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 and Fisheries Initiative
- Climate Team

NOAA-Fisheries Climate Science Strategy

- Proactive approach to increase the production, delivery, and use of climate-related information to fulfill NOAA Fisheries mandates.
- Identifies seven objectives to provide information to reduce impacts and increase resilience with changing climate and ocean conditions.
- Is implemented through Regional Action Plans

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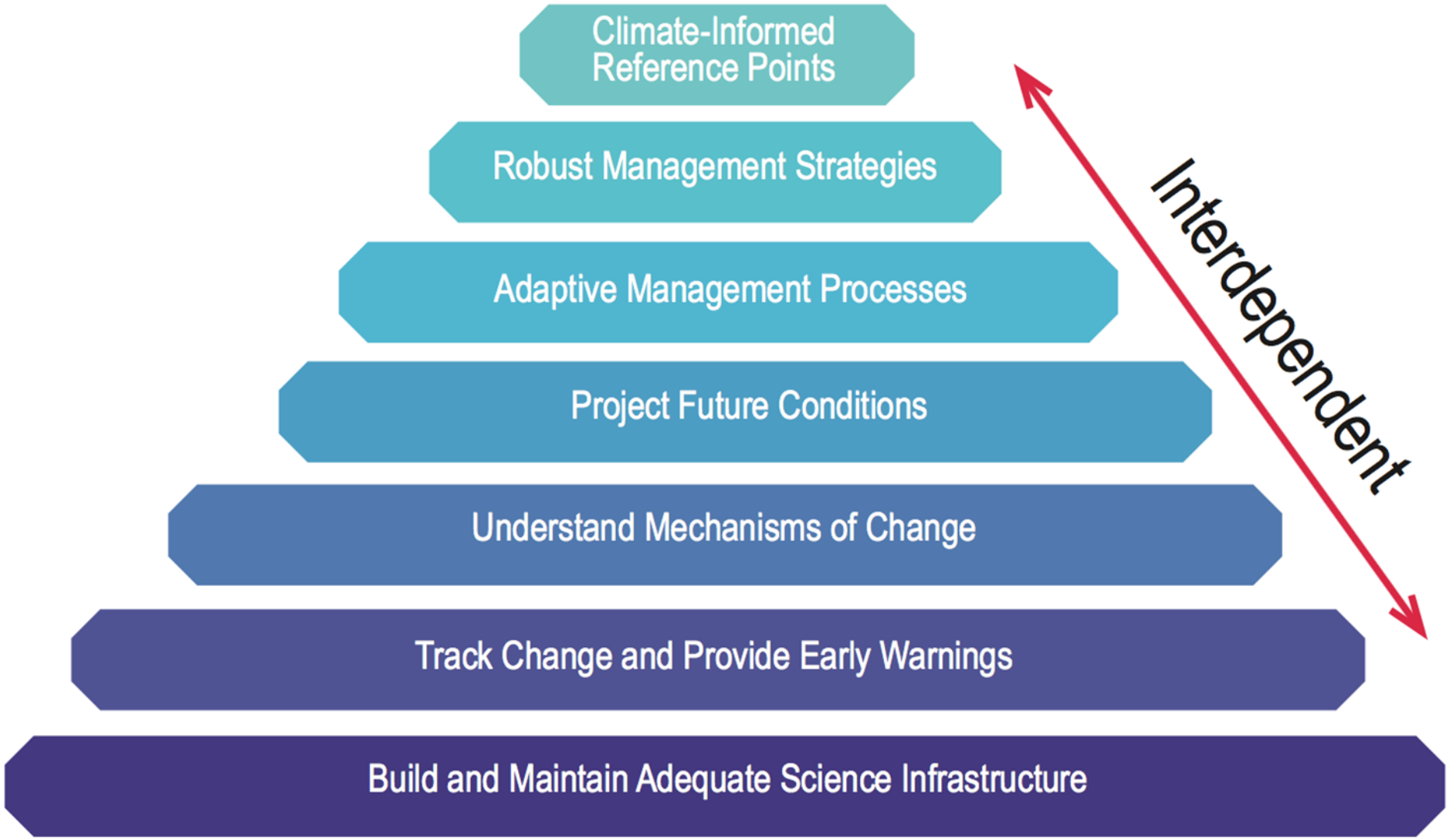
Climate Science Strategy Objectives



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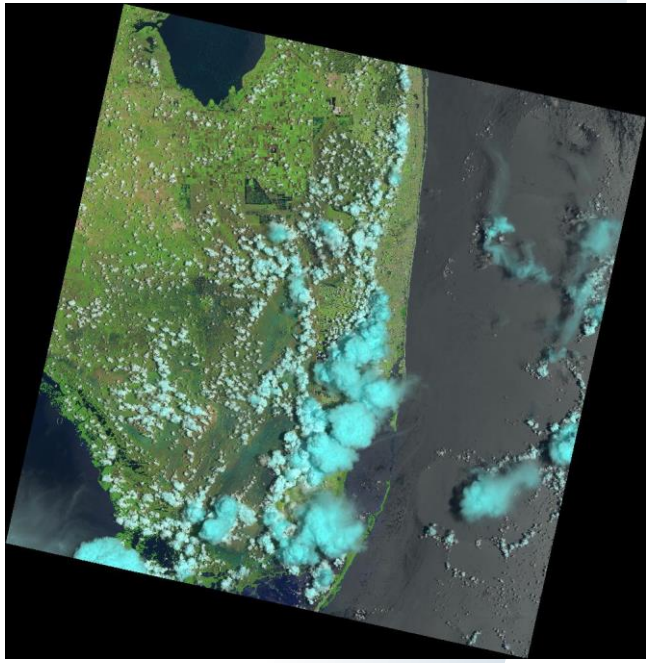
Southeast Regional Action Plans 1.0



- Developed via a collaborative process involving the SEFSC, SERO, AOML, the Councils, and the public.
- Developed two RAPs, one for the South Atlantic and one for the Gulf of Mexico
- There were 68 (11) actions in the South Atlantic and 62 (12) in the Gulf.
- Published as NOAA Technical Memos.

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Southeast Regional Action Plans 1.0

NOAA TECHNICAL MEMORANDUM NMFS-SEFSC-745
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2017 - 2021 SOUTHEAST UNITED STATES CONTINENTAL SHELF REGIONAL ACTION PLAN TO IMPLEMENT THE NOAA FISHERIES CLIMATE SCIENCE STRATEGY

By

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

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https://www.fisheries.noaa.gov/content/southeastern-us-continental-shelf-and-gulf-mexico-regional-action-plans

Southeast Regional Action Plans 1.0

A few priority actions (and accomplishments):

- Conduct climate vulnerability assessments
- Develop an Ecosystem Status Report
- Establish a regional SEFSC/*AOML*/SERO climate team
- Include environmental covariates in stock assessments (AMO, Red tide, larval drift)
- Hire an MSE specialist for developing climate-ready harvest control rules.
- Develop *and execute* a monitoring plan to support climate science needs.
- *Collaborate on a workshop for climate-informed reference points.*

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Southeast Regional Action Plans 2.0

- RAP 2.0 is in progress. Developed in a manner similar to RAP 1.0 involving the SEFSC, SERO, AOML, the Councils, and the public.
- Climate-change interviews with SEFSC, SERO and Council to develop action items.
- One document covering the South Atlantic, Gulf of Mexico, and Caribbean. Region-specific action items.
- Will be published as NOAA Technical Memo.

Southeast Regional Action Plans 2.0

Proposed action items include:

- Regional climate change workshop
- Investigate use of coastal surveys to detect species distribution shifts
- Role of climate in EFH, HAPC, NEPA, ESA
- Improve understanding of plankton and lower trophic levels in the South Atlantic
- Improve understanding of environmental drivers on popn dynamics of harvested species
- Improve stakeholder engagement (e.g., participatory modeling efforts involving fishers)
- Improve inter-agency coordination along Atlantic coast

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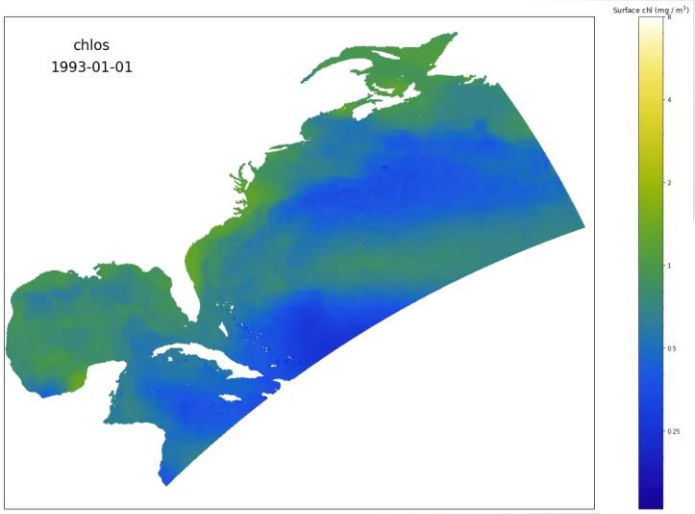
Climate and Fisheries Initiative

- Cross-NOAA program to build a national operational modeling (MOM6) and Fisheries and Climate Decision Support System (FACSS).
- Produce climate products useful to managers (e.g., climate-informed harvest rates, species distribution maps, recovery targets, indicators for Ecosystem Status Reports)



Animation courtesy of Andrew Ross (GFDL).

https://media.fisheries.noaa.gov/2021-08/NOAA%20Climate%20and%20Fisheries%20Initiative%20Fact%20Sheet.pdf?VersionId=null

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CFI Goals

- Regional MOM6 ocean modeling system is operational. Delivers hindcasts, nowcasts, forecasts, and 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. Identifying best management strategies to reduce risks and increase resilience.
- Web portals provide easy access to climate-related information for multiple applications.
- Decision-makers have robust early warnings and longer-term projections of changing climate/ocean conditions. Marine heatwaves, hypoxic events, harmful algal blooms, and acidification.

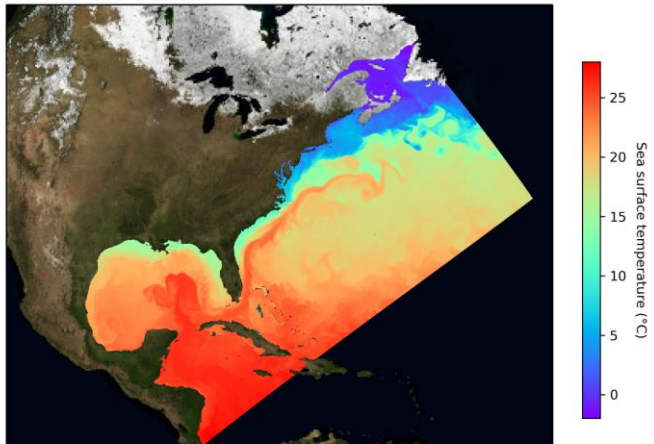

Figure courtesy of Andrew Ross (GFDL).

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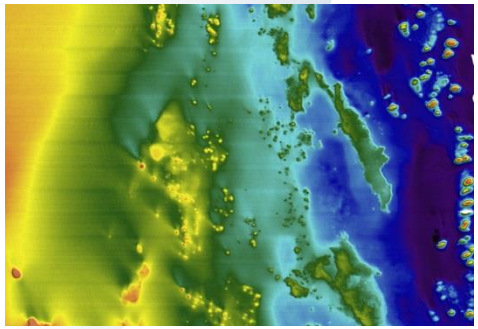
Regional Climate Team

- Currently composed of SEFSC and SERO staff scientists. Plan to expand to AOML.
- Biweekly meetings. Working on RAPs, HQ taskers, CVAs, etc.
- **SERO**: Joseph Cavanaugh, Karla Gore, Kelli O'Donnell, Patrick Opay
- **SEFSC**: Michael Burton, Jennifer Doerr, Jennifer Leo, Roldan Muñoz, John Quinlan, Christopher Sasso



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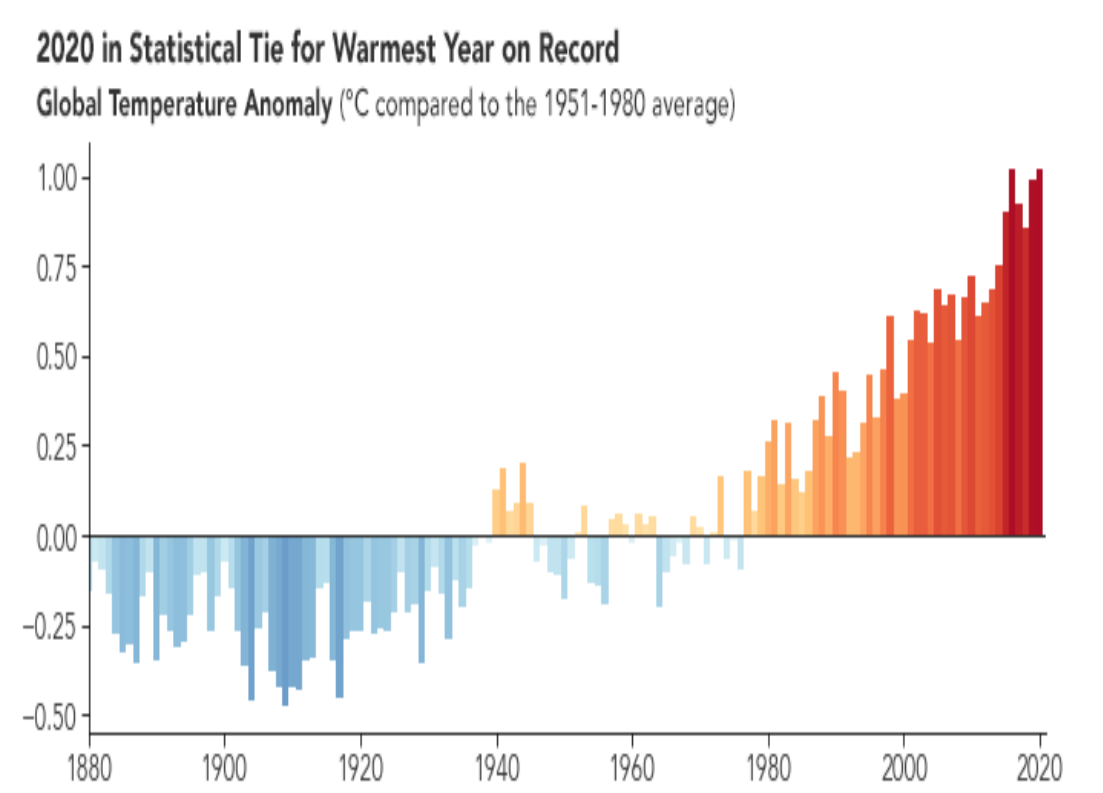

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