Agenda Item B.1.b Supplemental Public Presentation 1 March 2022

# Climate change Adaptation Tools for California Current fisHeries

### CATCCH

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# The CATCCH Project

- Only recent high-resolution climate change ocean impact models can make accurate predictions along coasts.
- But these outputs have not yet been wedded to biogeochemical and fisheries models to inform sustainable decisions.

This Project is designed to close that modeling gap by:

- making it easier for fisheries stakeholders to access useful information from models
- developing a framework to support confident decisions
- maintaining resilient, sustainable future fisheries in the face of accelerating climate change.



(Bond et al., 2015



## Interviewees and aims

### Completed (12):

- Fishermen
- Nonprofit organizations
- Fishing management organizations
- Scientists
- Government organizations (limited)

### Targeted next set:

- More federal and state govt. organizations
- Larger fisheries management organizations
- Scientists

### **Goals** 1.How do they use data in their decision making?

2.What problems and gaps are there in accessing and using data?

3.What timescales are important for planning?



## Interview results

### • Themes

- Information sources & trust
- Lack of data interoperability
- Regulation & resource management

#### **Direct Quotes**

 "Anything that fishermen think they have input into, they trust it. If they don't feel like they have been consulted, or at least asked about, they don't trust it. We are on the water every day. We see today what scientists acknowledge a year or two from now." Director, Fishing Mgmt. Org.

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 "Going into the future, our stock assessments are based on long-running datasets...but if offshore wind takes away some of those datasets, how will that impact the uncertainty in data that informs the stock assessments?" Director, Fishing Mgmt. Org.



# Changing scope



## Impact/Implementing Stakeholder Input

- We thought fishermen were key stakeholders for our decisionmaking system, and most of them are not.
- Stakeholders are interested in ways to compile disparate data sources and we are exploring this further.
- We are thinking about data-driven decision making in new, more comprehensive ways than just including data from models.



# What are we doing

• Website: https://sustainableblue.geos.tamu.edu

### **Deliverables - now**

- Model results translated into information responsive to user priorities.
- Monthly maps of multiple physical, chemical and biological variables in the U.S. west coast fishing region.

### To come

 Prototype decision system including integrated model products that suggest how best to manage the fishery to ensure it remains sustainable for decades to come. Reciprocal interactions between scientists and fisheries stakeholders

Consequential and credible decisionsupport tool to optimize environmental information delivery



## Examples – individual monthly data

Climate-Biogeochemistry Model Forecast

option: Benthic Invertebrates 📀 year: 2018 📀 month: 2 📀



Based on data from 2015 with forecasts through 2025



# Examples - forecast data

CATCCH Home Maps Animations Team

**Climate-Biogeochemistry Model Forecast** 

option: Small Fish 🗘 year: 2024 🗘 month: 11 🗘

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# What's next?

- More interviews
- Feedback to potential users
- Development of decision support tools
- Search for continued funding



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## Questions?

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