NOAA FISHERIES

Southeast Regional Action Plans for Climate Change

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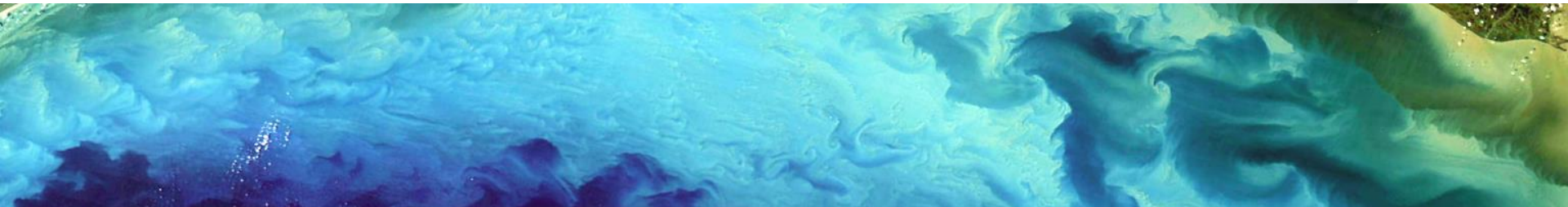
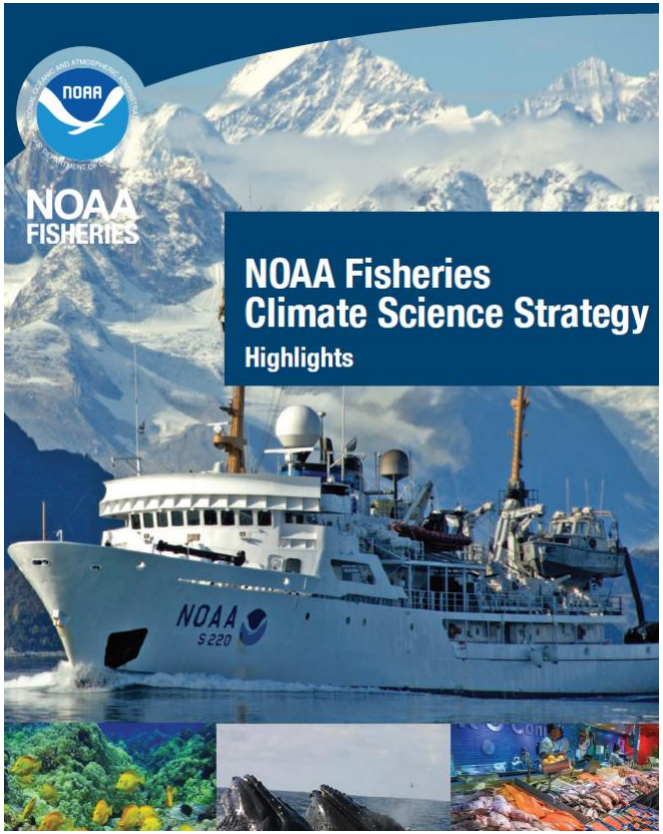
Presentation Outline

- NOAA-Fisheries Climate Science Strategy
- Regional Action Plan 1.0 Development
- Achievements
- Regional Action Plan 2.0 Development
- Climate, Ecosystems, and Fisheries Initiative
- Southeast Region Climate Team



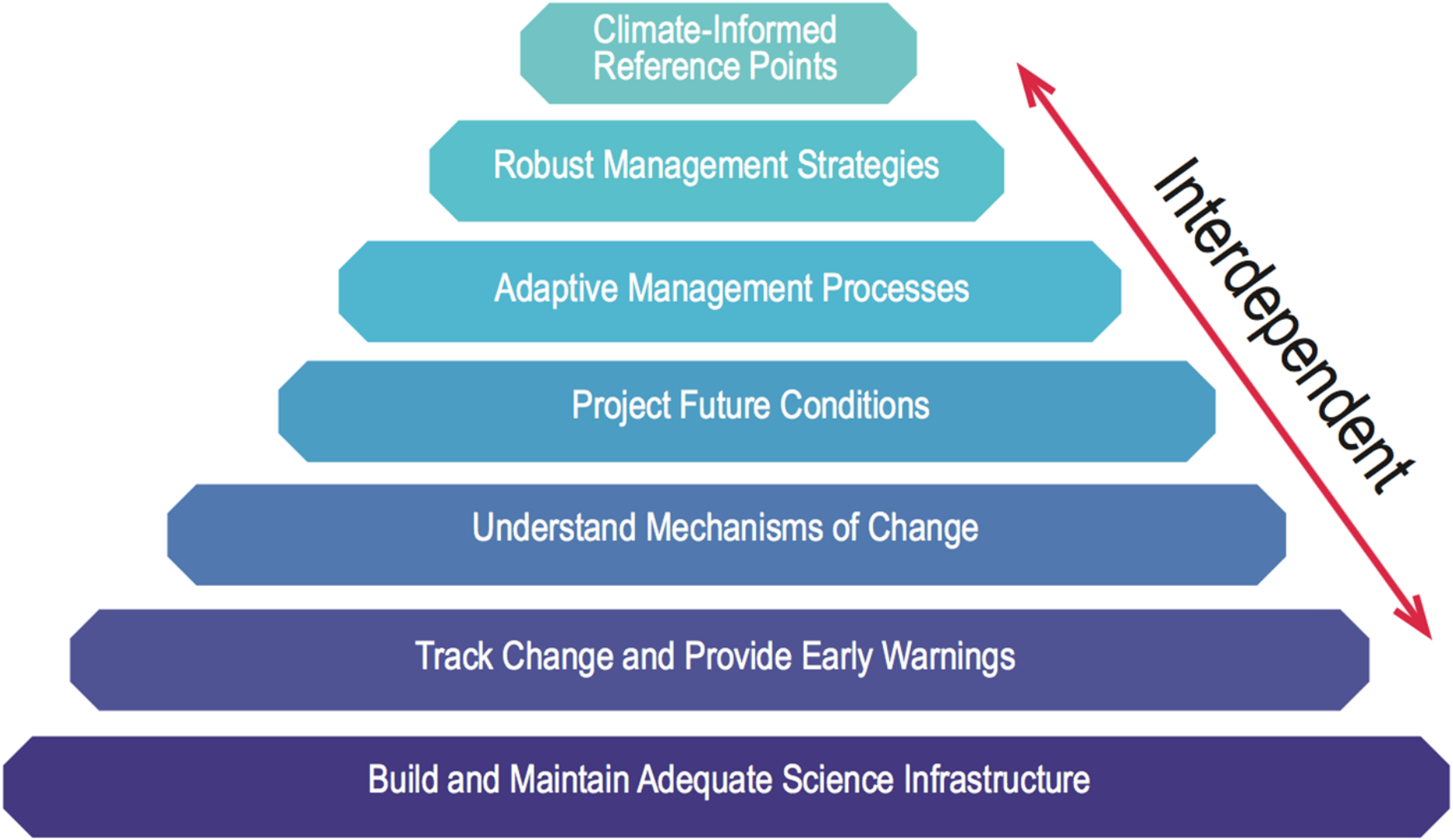
NOAA-Fisheries Climate Science Strategy



- Proactive approach to increase production, delivery, and use of climate-related information to fulfill NOAA Fisheries mandates.
- Seven objectives to reduce impacts and increase resilience with changing climate and ocean conditions.
- Implemented through Regional Action Plans (RAP)

Climate Strategy document

7 Climate Science Strategy Objectives



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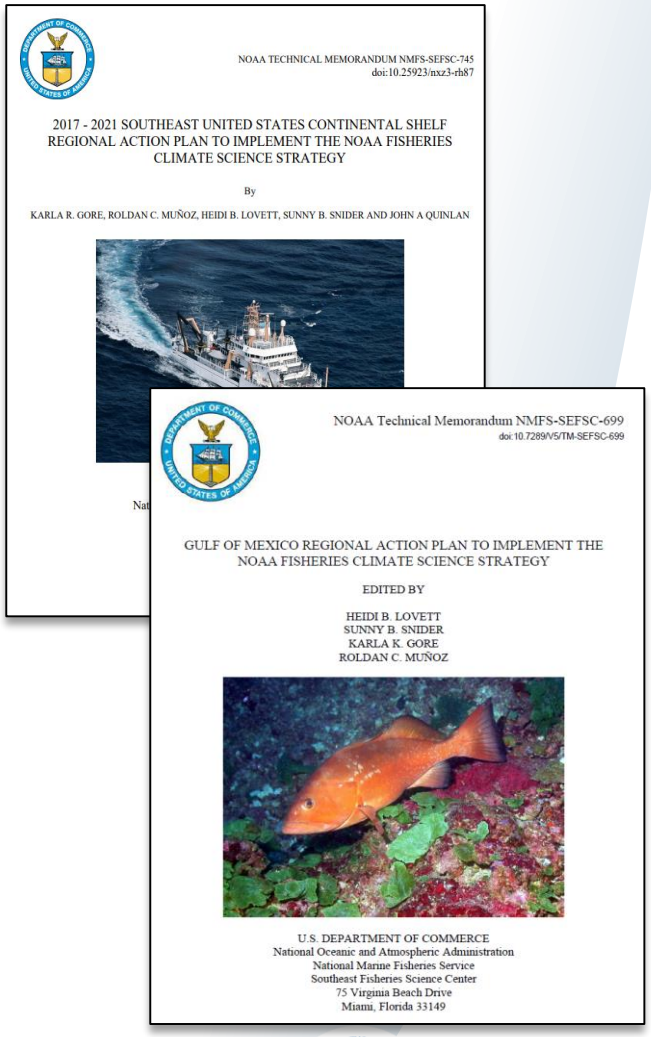
Southeast Regional Action Plans 1.0

- Developed involving the **SEFSC**, **SERO**, **AOML**, the **Councils**, and the **public**.
- Developed RAPs for the South Atlantic and the Gulf of Mexico
- There were 68 (11 priority) actions in the South Atlantic and 62 (12 priority) in the Gulf.



NOAA TECHNICAL MEMORANDUM NMFS-SEFSC-745
doi:10.25923/nxz3-rb87

2017 - 2021 SOUTHEAST UNITED STATES CONTINENTAL SHELF REGIONAL ACTION PLAN TO IMPLEMENT THE NOAA FISHERIES CLIMATE SCIENCE STRATEGY

By

KARLA R. GORE, ROLDAN C. MUÑOZ, HEIDI B. LOVETT, SUNNY B. SNIDER AND JOHN A QUINLAN

NOAA Technical Memorandum NMFS-SEFSC-699
doi:10.7289/V5/TM-SEFSC-699

GULF OF MEXICO REGIONAL ACTION PLAN TO IMPLEMENT THE NOAA FISHERIES CLIMATE SCIENCE STRATEGY

EDITED BY

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Link to RAP 1.0 documents

Southeast Regional Action Plans 1.0

A few priority *actions* (and accomplishments):

- Conduct climate vulnerability assessments (CVA)
- Develop Ecosystem Status Reports
- Establish a regional SEFSC/*AOML*/SERO climate team
- Include environmental covariates in stock assessments (AMO, red tide, larval transport)
- Hire an MSE specialist for developing climate-ready harvest control rules.
- Develop *and execute* a monitoring plan to support climate science needs.

Additional details in Peterson et al. (2021). NOAA Fisheries Climate Science Strategy Five Year Progress Report (NMFS-F/SPO-228)

Southeast Regional Action Plans 2.0 (2022-2024)

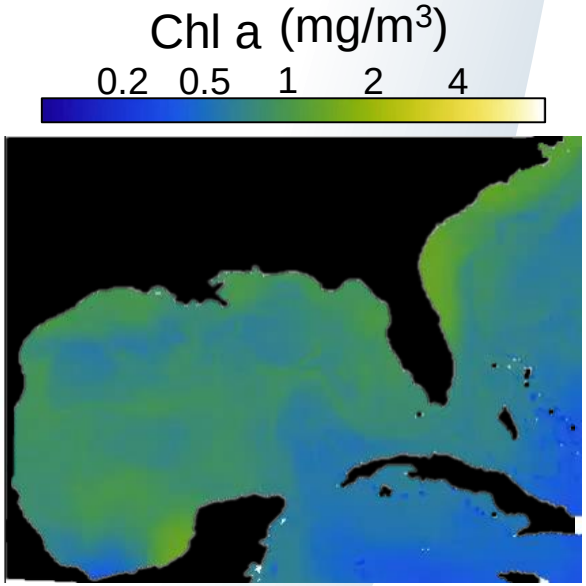
- RAP 2.0 Developed in a manner similar to RAP 1.0
- Input from SEFSC, SERO, and Council to develop action items.
- One document that includes South Atlantic, Gulf of Mexico, and Caribbean Region-specific action items.
- Currently incorporating public comments. Plan to finalize and release as tech memo in October.

Southeast Regional Action Plans 2.0
Selection of proposed action items include:

- Regional climate change workshop (virtual)
- Improve understanding of environmental drivers on population dynamics (growth, recruitment) of harvested species (SA & GOM)
- Investigate use of coastal surveys to detect species distribution shifts (dolphinfish in SA, SEFSC, AOML, NC State)
- Role of climate in EFH, HAPC, NEPA, ESA (SERO)
- East Coast climate change scenario planning workshop (underway)
- *Expand* stakeholder engagement (e.g., participatory modeling efforts involving fishers; red tide-GOM, dolphin-wahoo-SA, red snapper-GOM)
- *Develop a comprehensive and collaborative monitoring program for climate (nutrients - protected resources).*

NOAA, Climate, Ecosystems, and Fisheries Initiative (CEFI)*

- Cross-NOAA program to 1) build a national Modular Operational Model (MOM6) and
- 2) regional and national Fisheries and Climate Decision Support System (FACSS) to
- 3) Produce climate products useful to managers (e.g., climate-informed harvest rates, species distribution maps, recovery targets, indicators for Ecosystem Status Reports), and
- Reduce impacts, increase resilience to changing ocean.



Courtesy of Andrew Ross (GFDL).

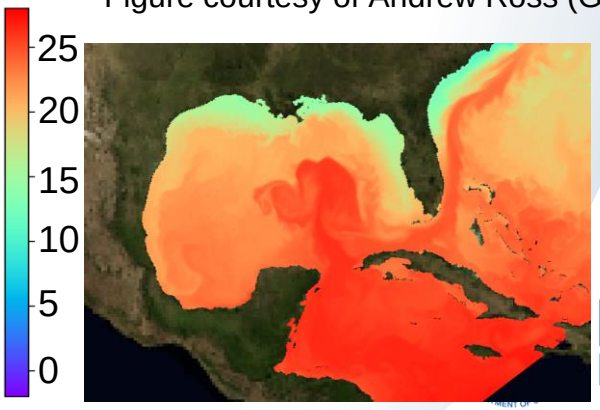
*Formerly the Climate and Fisheries Initiative (CFI), the name was changed to better reflect the cross cutting and cross program aspect of the initiative.

CEFI Goals

- Regional MOM6 updated and operational, delivering hindcasts, nowcasts, forecasts, and ecosystem projections for management of marine and coastal resources.
- Cross-NOAA regional teams support the production and application of regional MOM6 products.
- Research and modeling is improving understanding of climate impacts. Helping to identify best management strategies to reduce risks and increase resilience.
- Web portals provide easy access to climate-related information for multiple applications.
- Decision-makers have early warnings and longer-term projections of changing climate/ocean conditions: marine heatwaves, hypoxic events, harmful algal blooms, and acidification.

Sea Surface Temperature

Figure courtesy of Andrew Ross (GFDL).



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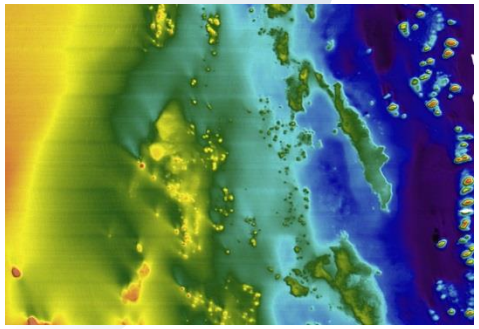
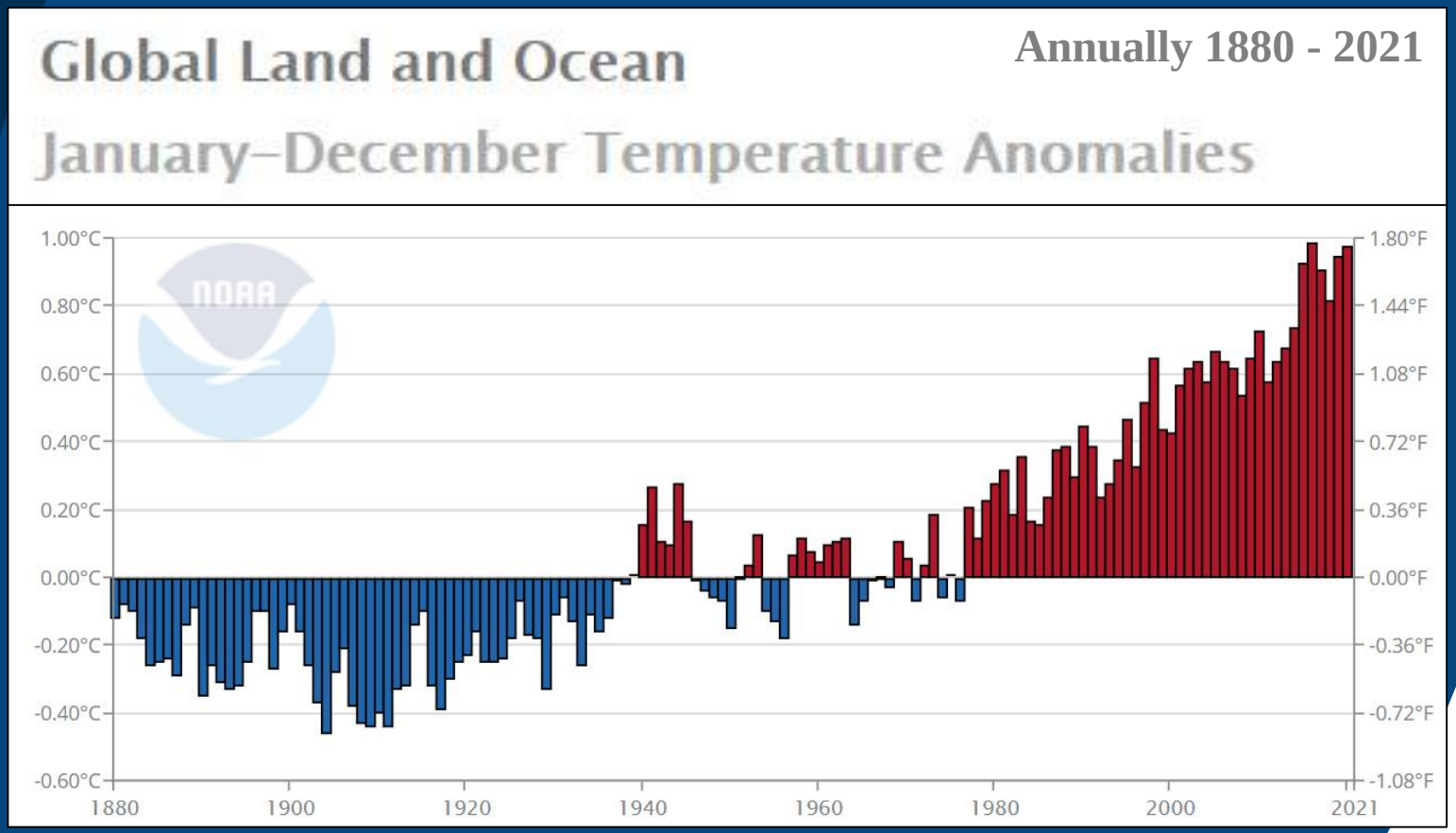
Regional Climate Team

- Currently composed of SEFSC and SERO staff scientists. Plan to expand to AOML.
- Working to develop and implement the RAPs, be responsive to HQ, and complete CVAs, etc.
- **SERO**:Lauren Waters, Joseph Cavanaugh, David Dale, Karla Gore, Kelli O'Donnell
- **SEFSC**: Michael Burton, Jennifer Doerr, Jennifer Leo, Roldan Muñoz, John Quinlan, Christopher Sasso



Thank you!
Questions?



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