

Update on the Coral Reef Management Capacity Building Needs Assessment

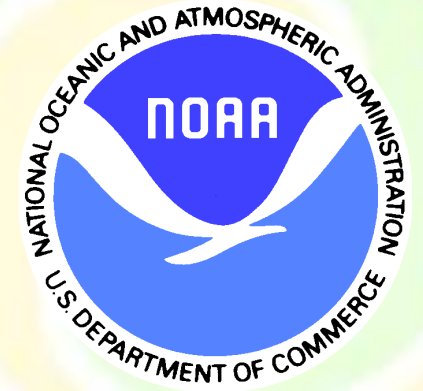
FEBRUARY 19, 2014
31ST U.S. CORAL REEF TASK FORCE MEETING
WASHINGTON D.C.



As we face greater social challenges
and ecological challenges, filled with
uncertainty and unpredictability, **how**
will we respond?



**The Caribbean Landscape
Conservation Cooperative**
Conservation science for a changing world



Tufts
UNIVERSITY



USAID
FROM THE AMERICAN PEOPLE

AQUACULTURE
Research Institute



COASTAL RESOURCES CENTER
University of Rhode Island



NFWF

sustainaMe**TRix**

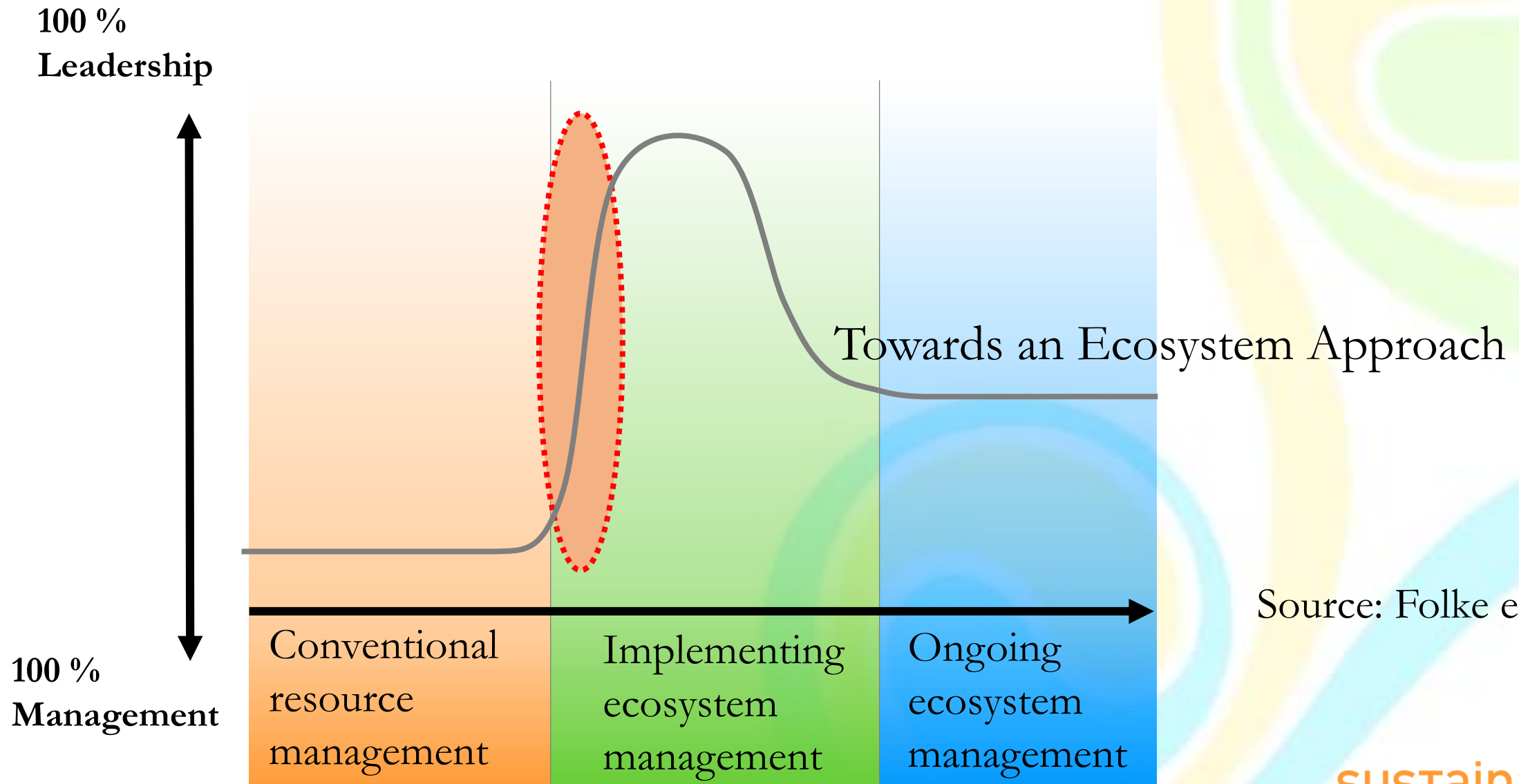
Key Questions Addressed in the Presentation

- What is the purpose and scope of this capacity building needs assessment?
- How was the assessment conducted and what are the principle findings?
- What is recommended to build a comprehensive capacity building strategy that addresses key issues and capacity needs?

Major Take-Home Messages

- Capacity building needs are significant and growing in all seven jurisdictions
- To build effective and long term adaptive capacity, leadership is required from all CRTF partners, AIC and NOAA CRCP
- We are developing a set of specific recommendations in a synthesis report and would like to present these in detail
- There is no silver bullet, panacea. It will require a paradigm shift towards the ecosystem approach.

Moving Towards an Ecosystem Approach



Source: Folke et al., 2005

Definition Of Adaptive Capacity

Broadly defined as the ability of a social-ecological system (or the components within that system) to be robust to disturbance and capable of responding to change.

(Walker and Salt 2006, Carpenter and Brock 2008)

TECHNICAL

- Trained Personnel, Specialized Staff (Technical, Planning Skills)
- Data Management Standardization and Sharing
- Six Competencies for Coral Reef Management
- Technology Transfer

FINANCIAL

- Sufficient Funds to Support Coral Reef Management
- Stability, Consistency of Funds
- Control over Resources and Funds (Internal or External)

SOCIAL

- Awareness & Understanding about Coral Reef Management Among Resource Users
- Expression of Concern on Coral Reefs by Civil Society

INSTITUTIONAL

- Clear Definition of Roles and Responsibilities for Coral Reef Management
- Ways to Resolve Institutional Conflicts
- Enabling Legislations to Support Coral Reef Management
- Organizational Accountability

POLITICAL

- Leadership with Coral Reef Management Organizations
- Motivation of Decision-makers
- External Leadership
- Political Support for Coral Reef Management

SELECTED OPERATIONAL ISSUES

ADAPTIVE CAPACITY

ADAPTED FROM ARMITAGE ET AL. 2005

SELECTED STRATEGIC ISSUES

- Differential Power Relations Among Resource Users in an Institutional, Organizational, and Property Rights Context
- Implication for Rule Creation, Adjudication, Enforcement and Distribution of Rights and Benefit

POWER

- Scale Mismatch Among Resources and Resource Users (Local, External)
- Cross-Scale Sociopolitical and Economic Effects
- Changing Livelihood Systems (Subsistence to Commodity)

SCALE

- Control and Ownership of Knowledge
- Use and Misuse of Different Knowledge Framework (Western, Traditional)
- Challenges of Bridging Knowledge Systems

KNOWLEDGE

- Consistency of Inconsistency of World View, Values, Norms of Resource Users Across Scale

CULTURE

- Ethnic, Religious Class Differentials within Communities
- Impact of Disinformation, Misconceptions, Mistrust within a Varied Community

COMMUNITY

Three Phases of the Capacity Needs Assessment

PHASE 1

Pre-Assessment

PHASE 2

Assessment

PHASE 3

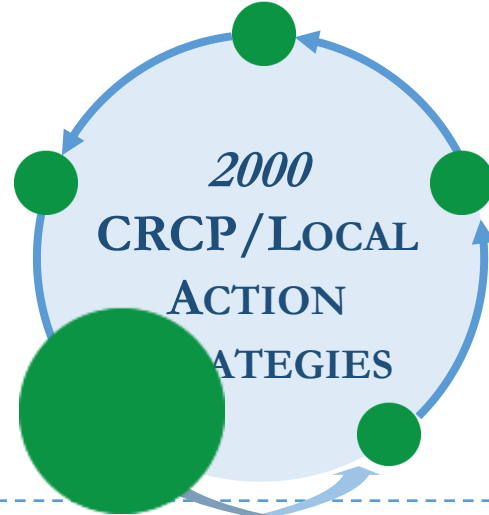
Post-Assessment

Evolution of AIC, CRTF, and CRCP



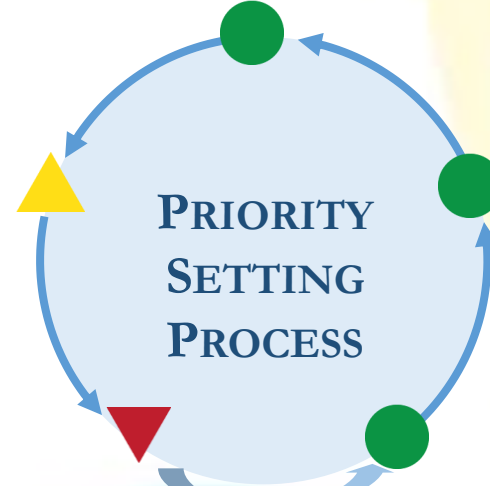
GENERATION 1
(1993 – 1998)

- 1994 All Islands Committee Established
- 1997 US Island Coral Reef Initiative Blue Book
- 1998 USCRTF Formed



GENERATION 2
(1999 – 2007)

- 2000 USCRTF Adopted National Action Plan
- 2002 USCRTF Developed National Action Strategy
- 2002 USCRTF Adopted Puerto Rico Resolution



GENERATION 3
(2008 – PRESENT)

- 2008 CRCP Road Map for the Future
- 2008/2009 Two CREIOS Workshops
- 2009 CRCP Releases Two Reports outlining 20 year goals and 5 year objectives



GENERATION 4

NOAA CRCP Coral Reef Management Priorities

Reduce Impacts from Land Based Sources of Pollutions

Reduced Impacts from Fishing

Reduce Impacts from Climate Change

NOAA CRCP Coral Reef Management Priorities

Reduce Impacts from Land Based Sources of Pollutions

- Reduce pollutant loading from watersheds to priority coral reef ecosystems.
- Promote in-water management activities to restore priority coral reef ecosystems that have been adversely impacted by accumulated sediments, nutrients, and algae.
- Build and sustain management capacity at the local level through local, state, regional, and federal coordination of financial, institutional, and human resources to reduce and prevent the impacts of land-based sources of pollution on coral reef ecosystems.

Reduced Impacts from Fishing

Reduce Impacts from Climate Change

NOAA CRCP Coral Reef Management Priorities

Reduce Impacts from Land Based Sources of Pollutions

Reduced Impacts from Fishing

- Increase the abundance and average size of key coral reef fishery species to protect trophic structure and biodiversity and improve coral reef ecosystem condition.
- Support effective implementation and management of marine protected areas (MPAs) and ecological networks of MPAs that protect key coral reef ecosystem components and functions.
- Increase stakeholder engagement and capacity to improve local compliance with and enforcement of fisheries management regulations that further coral reef ecosystem conservation.
- Utilize locally relevant education and communication strategies to increase public and policy maker understanding of fishing impacts in coral reef ecosystems and support for effective management options.

Reduce Impacts from Climate Change

NOAA CRCP Coral Reef Management Priorities

Reduce Impacts from Land Based Sources of Pollutions

Protect and Sustain Fisheries

Reduce Impacts from Climate Change

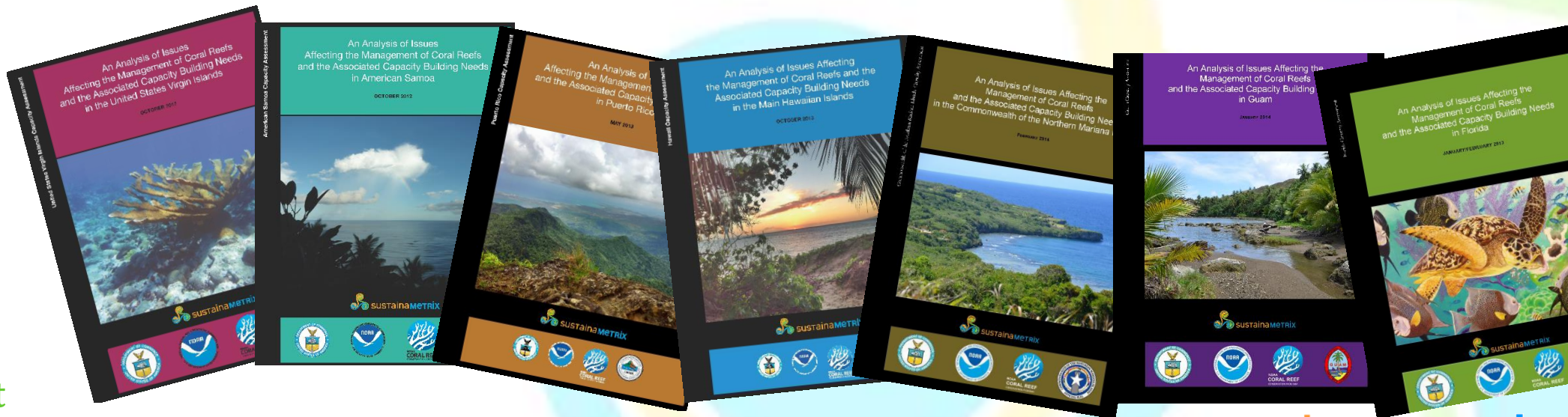
- Increase coral reef resilience to climate change and ocean acidification through effective management strategies.
- Identify, understand, and communicate risks and vulnerability of U.S. coral reef ecosystems, ecosystem services, and dependent human communities to climate change and ocean acidification.
- Enhance strategic management of coral reef ecosystems through improved and applied understanding, forecasts, and projections of climate change and ocean acidification impacts.
- Support management efforts to increase survivorship of coral reef species and enhance reef resilience by evaluating and implementing promising intervention strategies that directly reduce climate change and ocean acidification impacts.

Overview of Capacity Needs Assessment Process

PHASE 1 Pre-Assessment



PHASE 2 Assessment



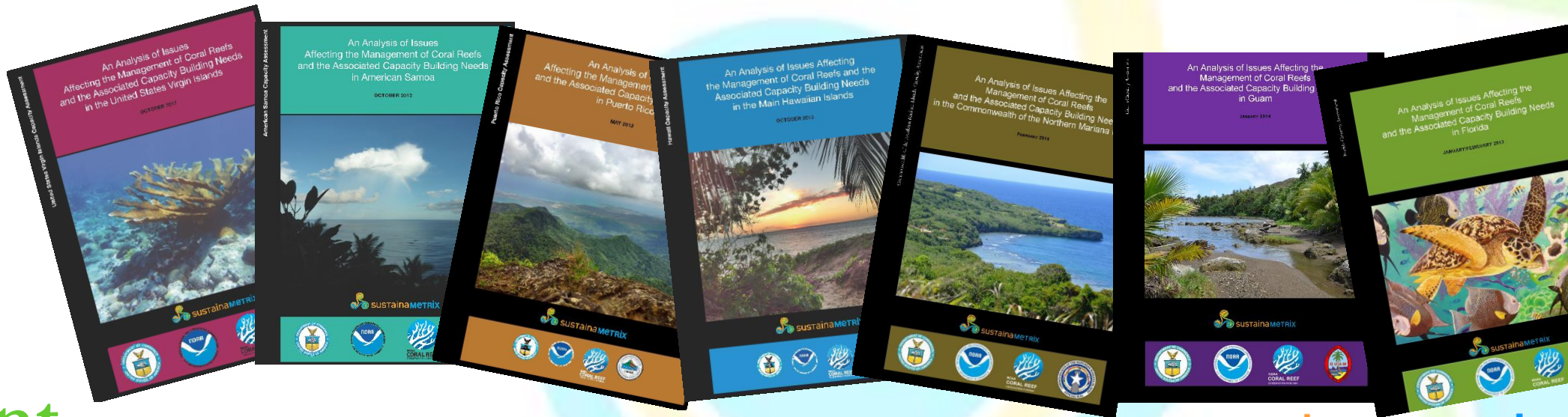
PHASE 3 Post-Assessment

Overview of Capacity Needs Assessment Process

PHASE 1 Pre-Assessment

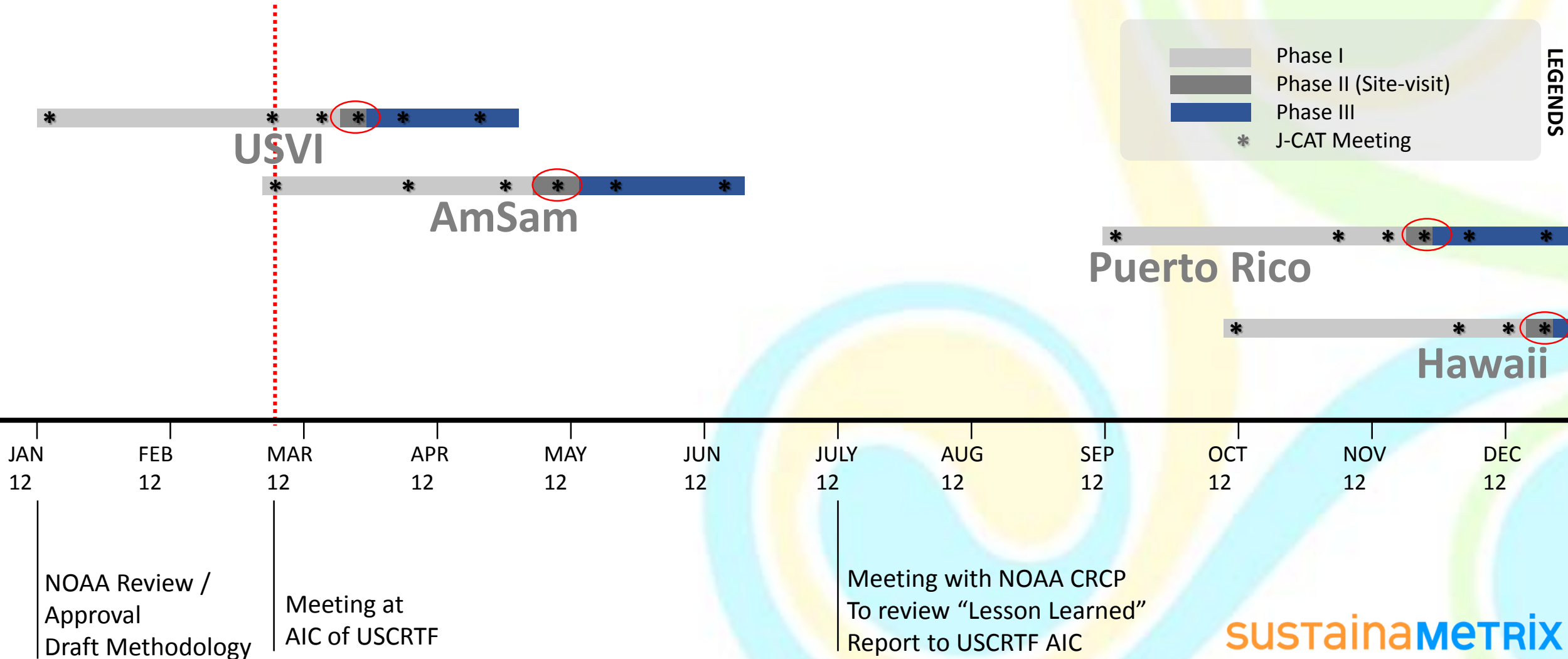


PHASE 2 Assessment



PHASE 3 Post- Assessment

Overview of Assessment Process





LEGENDS

- Phase I
- Phase II (Site-visit)
- Phase III
- * J-CAT Meeting

JAN 13 FEB 13 MAR 13 APR 13 MAY 13 JUN 13 JULY 13 AUG 13 SEP 13 OCT 13 NOV 13 DEC 13

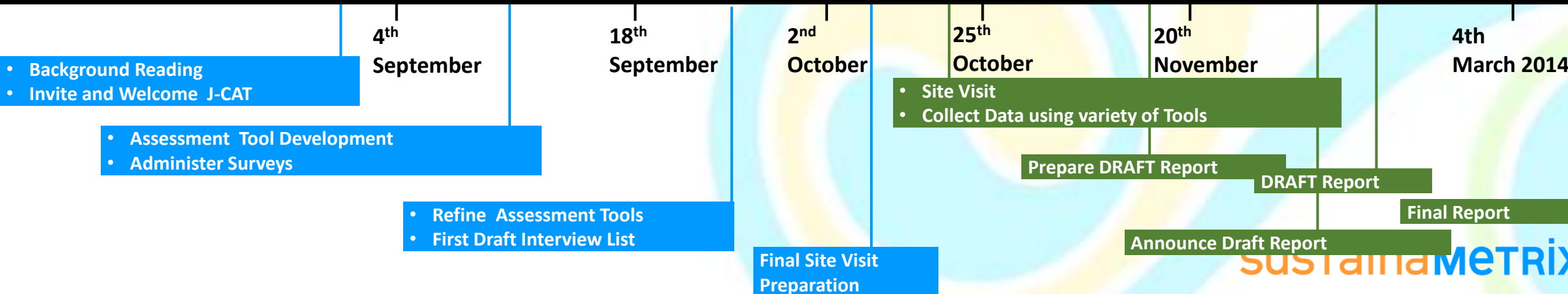
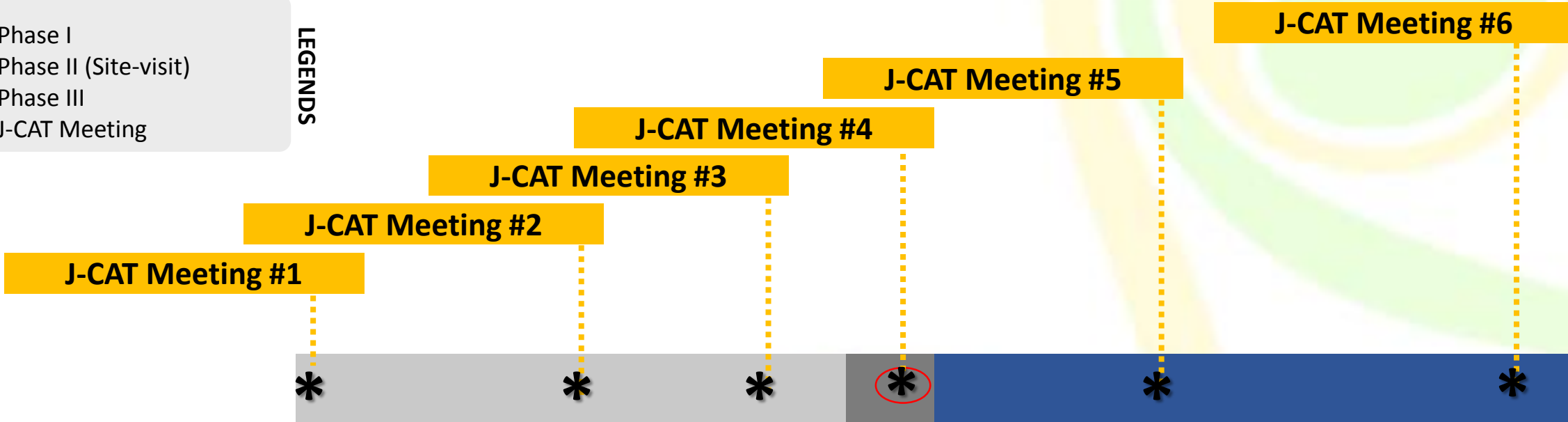
Meeting at
AIC of USCRTF

Meeting with John
Christensen

Synthesis Document
Development

Florida J-CAT Timeline

- LEGENDS**
- Phase I
 - Phase II (Site-visit)
 - Phase III
 - * J-CAT Meeting



*Restauración de la Cuenca
Hidrográfica de Bahía de
Guánica, Puerto Rico*

**7 Jurisdictions,
70 Days Site Visits**

**370 interviewees representing over
193 agencies**

42 J-CAT Meetings



Deliverables

Section 1

Introduction

- Scope & Purpose
- Our Approach

Section 2

Site Specific Contexts

- Issues related to
- Socioeconomic
 - Biophysical
 - Governance

Section 3

Management Capacity

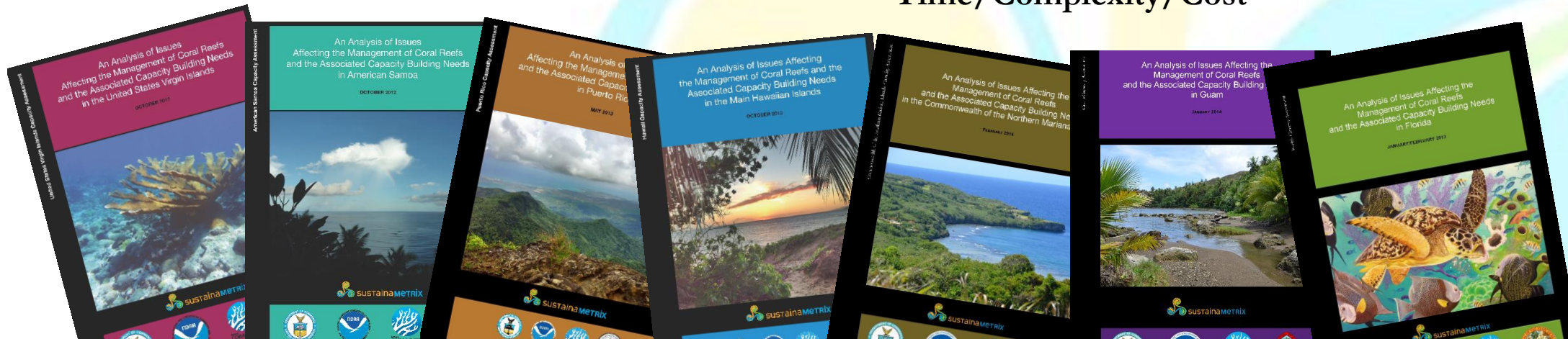
Section 4

Recommendations

- Groups
- Related PSD goals
- Recommended lead and potential partners
- Time/Complexity/Cost

Section 5

Strategy for building Adaptive Capacity



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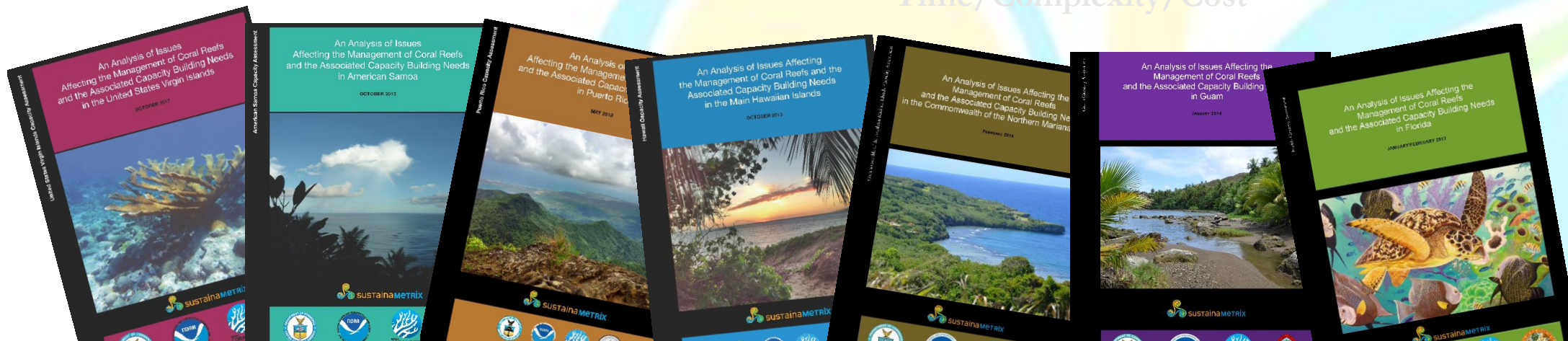
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Time

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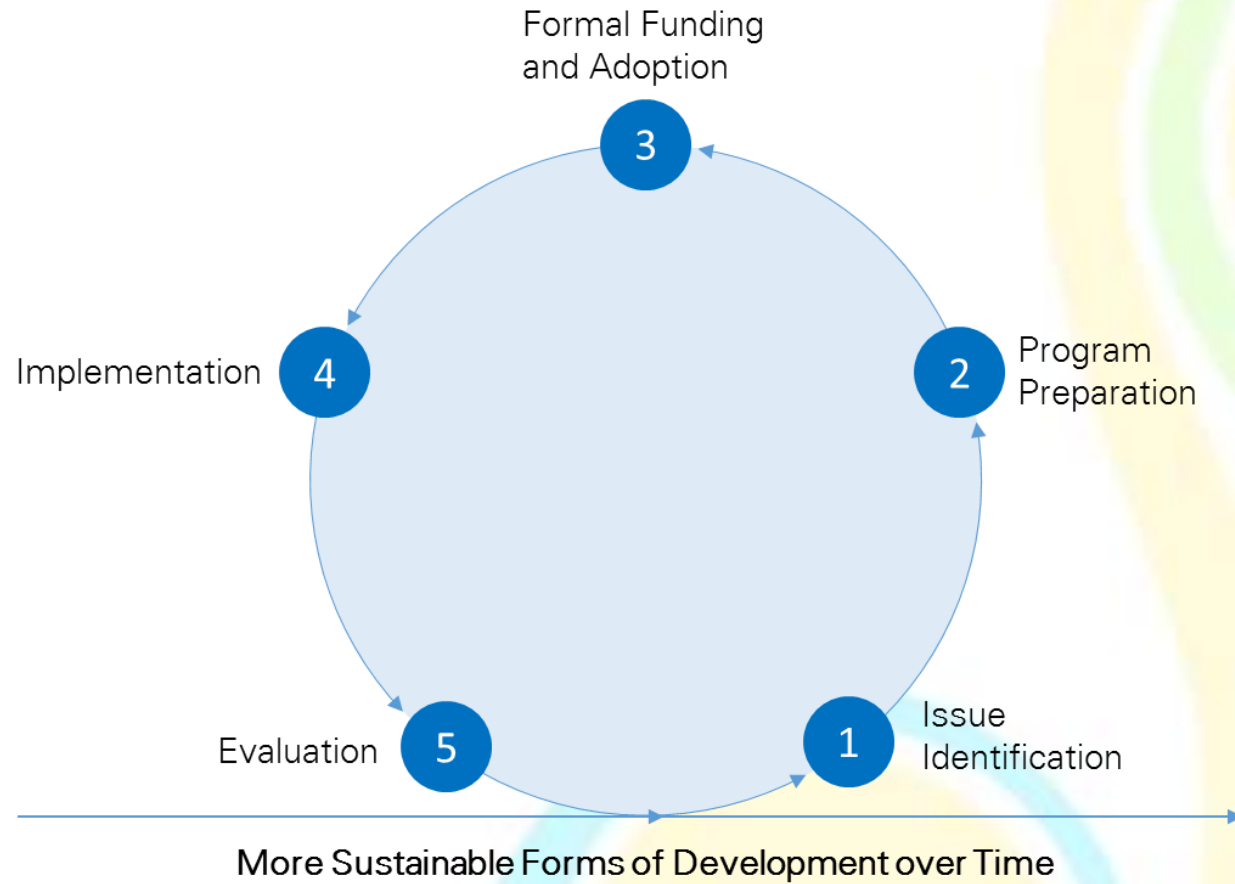
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COMMUNITY



Progressively larger cycle loops indicate growth in program scope

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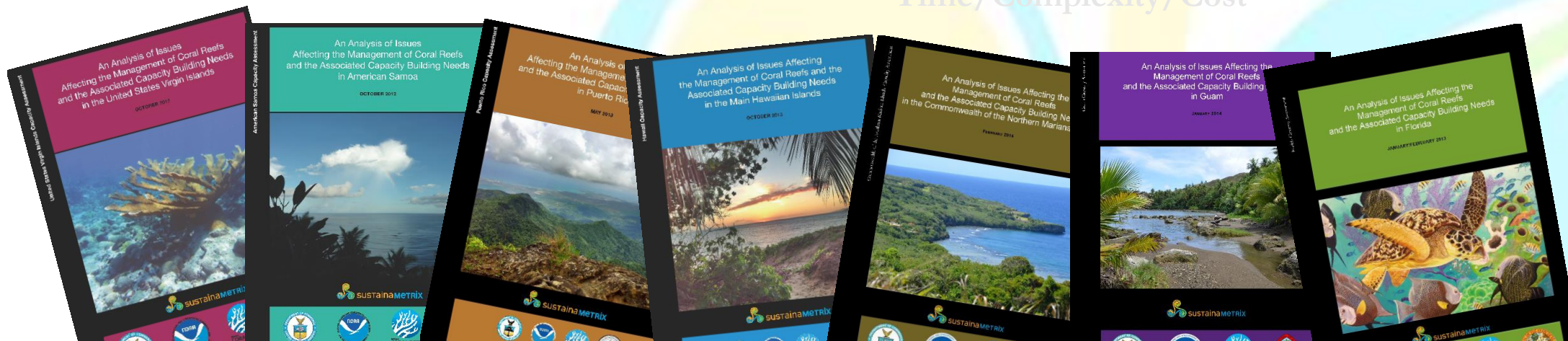
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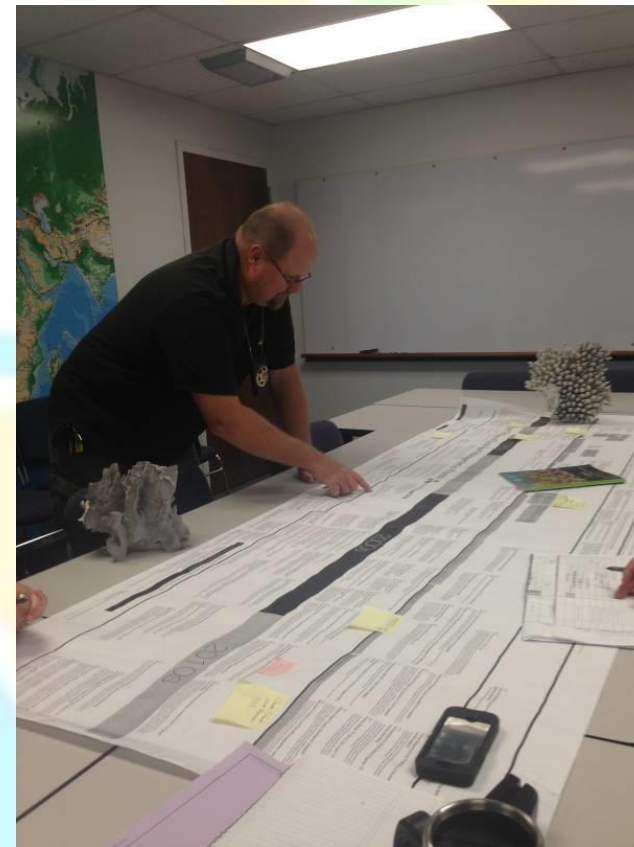
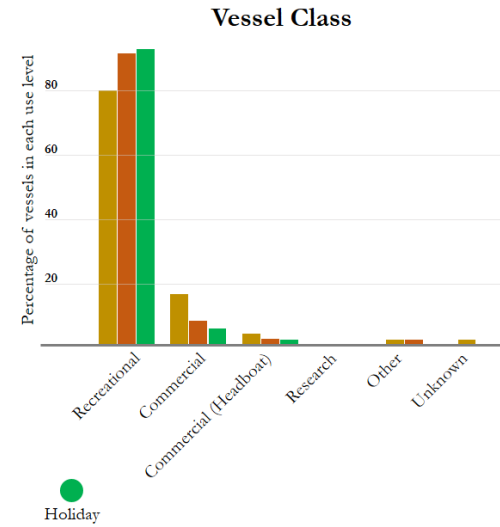
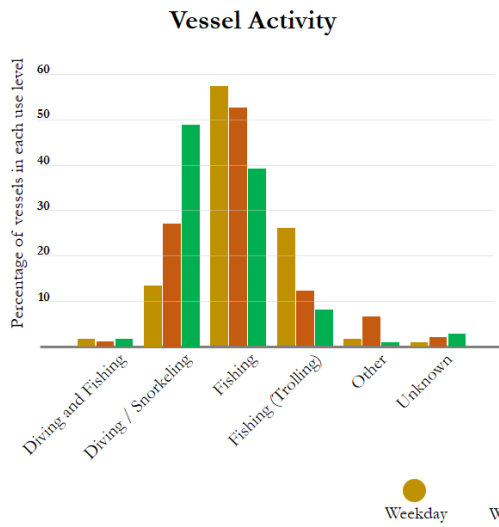
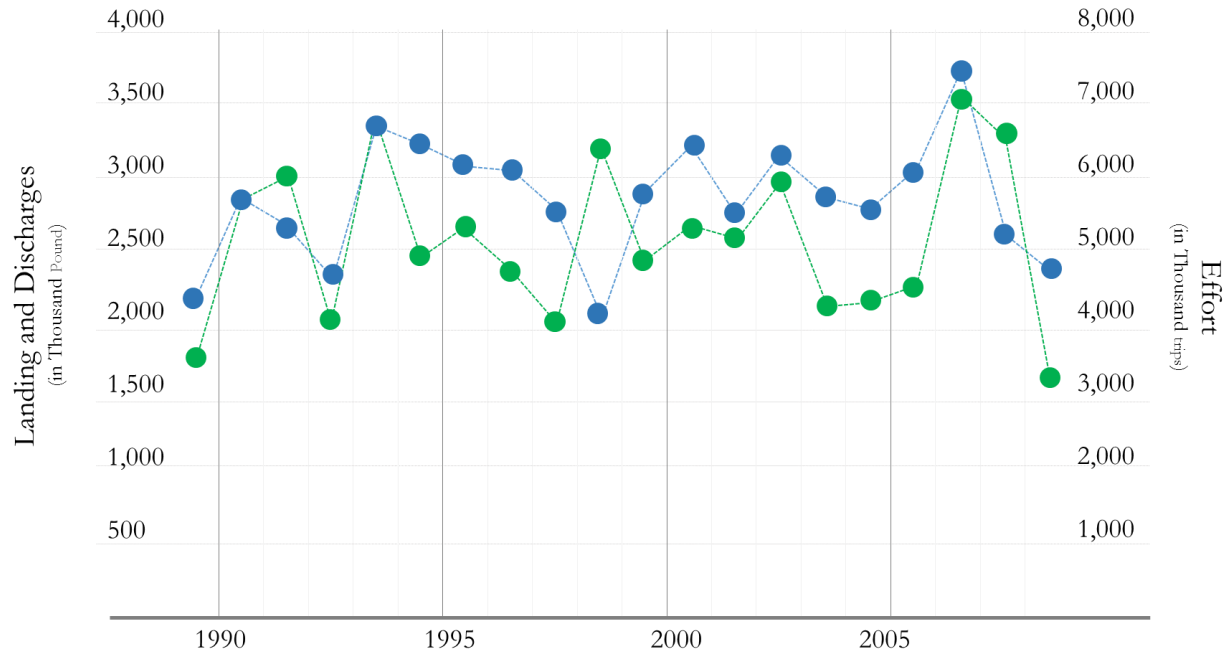
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Strategy for building Adaptive Capacity





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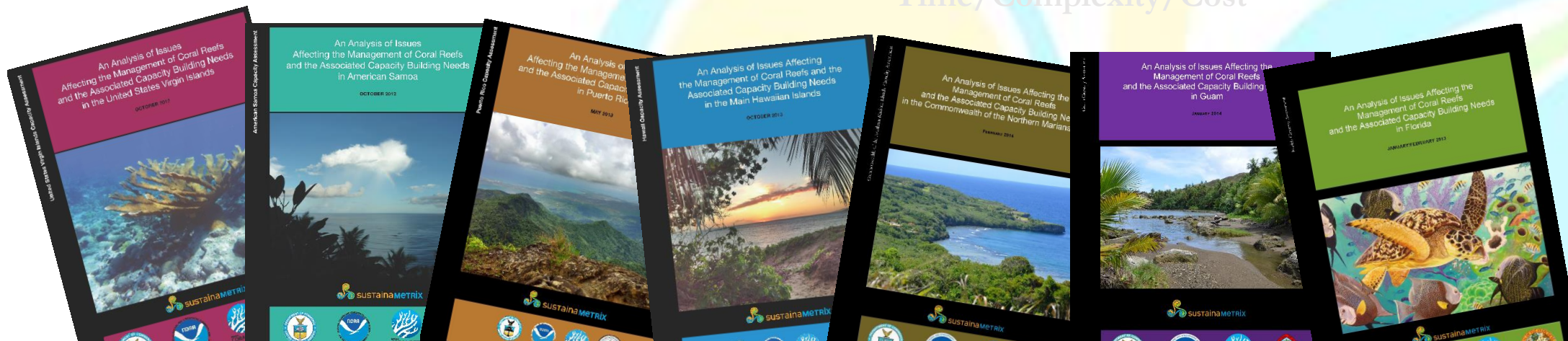
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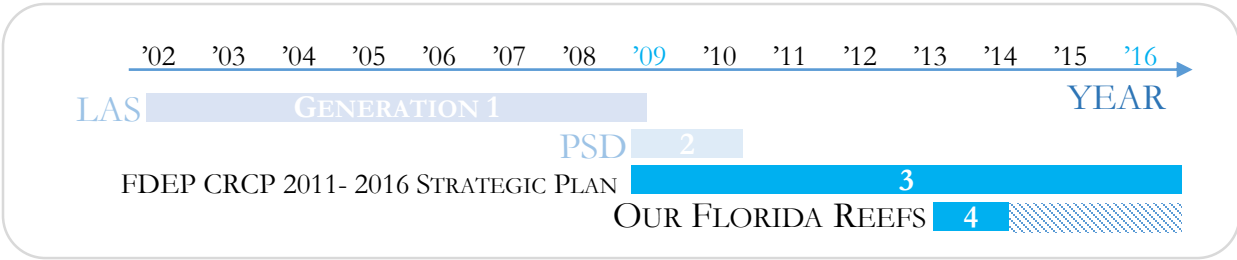
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Section 5

Strategy for building Adaptive Capacity





- COMPLETED
- ▲ UNDERWAY
- ▼ NOT INITIATED



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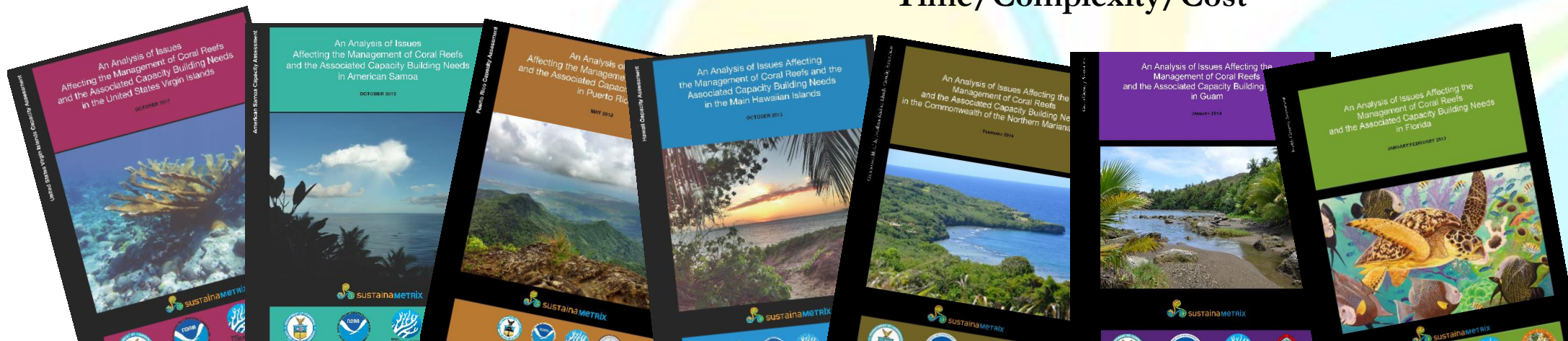
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Strategy for building Adaptive Capacity



Group 1

Politically Challenging Goals to Improve Formal Commitment to Coral Reef Conservation

Group 2

Using Common Management Framework to Pursue Ecosystem Based Management at Priority Sites

Group 3

Tractable Projects

Group 1 Recommendations: Politically Challenging Goals to Improve Formal Commitment to Coral Reef Conservation

This group of recommendations is highly political in nature, will require high-level governmental action, and in many respects lies beyond the direct reach of the coral reef management network.

Page #		Capacity Building Strategy / Recommendation / Potential Partners	Complexity / Time / Cost
46	PR 1.1	Reform the DNER Ranger Corps	
48	A	<p>External Review of DNER Ranger Corps: The DNER Ranger Corps, and coral reef management generally, could benefit from a thorough, external evaluation by professional evaluators with expressed expertise in evaluating natural resource regulatory enforcement programs. This recommendation is essential because without supportive and effective enforcement, compliance will be low and reef health will continue to decline. High-level leadership within DNER supports the idea of an external review of the DNER Ranger Corps, creating a window of opportunity to both perform the external review and then effectively implement the proposed recommendations. One potential organization that has conducted such reviews is MPA Enforcement International.</p> <p>Associated PSD Goals: A3 and B2 Recommended Lead: DNER Secretary Potential Partners: DNER Ranger Corps, MPA Enforcement International</p>	
49	B	<p>Specific DNER Ranger Corps Reforms: The following specific potential reforms do not remove the necessity of a professional evaluation, but can provide a reform agenda while pursuing an evaluation and can provide background for it.</p> <ul style="list-style-type: none"> • The sanction-based system should be completely redesigned. • Performance reviews and merit-based advancement should be instituted, and successful collaborations should be rewarded. • A certification program based on both performance and knowledge could improve the efficacy of the DNER Ranger Corps. • Marine Rangers should be a dedicated unit and receive specific training relevant to marine enforcement responsibilities and should not be transferred between marine and terrestrial responsibilities. • Ranger patrols should be unpredictable and scheduled to work in areas and at times when violations are known to be likely. 	

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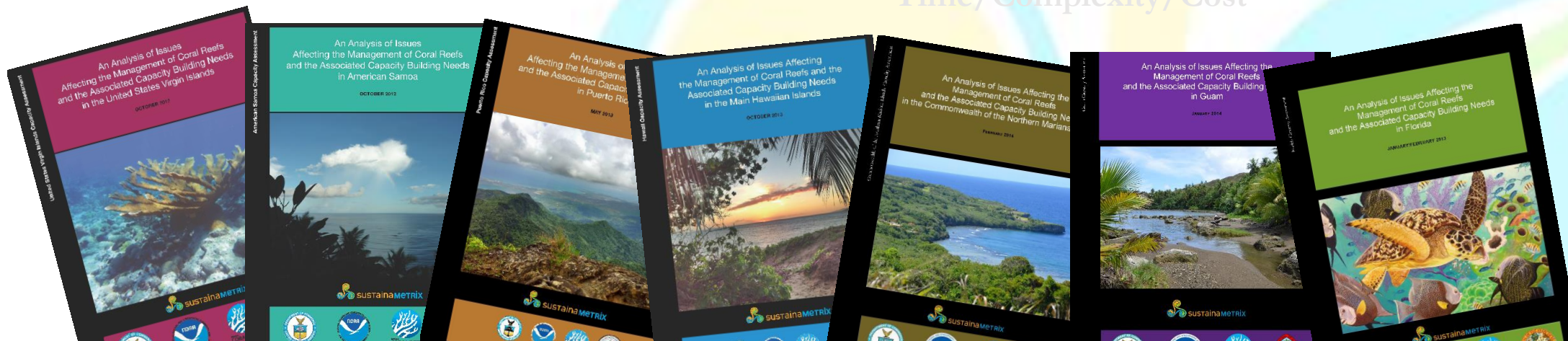
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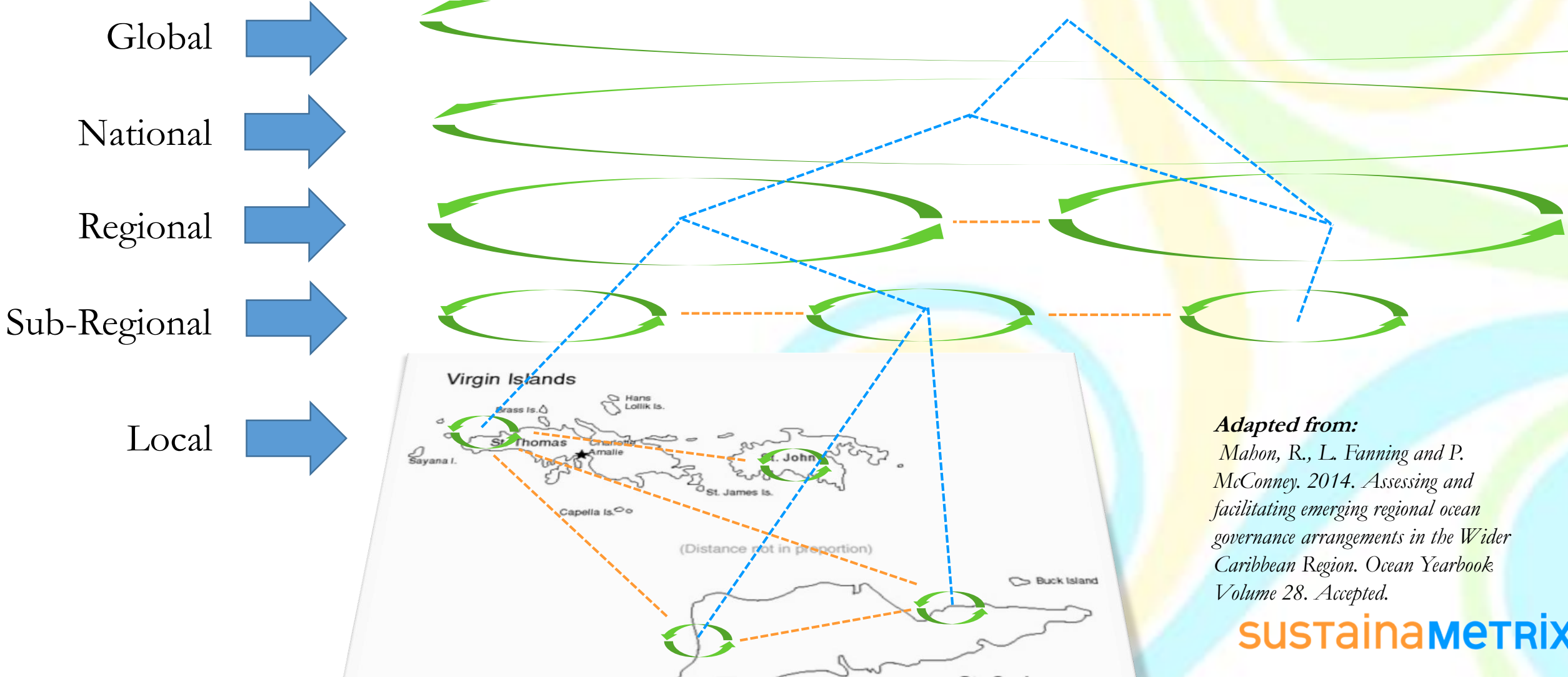
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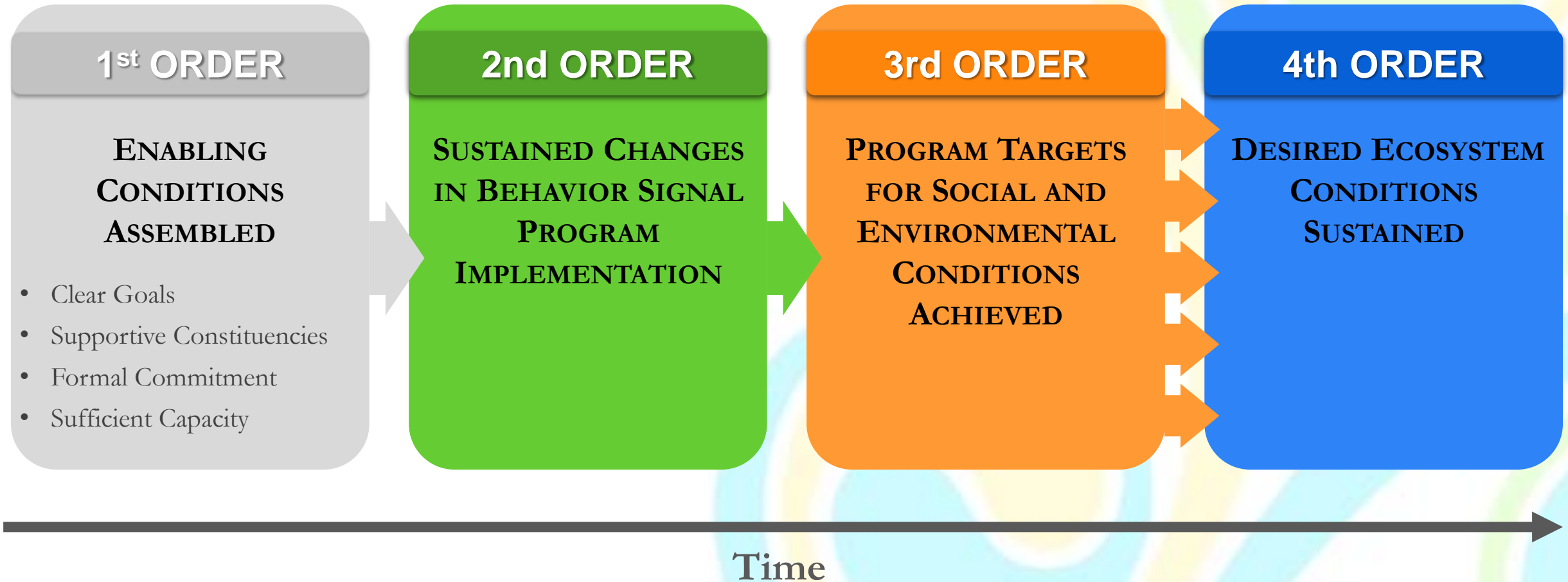


Scale: Drivers of Ecosystem Change



Adapted from:
Mabon, R., L. Fanning and P. McConney. 2014. *Assessing and facilitating emerging regional ocean governance arrangements in the Wider Caribbean Region.* *Ocean Yearbook Volume 28.* Accepted.

THE OUTCOMES OF ECOSYSTEM GOVERNANCE



THE OUTCOMES OF ECOSYSTEM GOVERNANCE

4th ORDER

**DESIRED ECOSYSTEM
CONDITIONS
SUSTAINED**

Time

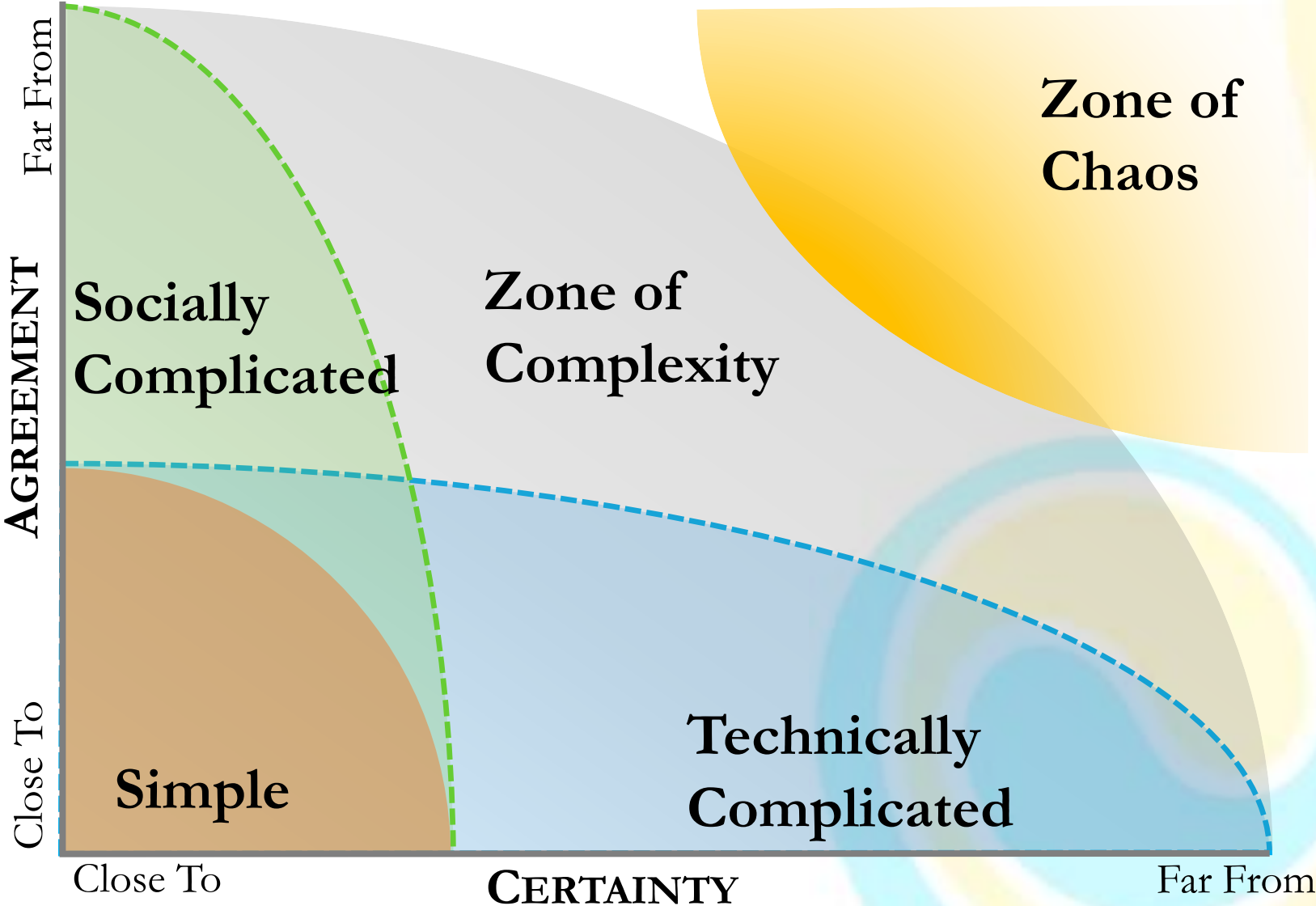
4th Order Outcomes: NOAA CRCRP Coral Reef Management Priorities

Reduce Impacts from Land Based Sources of Pollutions

Reduced Impacts from Fishing

Reduce Impacts from Climate Change

Use of Complexity Concepts



Source: Zimmerman et al., 1998

THE OUTCOMES OF ECOSYSTEM GOVERNANCE

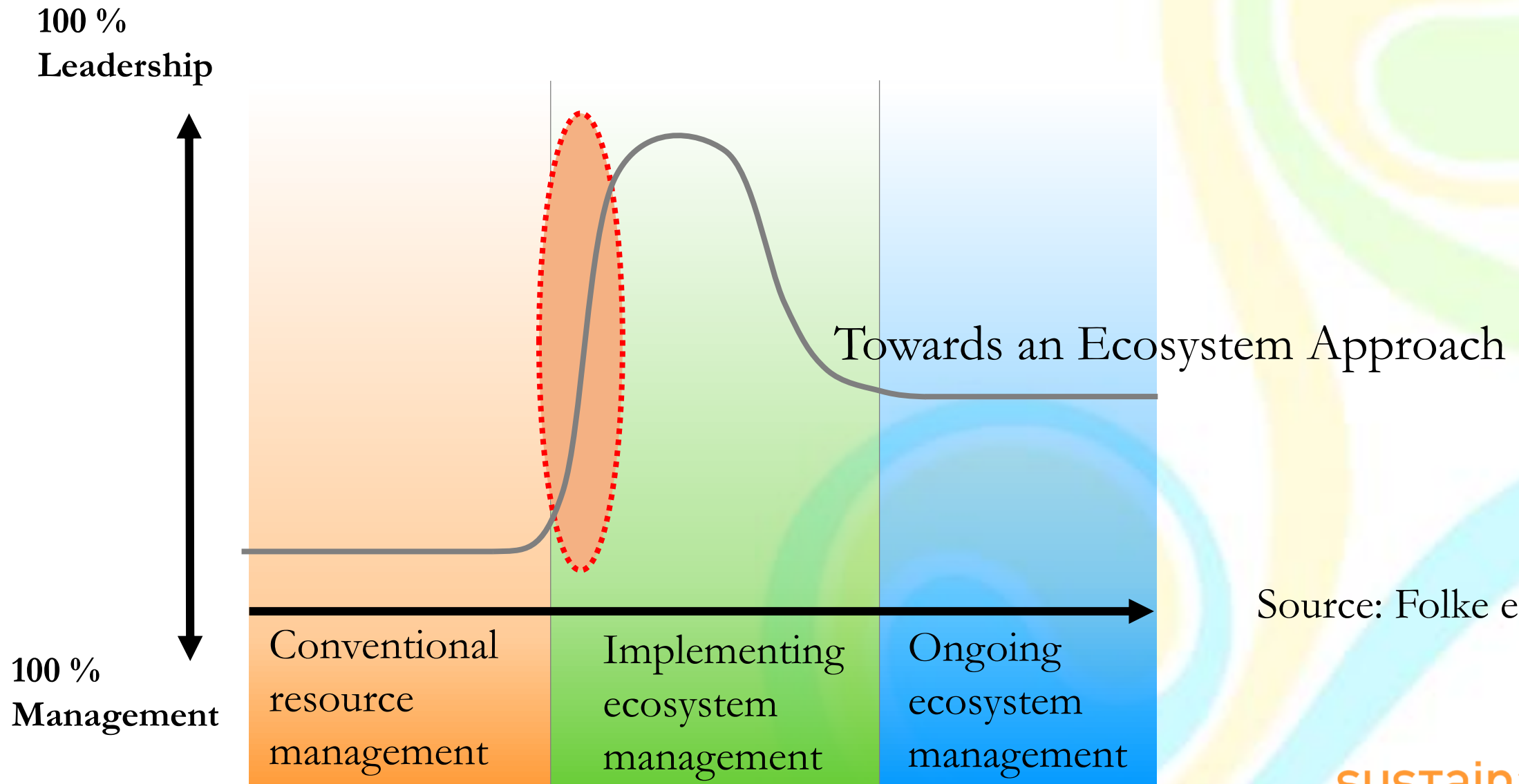


Cross Portfolio Findings: 3rd Order Outcomes

By the end of this century, many of the shallow coral reefs near urbanizing areas are likely not going to be there

- Time bound and measurable goals should be defined for fisheries and LBSP
- Area specific management plans are largely silent on 3rd order goals for biophysical and completely silent on social goals
- There has not been an effort to define what the outcomes for people are anticipated to be – and this should be defined

Moving Towards an Ecosystem Approach



Source: Folke et al., 2005

THE OUTCOMES OF ECOSYSTEM GOVERNANCE



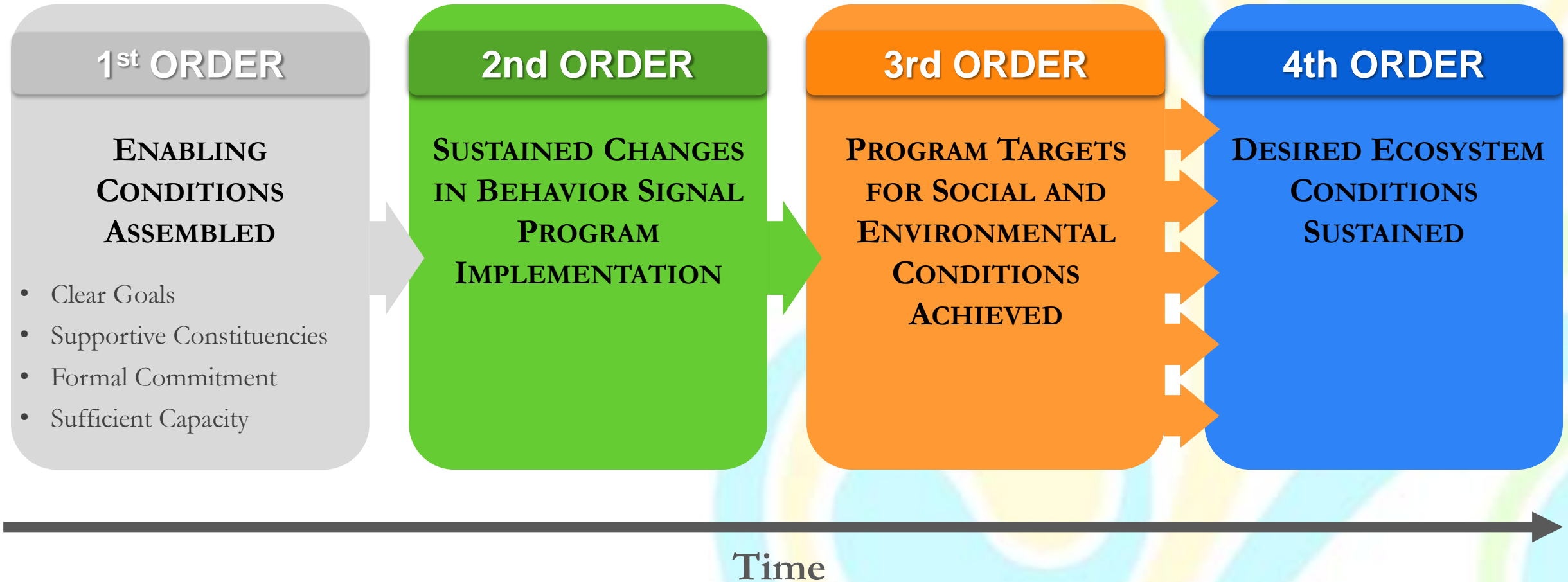
Time

Cross Portfolio Findings: 2nd Order Outcomes

The forces of fragmentation are enormous. The quantity of collaboration has increased but the quality is generally trending downward, still a strong “project” mentality.

- There are specific behaviors regarding resource users, coral reef managers and those who support coral reef management
- Short term interests trump long term behavior change
- Paying attention to behavior and understanding what influences behavior in a given context is an interdisciplinary science challenge that needs to be addressed

THE OUTCOMES OF ECOSYSTEM GOVERNANCE



Cross Portfolio Findings: 1st Order Outcomes

As noted in the PSD, these are the greatest challenges for building capacity for coral reef management

- The process for establishing clear and unambiguous goals
- Supportive and informed constituencies are generally tied directly to the use of the resource
- Formal commitment is low overall and highly variable
- Adaptive capacity is needed and requires a long term investment with strong leadership

Capacity Building Recommendation #1

To make EBM Operational - Develop a Common Management Language

- Focus on the process and the outcomes of management
- Context, context, context, move from projects to program focus
- Human dimensions are central to the practice: how effective is coordination, collaboration, working across disciplines, conflict resolution, building political will etc.
- Much greater focus on ecosystem governance

Framework for Ecosystem Governance Knowledge Base

Changes in Ecosystems



- Ecosystems Goods and Services
- Ecosystem Resilience
- Human Activities
- Human Well being

Part 1: **Looking Back**

- Timeline of Key Issues
- Trends in Key Variables
- Governance by Era
- Case Studies of Governance Processes and Outcomes

Response To Change



Part 2: **Looking Forward**

- Trend Projection and Climate Change
- Selection of Issues
- Goals and Objectives
- Selection of Partners
- Selection of Variables to be Monitored

Strengths and weaknesses of the existing governance system

Capacity Building Recommendation #2

Build off of the Strength of Reference Sites

- Build knowledge through baselines, routine monitoring and analysis aimed at responsiveness and effectiveness of management to societal and environmental change
- Address critical issues with understanding of their “issue sheds” sources, and drivers which often transcend many scales
- Applied research aimed at a subset of management and capacity building issues in the reference sites

Strengths and weaknesses of the existing governance system

COLLECTIVE
UNDERSTANDING
& DECISION MAKING

Shared
Understanding

Shared
Commitment

Building on
Who is doing What & Where

First Stages of
Building an Ecosystem
Knowledge Base



Capacity Building Recommendation #3

Team-based Training Bundles on the What and the How

- Codification of good practices at three levels – resource users, managers and high level decision makers
- Clear training on what are the issues and why they matter most to the people of the place
- Build off of capacity building experience – both good and bad and create an adaptive process for what to do in a given context – this requires matching methods and interventions

Capacity Building Recommendation #4

Invest in Strengthening Enforcement and Voluntary Compliance

- Enforcement and compliance are two sides of the same coin. They're the heart of success when coral reef management plans deliver desired results
- When enforcement is weak, and when penalties aren't a deterrent, voluntary compliance will be low

Capacity Building Recommendation #5

Build Developmental Evaluation As M&E Strategy

Evaluation, Learning and Adaptive Management

- Create mechanisms for periodic self-assessment across the many coral-related projects. They are needed to draw lessons across federal, commonwealth and local initiatives - Annual Learning Forums (IDRC)
- Peer to peer learning and training – motivating and inspiring if it shares lessons learned on what worked and what didn't given assessment of the situation

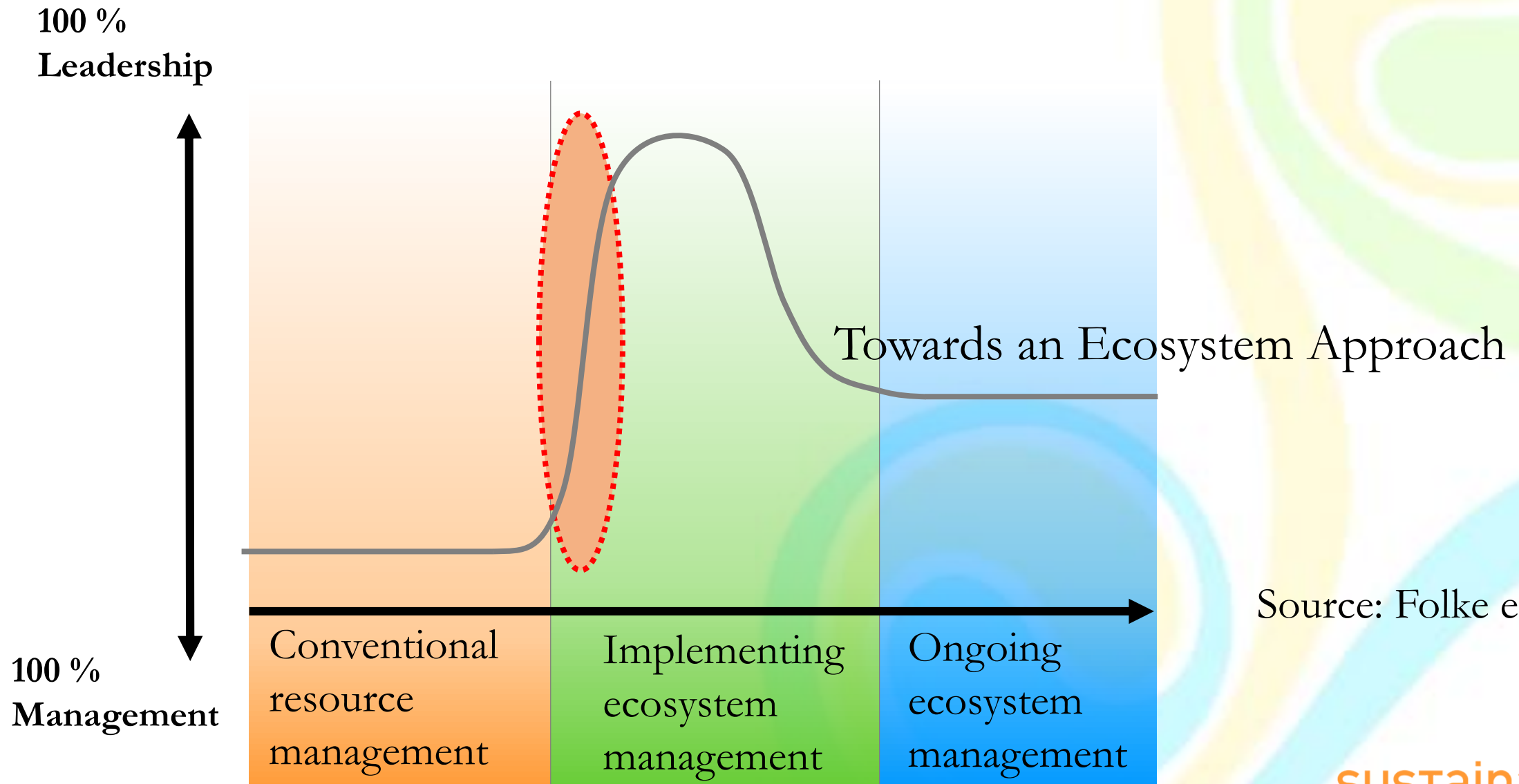
Capacity Building Road Map

Need Leadership, Advisory Board

Link all funding the documentation and sharing of learning

- Federal Agencies can take strong leadership roles – focus on the 4th Order and helping to build the 1st Order – let the jurisdictions move through the second and third and provide assistance when sought
- Peer to peer learning and training – motivating and inspiring if it shares lessons learned on what worked and what didn't given assessment of the situation

Moving Towards an Ecosystem Approach



Source: Folke et al., 2005

Major Take-Home Messages

- Capacity building needs are significant and growing in all seven jurisdictions
- To build effective and long term adaptive capacity, leadership is required from all CRTF partners, AIC and NOAA CRCP
- We are developing a set of specific recommendations in a synthesis report and would like to present these in detail
- There is no silver bullet, panacea. It will require a paradigm shift towards the ecosystem approach.

U.S. Department of Commerce
National Oceanic and Atmospheric Administration

Coral Reef NOAA

NOAA CORAL REEF CONSERVATION PROGRAM

ABOUT CORALS | THREATS | CONSERVATION | DEEP-SEA CORALS | EDUCATION | RESOURCES | GET INVOLVED

ABOUT CRCP

February 18, 2014

Capacity Assessments

Home > About CRCP > Future Strategy > Reprioritization > Capacity Assessments

This page provides background and information on the CRCP's Capacity Assessment process with each of the coral reef states and territories. The priority setting process and capacity assessments came out of recommendations listed in the CRCP Roadmap for the Future.

Background and Purpose

A lack of capacity to implement conservation actions is a critical issue for conservation practitioners in many fields. Whether it's funding, people, public or political will, training, or equipment, the lack of capacity to manage is a major roadblock to the best made plans for conservation. NOAA's Coral Program is investing in the Capacity Assessment effort to build more sustainable coral reef conservation communities in partnership with the jurisdictions.

This project is a follow-up to the Coral Program's Management Priority Setting process finished in 2010. Using the management priorities identified by each jurisdiction as a framework, the Capacity Assessments are designed to identify capacity gaps in light of that jurisdiction's priority goals and objectives, and provide recommendations to fill those gaps. The project is not a program evaluation; rather the focus is on how to best move forward and build sustainable management structures.

The assessment is geared toward understanding capacity gaps in local agencies with the responsibility to manage coral reefs, but the recommendations are meant to engage the larger conservation communities in the jurisdictions, other federal partners in the Coral Reef Task Force, and NGOs.

The process is underway and results from the jurisdictions will be posted as they become available.

- Capacity Assessment Methodology
- American Samoa Capacity Assessment Report and Coral Reef Conservation Time Line
 - American Samoa report
 - American Samoa time line
- US Virgin Islands Capacity Assessment Report and Coral Reef Conservation Time Line
 - US Virgin Islands report
 - US Virgin Islands time line
- Puerto Rico Capacity Assessment Report and Coral Reef Conservation Time Line
 - Puerto Rico report
 - Puerto Rico time line
- Hawaii Capacity Assessment Report and Coral Reef Conservation Time Line
 - Hawaii report
 - Hawaii time line
- Guam Capacity Assessment Report and Coral Reef Conservation Time Line
 - Guam report
 - Guam time line

CRCP Reprioritization

External Program Review

Roadmap for the Future

CREIS Workshops

Threat-based Working Groups

Climate Change Resources

Land-based Pollution Resources

Goals & Objectives and International Strategy

Management Priority Setting

Capacity Assessments

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<http://coralreef.noaa.gov/aboutcrcp/strategy/reprioritization/managementpriorities/>

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Coral Reef Capacity Assessment



For over ten years, partners within the NOAA Coral Reef Conservation Program (CRCP) and the US flagged States and Territories with coral reefs have expressed a major concern over lack of capacity to effectively manage coral reefs in the jurisdictions. Through these discussions, and an external review process, CRCP decided to support a capacity assessment process to better understand specific issues, needs, and gaps within and across all jurisdictions to help better support decision making to build coral reef management capacity.

However, the first question remained "Capacity to do what specifically?" To answer this question, CRCP and the jurisdictions completed a series of steps to define key threats to reefs and prioritize what needs to be done to manage and conserve coral reefs and show measured results at the national and jurisdictional levels. The results of these processes are described in the NOAA CRCP National Goals and Objectives document and the Coral Reef Management Priority documents for each of the seven jurisdictions with coral reefs (American Samoa, the Commonwealth of the Northern Mariana Islands, Florida, Guam, Hawaii, Puerto Rico, and the US Virgin Islands).

Upon completing these plans in 2010, CRCP has decided to now follow-up on the priority setting process to assess the capacity of the jurisdictions to implement these goals and objectives and has selected a partnership consultant team led by SustainaMetrix.

The purpose of the assessment is to identify gaps and persistent barriers in coral reef management capacity in each jurisdiction, and provide recommendations as to how these gaps could be addressed. The product will be seven separate reports, one for each jurisdiction, designed to support the jurisdictional organizations that manage coral reefs, their partners, the All Islands Committee (AIC) of the US Coral Reef Task Force, and other stakeholders by documenting what is needed to improve coral reef management capacity, focusing in particular on the capacities needed to implement the goals and objectives set forth in the Coral Reef Management Priority documents completed in 2010. A synthesis document will also be done to assess capacity across all seven jurisdictions, the findings of which are primarily intended for NOAA CRCP and other federal partners.

Visit NOAA CRCP's page to learn more about the capacity assessment process and SustainaMetrix's role in it.

coral reef

Partners

National Oceanic and Atmospheric Administration

Publications

An Analysis of Issues Affecting the Management of Coral Reefs and the Associated Capacity Building Needs in the Main Hawaiian Islands

An Analysis of Issues Affecting the Management of Coral Reefs and the Associated Capacity Building Needs in Puerto Rico

An Analysis of Issues Affecting the Management of Coral Reefs and the Associated Capacity Building Needs in American Samoa

An Analysis of Issues Affecting the Management of Coral Reefs and the Associated Capacity Building Needs in the United States Virgin Islands

Timeline Visualization

Click here to see Visualization of the Florida Timeline by Andrew

<http://sustainamatrix.com/projects/coral-reef-capacity-assessment>

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