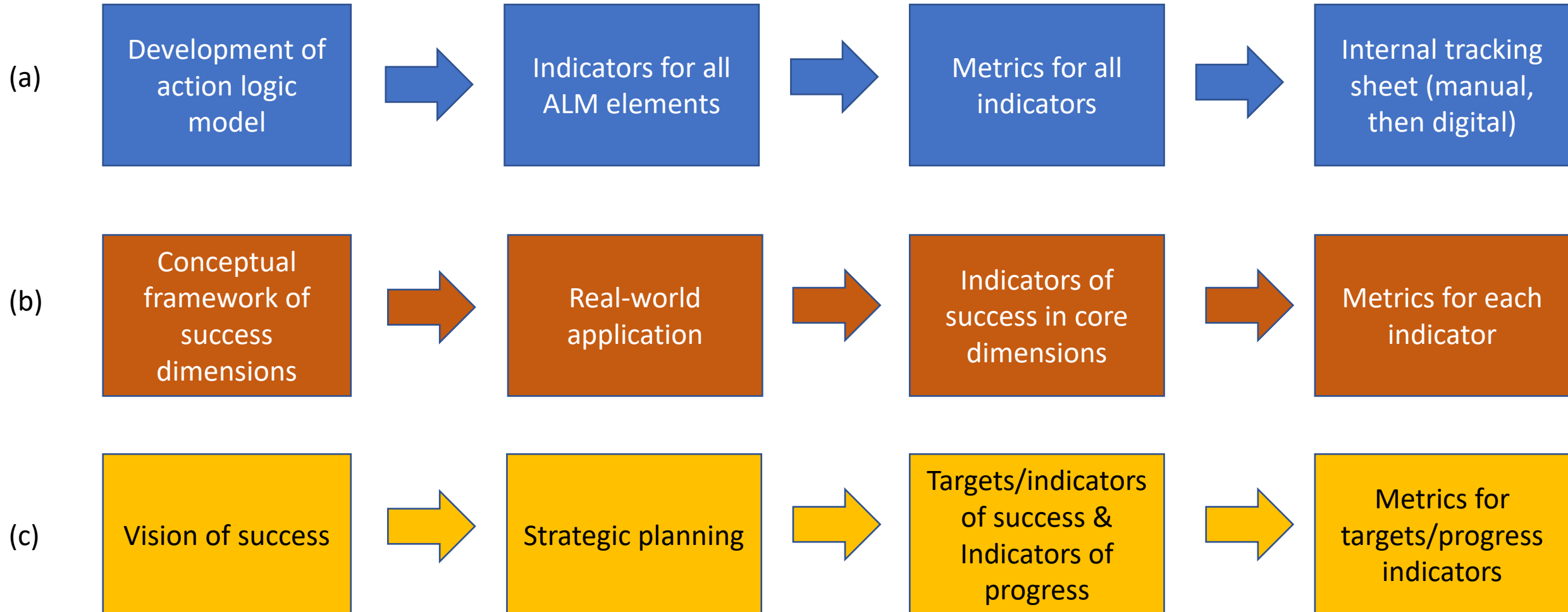


Tijuana River



Kachemak Bay

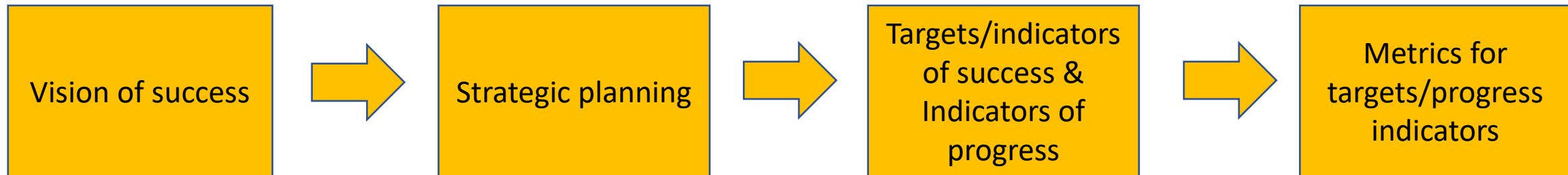
# Developing Indicators & Metrics – *Very different starting and end points*



# One powerful approach



Homer, Alaska



# Learning Together: An Adaptation Workshop Series

March 2016

## CLIMATE ADAPTATION FOR COASTAL COMMUNITIES

Introduction to climate change science –  
Observed and projected changes

Basics steps of the adaptation planning process

Communicating climate change and adaptation

October 2016

## SCENARIO PLANNING AND PATHWAYS TO SUCCESSFUL ADAPTATION

Vision for Homer & Kenai Peninsula

Climate scenarios

Pathways & Trigger points

April 2017

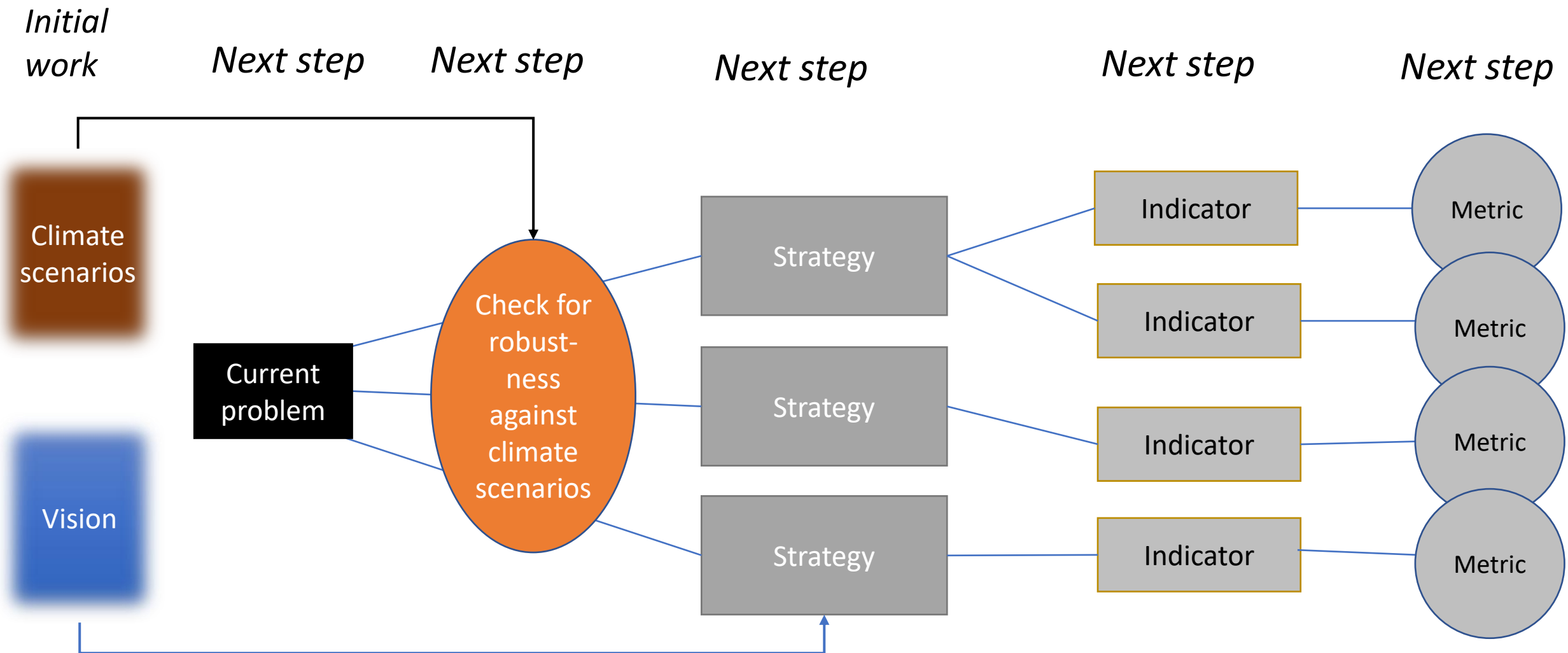
## SUCCESSFUL ADAPTATION PART II: STRATEGIES, PATHWAYS, AND EVALUATION

Climate-sensitive strategies to solve existing problems

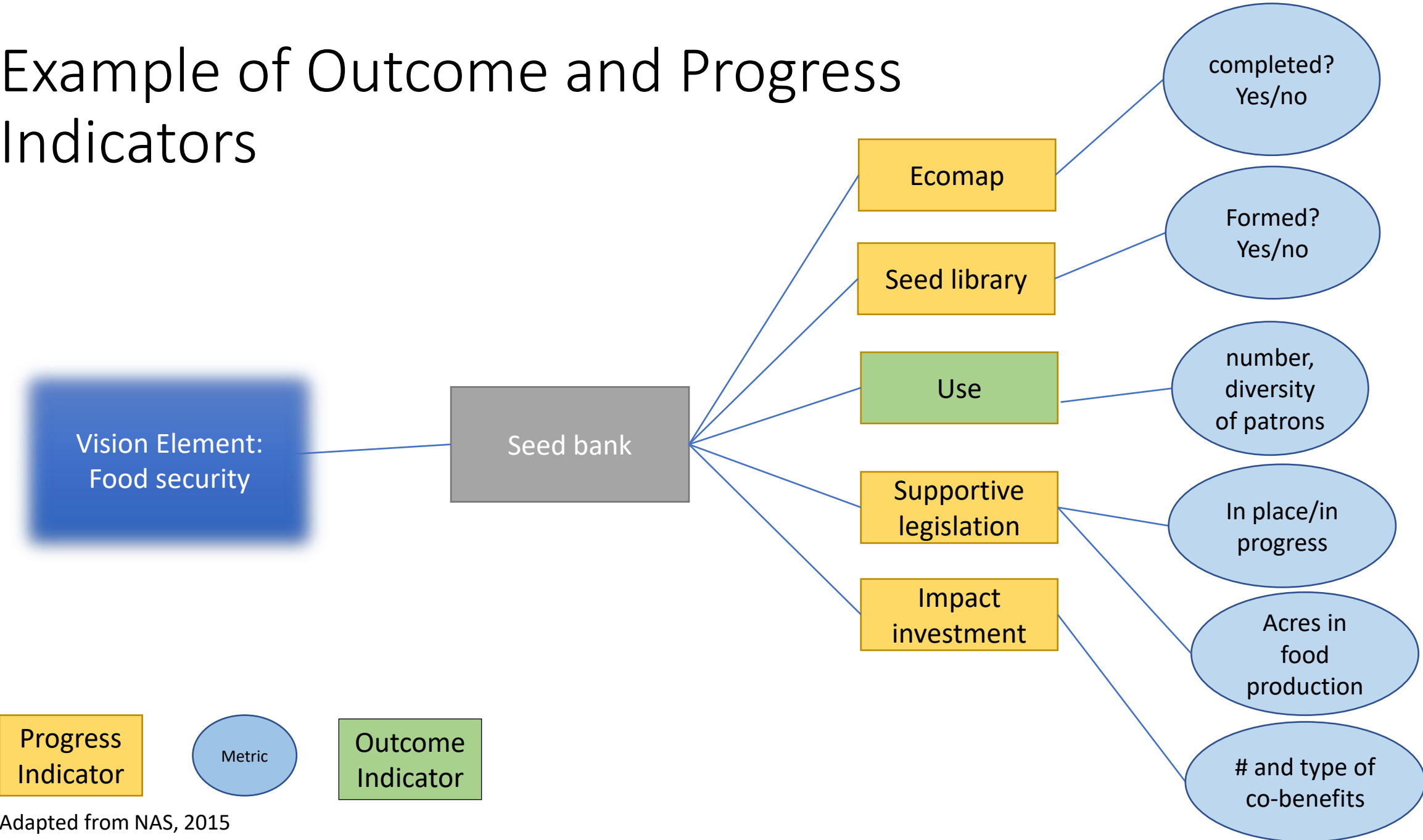
Transparent adaptive decision-making

Indicators of progress and success, and building capacity for ongoing learning

# Key Lesson: Develop Strategy-Specific Indicators



# Example of Outcome and Progress Indicators



Adapted from NAS, 2015

# More Case Studies:

## *Highlighting Different Approaches & Challenges*



### **Wells/ Southern Maine**

Tracking actions in 10 towns; making inroads to business community



### **Hudson River**

Local capacity to track I&M constraints significant; adding motivation for NY state testing its indicator systems used in carrot-&-stick approach



### **Jersey shore**

Explored existing resilience tools (incl. CRS) as basis for SAIM indicators; adding motivation for FEMA Reg. II to advance its resilience indicators



### **Tijuana River/San Diego**

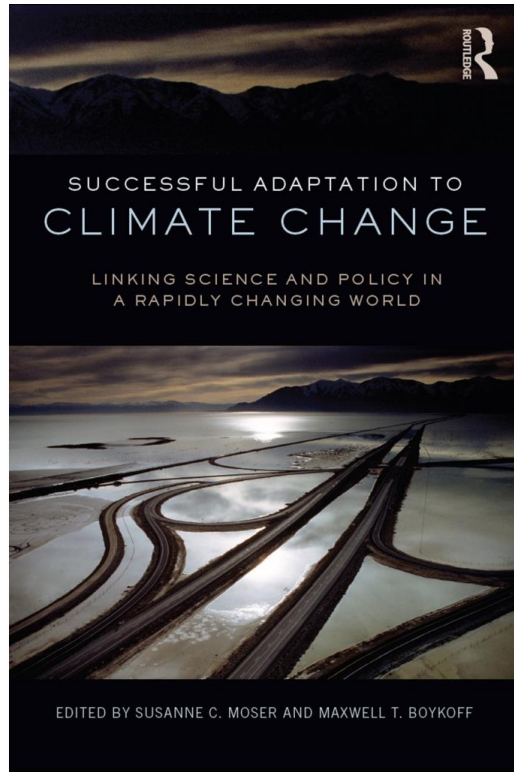
Building indicators and metrics into Reserve work plan; Stimulated regional conversation on “success”



### **Kachemak/ Kenai Pen.**

Embedding I&M into local and regional planning updates; Connected I&M with scenario planning and pathways

# Thank you!



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Some resources:

- Book: <http://www.routledge.com/books/details/9780415525008/>  
<http://www.amazon.com/Successful-Adaptation-Climate-Change-Changing/dp/0415525004>
- Cases: <https://resiliencemetrics.org/NERRS-work>