

Climate Change Action Planning

FRRP Conference 2011

Alex Score, Scientist, EcoAdapt



Adaptation is the closest thing we
have to an insurance policy for
protecting our *investments* from
the effects climate change



Point of Clarification

- **Mitigation** is what we do to decrease the potential of climate change itself.
↓GHG emissions = good road design
- **Adaptation** is insurance given a non-zero probability that climate change will have an adverse affect on your investment
limiting the impacts = wearing a seatbelt

Vulnerability



Adaptation Options



Resistance

Resilience

Response

What are all the changes that will happen and how can I respond?

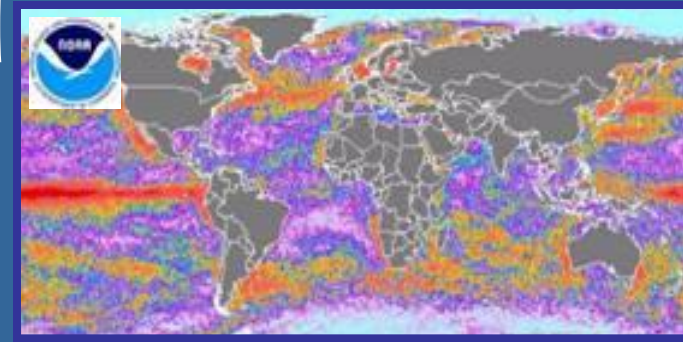


~~What are all the changes that will happen and how can I respond?~~

What is my goal, and what can I do to achieve it given the reality of climate change?



Tenets for a changing world



1. Protect adequate and appropriate space for a changing world

2. Reduce non-climate stressors that interact negatively with climate change or its effects.



3. Manage for uncertainty



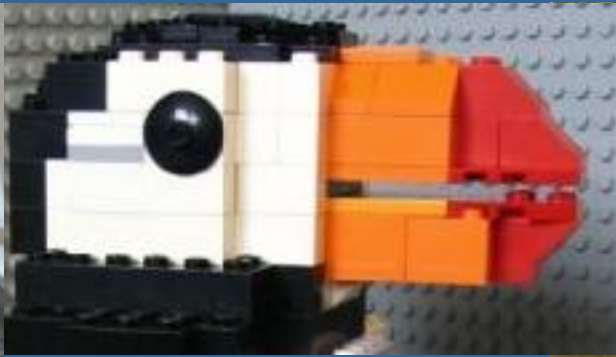
4. Reduce local and regional climate change

5. Reduce greenhouse gas emissions.



Adaptation Strategies

1. Natural Resource Management and Conservation
2. Capacity Building
3. Infrastructure, Planning, and Development
4. Governance and Policy

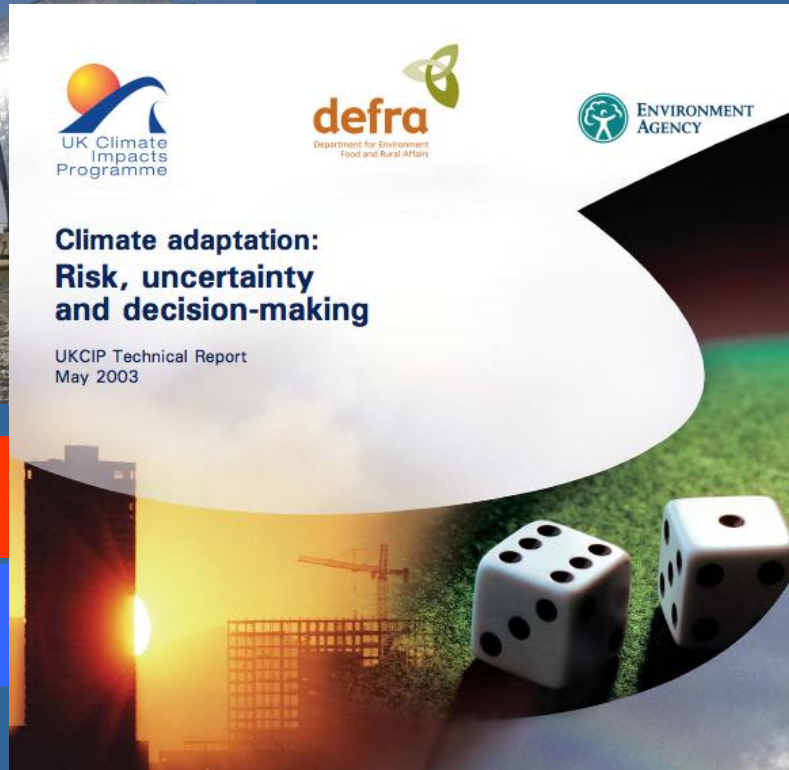


Adaptation does not happen in a vacuum

Framework principles

- Top down component should provide mandate, guidance and empowerment for bottom up development

Resource Management Decisionmaking



Everything
Solutions!

- Risk framework
- Short-, intermediate- and long-term decisions
- Federal mandate that action is necessary

Adaptation does not happen in a vacuum

Framework principles

- Top down component should provide mandate, guidance and empowerment for bottom up development
- Bottom up effort should be fostered
 - bulk of examples are local

Protecting Marine Turtles



Warmer water, altered currents, SLR, synergisms
Solutions!

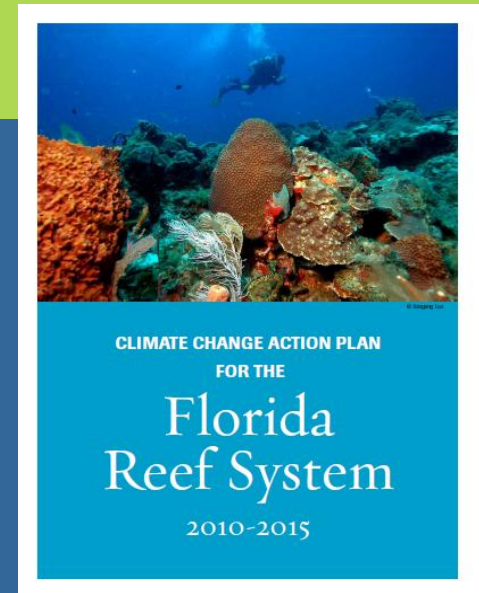
Protect more resilient beaches (higher, room behind)
Restore coastal vegetation
Proactive planning for coastal development

Adaptation does not happen in a vacuum

Framework principles

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- Bottom up effort should be fostered
 - bulk of examples are local
- Create opportunities for buy-in and partner engagement
 - don't limit partner engagement, you'll need them to innovate, to implement and for long-run success

A Climate Change Action Plan for the Florida Reef Tract



Warmer water, SLR, non- climate stressors

Solutions!

- Steering Committee with broad stakeholder buy-in and continued engagement
- Adaptable framework for the local reef managers to implement

Adaptation does not happen in a vacuum

Framework principles

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- Foster instinctive understanding of the implications of climate change in all staff, at all levels.

Coastal Resource Management and Planning



SLR, H₂O Supply, Erosion, Flood Solutions!

- Training for a broad user community across the region
- Included preparatory outreach
- Model for replication in other NERRs and partners

Adaptation does not happen in a vacuum

Framework principles

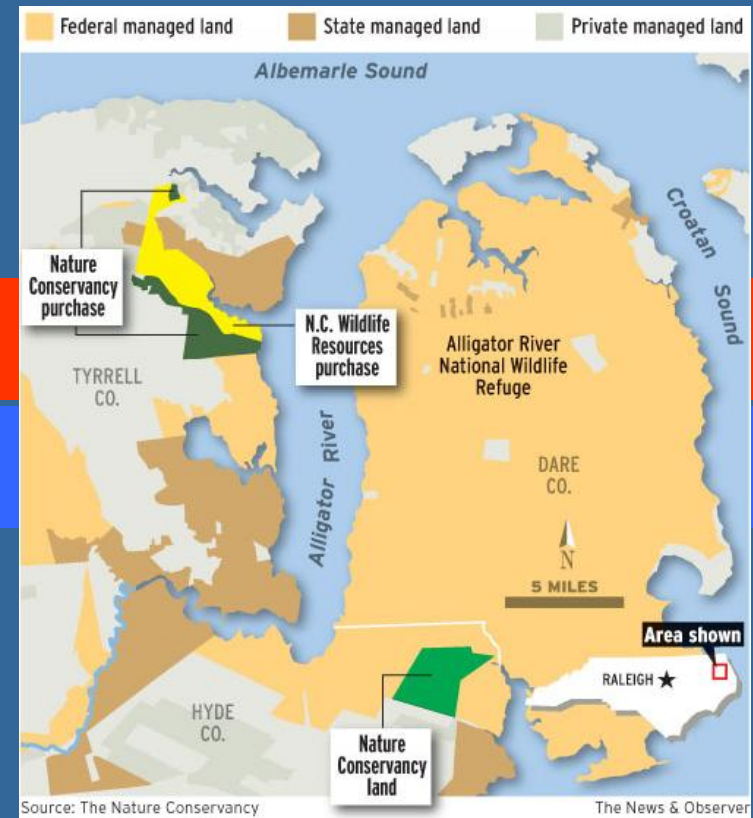
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- Foster instinctive understanding of the implications of climate change in all staff, at all levels.
- Don't lose site of underlying goals
 - Focus on INTEGRATION, not isolation of adaptation thinking
 - all work should be climate cognizant

Managing Land- Alligator River NWR



Sea Level Rise, Δ Hydrology
Solutions!

- Restoring hydrology
- Restoring oyster beds
- Planning for future conditions

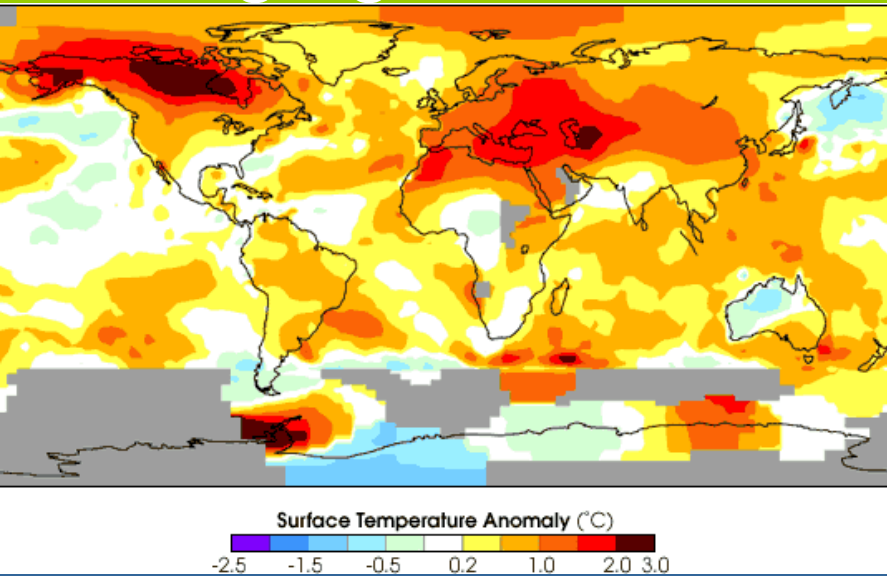


Adaptation does not happen in a vacuum

Framework principles

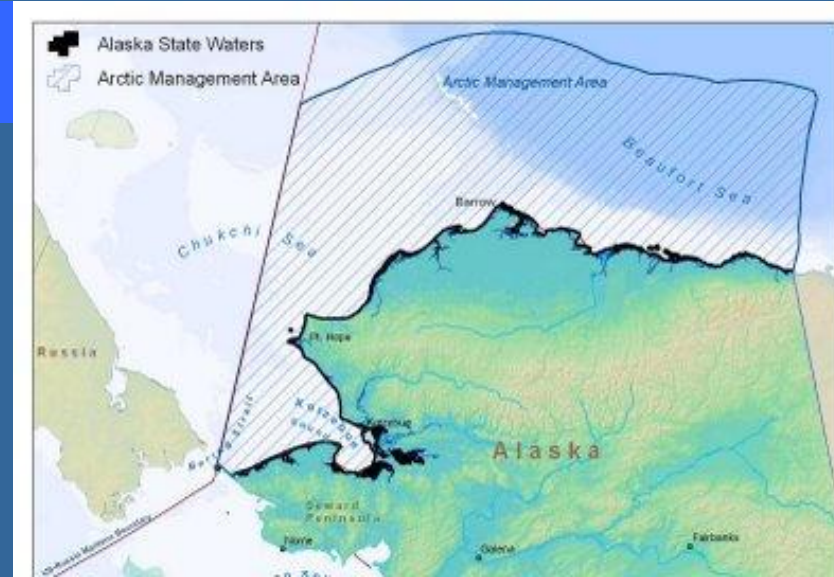
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- Don't lose site of underlying goals
 - Focus on INTEGRATION, not isolation of adaptation thinking
 - all work should be climate cognizant
- Don't shy away from uncertainty, rather support efforts that promote learning

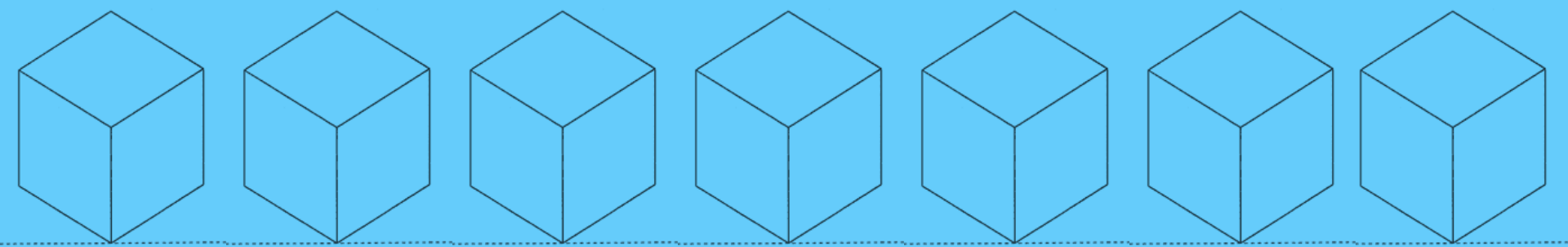
Managing Fisheries



Rising Ocean Temperatures, Acidification, more
Solutions!

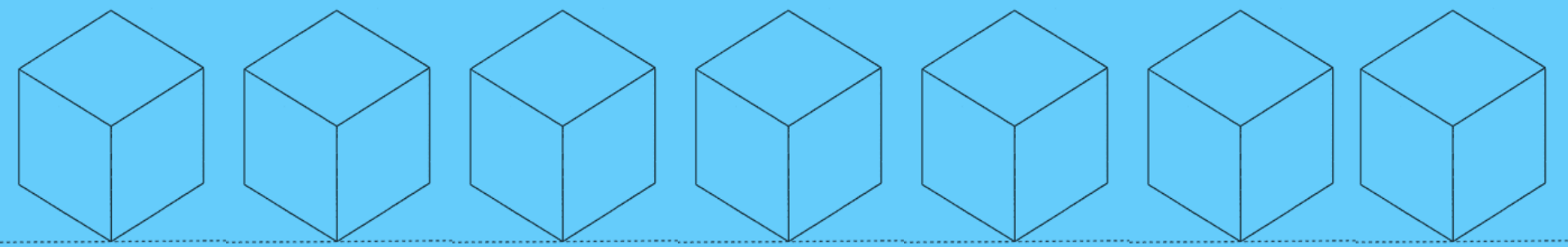
• “If you don’t know, don’t go”
Closure of rapidly changing
regions, especially those lacking
management plans





“There is no box.”

-Amory Lovins



Additional resources

LARA J. HANSEN AND JENNIFER R. HOFFMAN

CLIMATE SAVVY



ADAPTING
CONSERVATION AND RESOURCE MANAGEMENT
TO A CHANGING WORLD

climatesavvy.org

The screenshot shows the Cakex.org website interface. At the top, there are navigation links for SIGN IN, REGISTER, MY ACCOUNT, ABOUT, and DONATE. Below this is a search bar and a menu with options: CASE STUDIES, VIRTUAL LIBRARY, DIRECTORY, TOOLS, and COMMUNITY. The main content area features a case study titled "A Climate Change Action Plan for the Florida Reef Tract (2010-2015)" by Alex Score, dated October 26, 2010. The article includes a "Share This" button and a "Project Summary / Overview" section. A map of the Florida Reef Tract is shown, powered by ESRI, with a "Map" and "Satellite" view option. The "Project Background" section discusses the vulnerability of coral reefs to climate change impacts. On the right side, there are sections for "CASE STUDIES", "Search Case Studies", "Partner Organizations" (listing The Nature Conservancy-Florida Reef Resilience Program), "Related Virtual Library Resources" (listing Florida Reef Resilience Conference 2008: Resilience Strategies and Climate Change Action Plan For The Florida Reef System 2010-2015), "Related Case Studies" (listing Florida Reef Resilience Program), and a "Submit a Case Study" button.

cakex.org



The State of Marine and Coastal Adaptation in North America: A Synthesis of Emerging Ideas

Final Report
January 2011



EcoAdapt.org



Visit CAKE at:
www.cakex.org

If you have questions:

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286