

## CEFI Decision Support Teams for Climate Ready Fisheries (info on the full CEFI System is available here)

Kristen Koch, NMFS Southwest Fisheries Science Center IOOS Advisory Committee - June 28, 2023

#### **Overview: What is CEFI?**

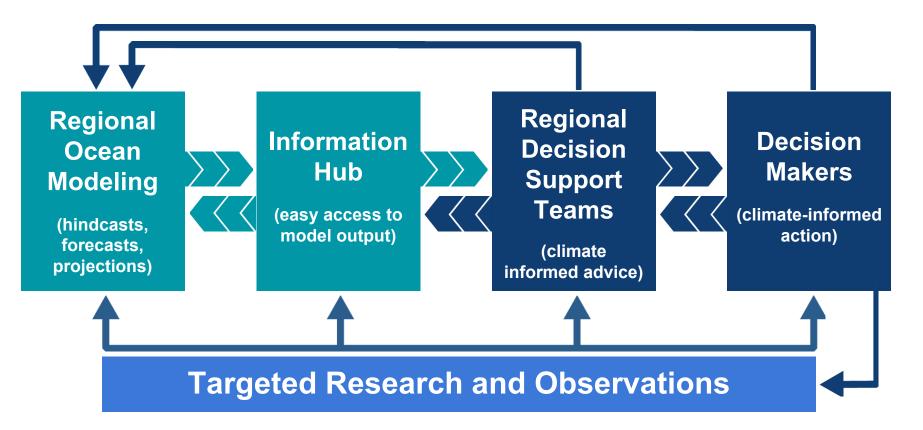
A cross-NOAA effort to provide climate-informed advice for marine resource management and community adaptation. Inflation Reduction Act: \$20M NMFS; \$16M OAR; \$4M NOS

Builds on existing NOAA investments in observations, research, modeling, and decision-making.

An end-to-end decision support system addressing four requirements:

- 1. Reliable delivery of robust ocean forecasts and projections
- **2. Operational production** of climate-informed ecosystem projections, risk assessments and adaptation strategies
- 3. Increased decision maker capacity to use climate advice
- 4. Targeted research & observations for validation & innovation

#### **CEFI Decision Support System**



https://www.fisheries.noaa.gov/topic/climate-change/climate,-ecosystems,-and-fisheries

### **CEFI Regional Teams**

Regional Ocean Modeling Teams





Region a Decisio n Schoo Cali

#### CEFI & Observations – Where Does IOOS Come In? (A West Coast Perspective)

- CEFI National Observations and Research Team (NORT) to identify priority observation requirements
- Non-stationarity and Fisheries/Protected Resources Growing Importance of Seasonal Forecast Data for Indices
- Maintain Core Expertise in Physical and Chemical Observations
  - data assimilation into models that will support CEFI Decision Support Teams in NMFS Science Centers (e.g. glider data for temperature anomalies, HFR data, satellite data)
  - model validation and verification

#### CEFI & Observations – Where Does IOOS Come In? (A West Coast Perspective)

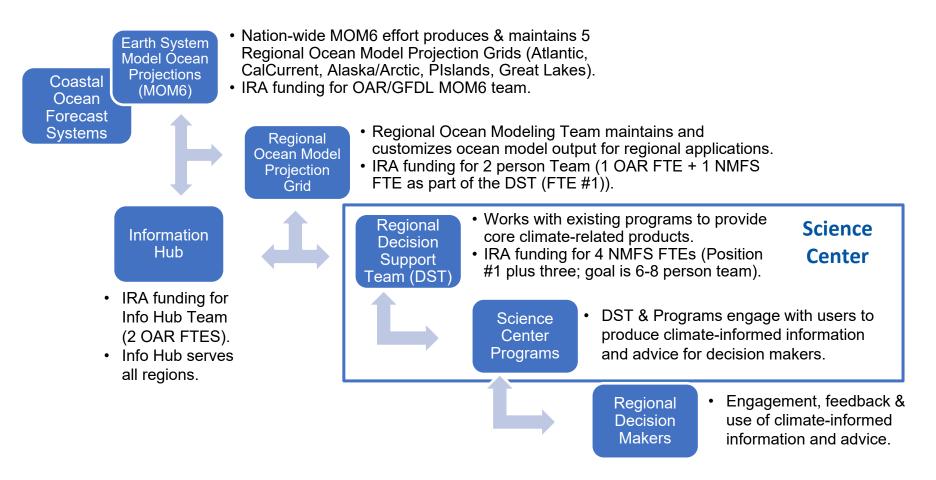
- Consider expanding in areas important to Living Marine Resources .) in conjunction with NMFS to support DSTs
  - animal tracking
  - expanded partnerships with fishing vessels?, etc
- Support growing needs of Fishery Management Councils through data used in Ecosystem Status Reports and new Environmental Indicators. Timescales of greatest interest: 1mo – 2 yrs

pcouncil.org/documents/2023/02/h-1-a-cciea-team-report-1-electronic-only-2022-2023-californiacurrent-ecosystem-status-report-and-appendices.pdf/

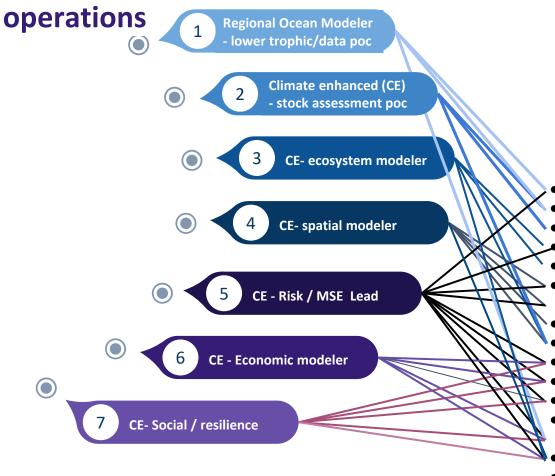
- NMFS Data Acquisition Plan (in draft)
  - Update of 1998 DAP
  - Strength in Diversifying our Platforms

# **Backup Slides**

#### **CEFI Regional Structure & IRA Funding**



#### **Envisioned CEFI Decision Support Teams - Basic structure and**



Examples of climate-informed decision support tools produced for/with existing SCenter programs

Eco-climate hindcasts, forecasts, projections Climate-linked stock assessments Climate-informed targets & reference points **Risk tables** Tipping point detection and risk Near-real time protected spp / bycatch risk maps Projected species hot-spots Future climate refugia (spatial) Species risk profiles Community resilience strategies Adaptation feasibility & effectiveness analyses Contingency and emergency planning and response Dynamic management tools

Cumulative risk and impacts analyses