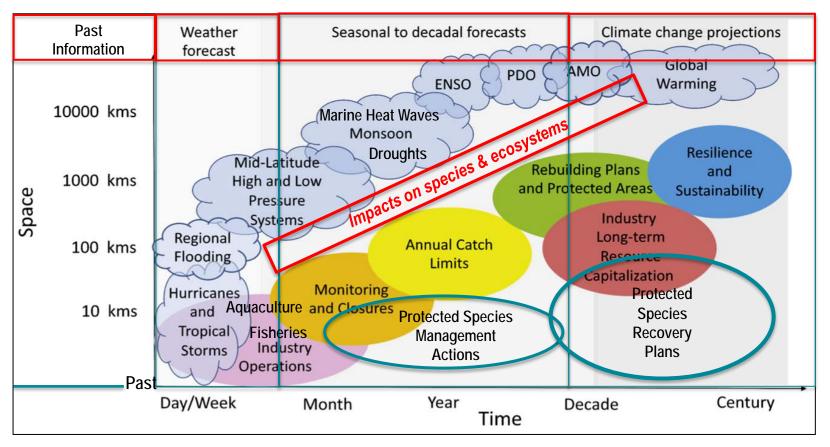


CFI Webpage

NPFMC NPFMC October 2021

2019 Assessment: NMFS Climate Information Requirements



NOAA's Climate and Fisheries Initiative

- Challenge: Climate change is impacting the nation's valuable marine and Great Lakes ecosystems, fisheries, and the communities that depend on them. These impacts are creating urgent questions that demand climate-informed answers.
- Response: NOAA's Climate Fisheries Initiative is a cross-NOAA effort which, when combined with existing programs, will enable the sustained operational ocean prediction and decision support system needed to reduce negative impacts and increase resilience of ecosystems and coastal communities



NOAA Climate and Fisheries Initiative (CFI)

- Cross-NOAA effort (NMFS, OAR, NOS, NWS, NESDIS)
- Build a operational ocean modeling and decision support system
 - Provide state-of-the-art ocean forecasts and projections
- Provide climate-informed ecosystem projections, risk assessments and management strategies
 - Reduce impacts and increase resilience of LMRs and communities.

What will CFI do?

CFI will:

- Build an operational ocean modeling and decision support system to
- Provide NMFS and other decisionmakers with state-of-the-art ocean forecasts, risk assessments and management options that
 - Enable climate-informed LMR management.

Integrated, nation-wide operational system that delivers:

- Ocean forecasts and projections
- Ecosystem projections
- Stock projections
- Risk Assessments
- Adaptation Options
- Strategy Evaluations
- Management capacity

CFI Climate, Ocean, and Ecosystem Decision Support Systems

- Advancing Ocean, Ecosystem, and Climate Understanding
- Operational Ocean, Climate, and Ecosystem Prediction Systems

Climate Ready Decision Making





OPERATIONS AND INFRASTRUCTURE

Drives Dissemination and Decision Support





National Community of Practice



Enhanced Observations



Targeted Research that Fuels Innovation



Enhanced Ocean Modeling Capabilities



Regional Ocean Modeling and Prediction



CFI Information Hub



Fisheries and Climate Decision Support System



Ecosystem Prediction



Increasing Capacity for Climate Ready Decisions



Rapid Response



Climate Smart Decision Support Tools



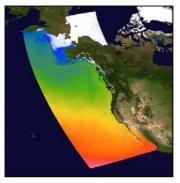
Improve Surveys and Research

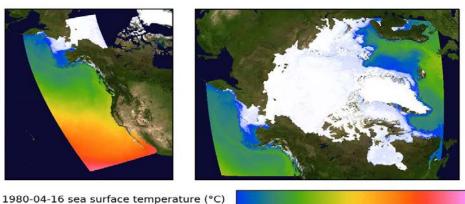


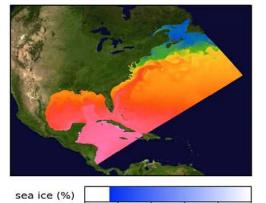
Coordinated Science and Advice



Enhanced Ocean Modeling Capabilities

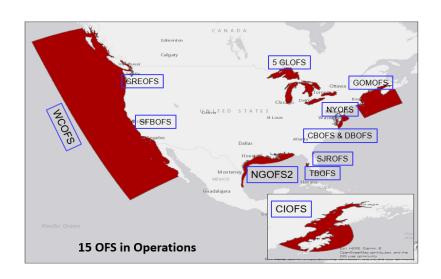








- Builds on NOAA ocean forecast (NOS) and Prediction Systems (OAR/GFDL)
- Regional Ocean Modeling Teams customize products for NMFS uses
- Holistic ocean/BGC predictions, expandable to earth system as needed
- NOAA HPC powers predictions spanning the range of ocean futures
- Robust dissemination through CFI Information Hub & national data stds



CFI Ocean Modeling and Decision Support System **CFI** Regional Ocean Info Migh-Resolution Oceania Elbal Climate Models Modeling **HUB Ecosystem foresight** Social-ecological system forecasts & **Teams** projections, tipping points & early Effective monitoring & research Improved research & climate-ready survey design, increased speed of response Rapid response Plan & predict, near-realtime alerts, emergency aid, triage **FACCS** impacts, enable individual adaptation Finhanced Biological No. Coordinated science & advice Inter- & intra-agency coordination, national strategies aligned with regional priorities, efficent information Climate smart decision support tools sharing, reduced redundancy **Fisheries and** Oynamic Social-Economic Mos Climate enhanced stock assessments, Climate Decision climate informed advice & tools, dynamic management Support System

Artwork – K. Holsman

Initial funding 2021

- Continue ROMS-MOM6 transition and testing
 - Pilot Projects Continue in New England, Eastern Bering Sea, Gulf of Alaska and West Coast
- Continued development of Arctic
 Grid

Build Phase 2022

- Data Portal Teams
- Model Teams
- FACSS Teams
- Skill Assessments
- Model design specifications to meet regional needs
- Cross NOAA Communication
- Testing and implementing tools and products

Questions?

