



NOAA
FISHERIES

Office of
Science &
Technology

ST Ecosystem Science Summary

ST Ecosystem Science Program Review

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ToR 1: Goals and Objectives

Does ST have clear goals and objectives for its ecosystem-related programs?

Are ST ecosystem programs appropriate to advance ecosystem science and management for NMFS?

- ST programs lead & support the production, delivery, and use of ecosystem information to fulfill the agency's mandates
- Each ST ecosystem program has specific goals and objectives to address high priority needs identified by NOAA, NMFS and its Science Centers

ToR 1: Goals and Objectives

Derived from Mandates

MSA

Magnuson-Stevens
Fisheries
Conservation &
Management Act

MMPA

Marine Mammal
Protection Act

ESA

Endangered
Species Act

NEPA

National
Environmental
Policy Act

Resilient Resources, Communities & Economies

ToR 1: Goals and Objectives

Derived from Input



NOAA Fisheries Priorities & Guidance

External Input

NOAA Fisheries Science Board

Strategic/Implementation Plans

Scientific Steering Committees of Programs

Suite of ST Activities - Program Summaries

Program	Permanent Staff	Activities	\$ Disbursed (FY2016)
IEA	1	Science based framework to support decision making in an ecosystem context	\$2.66M
FATE	1	Science program to understand the effects of environmental forcing on fishery species	\$1.65M
Habitat Science	1	National leadership & support for habitat related science activities, address HAIP priorities	\$0.50M
Marine Eco. and Climate	2	National leadership & support for climate related science activities, address Climate Science Strategy priorities	\$0.87M
COPEPOD	1	Global plankton data & data products	---
Eco. Model Coord.	1	Improve capabilities, ensure quality & consistency	---

Staff not just managing this program funding & the supported projects

ToR 2: Integration with Relevant Programs

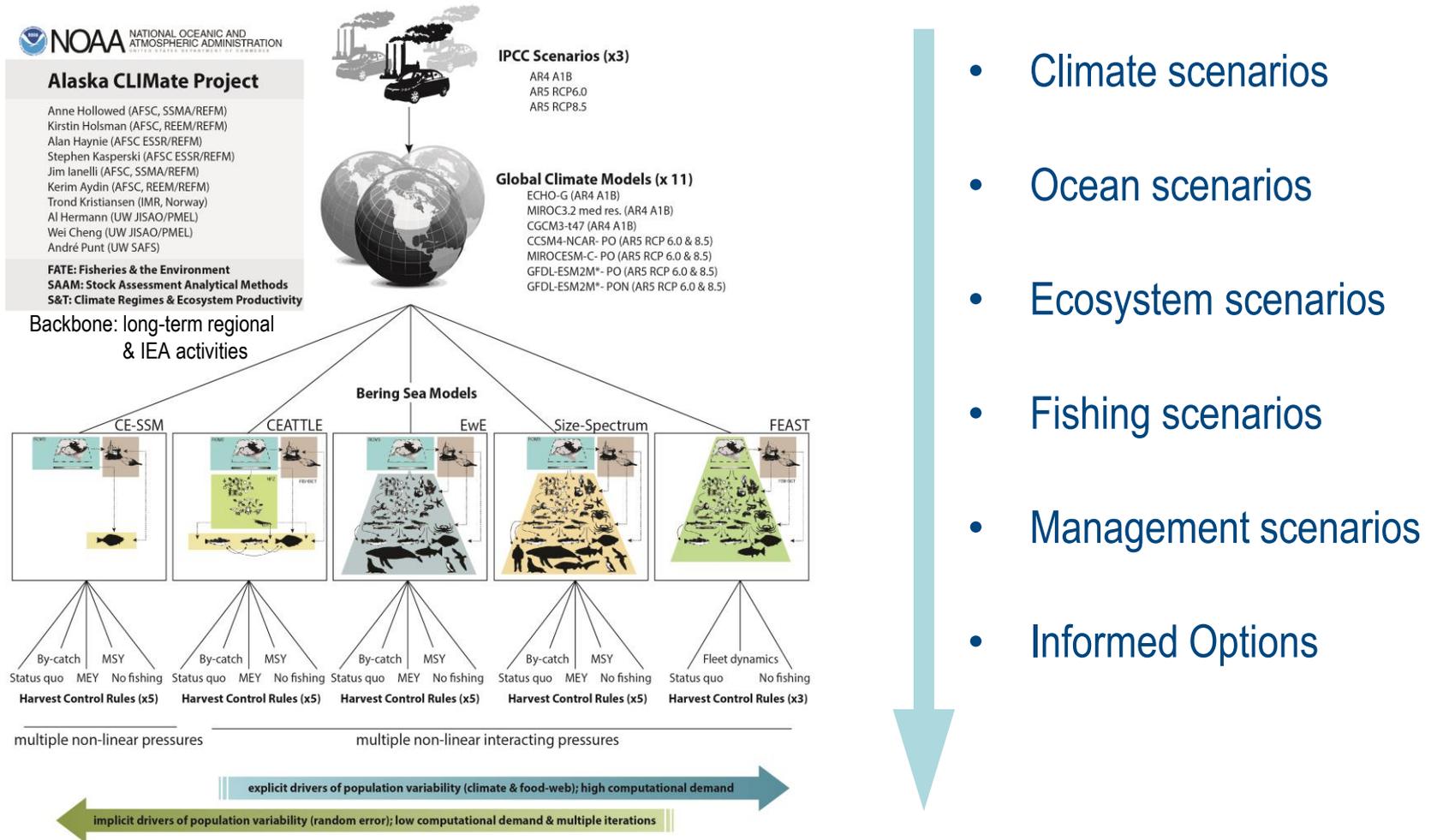
Are ST ecosystem-related science programs appropriately integrated with other relevant programs?

Is ST adequately collaborating with NMFS Science Centers and other relevant offices and programs across NOAA?

- Many examples shown of how programs coordinate with and leverage other programs.
- NMFS Science Center scientists are integral to all ST ecosystem-related science programs.
- Other offices across NMFS (HC, SF, PR, Regional Offices) and NOAA (OAR, NOS, NESDIS) are integral parts of many programs.

Tor 2: Integration between programs

Projecting future conditions and management strategies

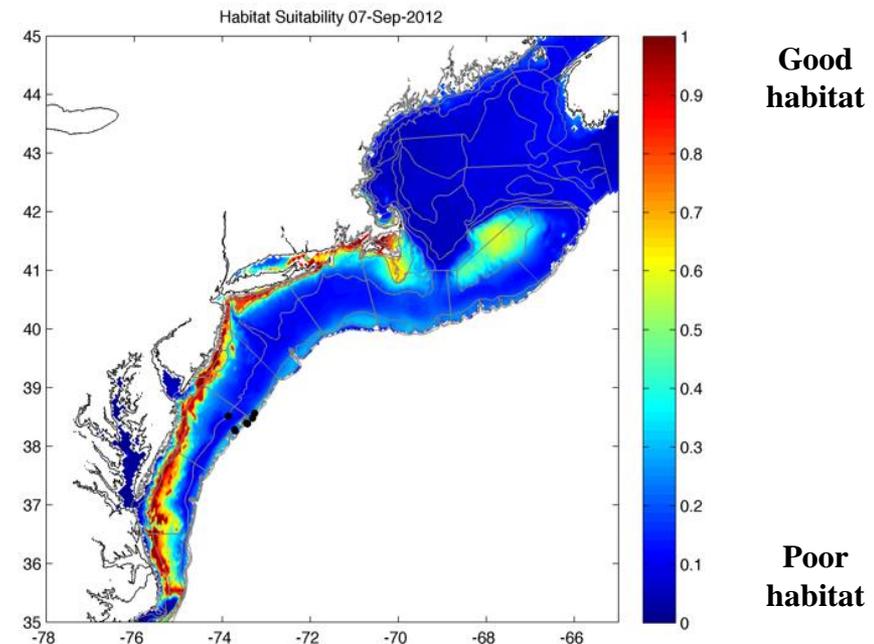


Tor 2: Integration between programs

Improving stock assessments

John Manderson et al. (NEFSC)

- Built habitat model to advance the prediction of butterfish distribution
- Scaled catchability for survey data based on thermal habitat availability
- Stock was not overfished, and overfishing was not occurring
- Butterfish landings quota was increased



Tor 2: Integration between programs

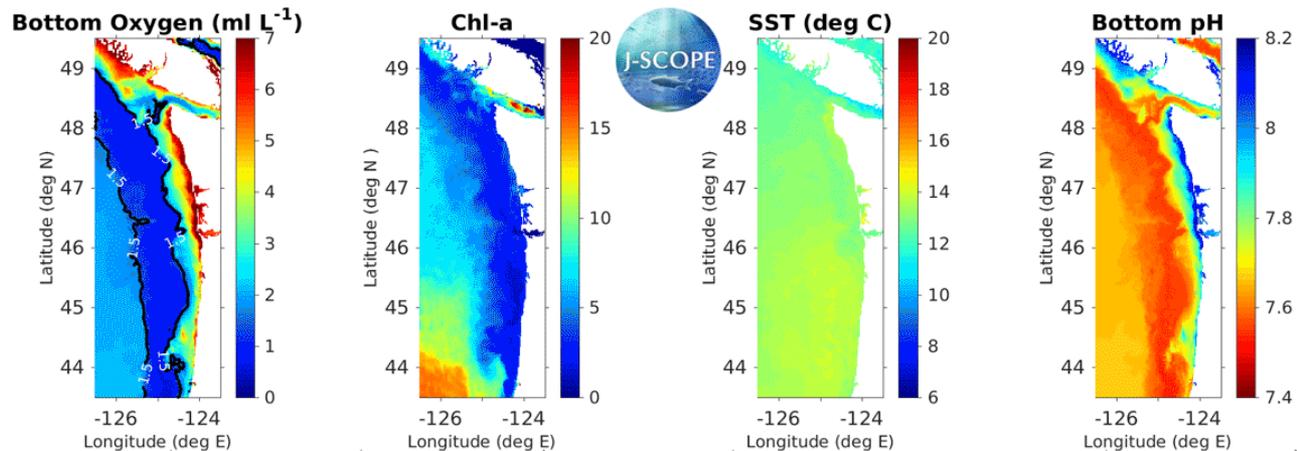
Seasonal predictions for managers



J-SCOPE

JISAO Seasonal Coastal Ocean Prediction of the Ecosystem

In the context of the California Current IEA, JSCOPE provides short term (six to nine month) forecasts of ocean condition that are testable and relevant to management decisions for fisheries, protected species and ecosystem health. Results will directly inform the IEA process, and will forecast indicators requested by the Pacific Fishery Management Council.



Kaplan et al.

ToR 3: Addressing Near-term Priorities

Do ST's ecosystem-related science programs provide information to address the priority needs of the Science Centers, NOAA managers, Fishery Management Councils and Commissions, and other partners for ecosystem-related information?

- Each program has specific goals and objectives to address high priority needs identified by NOAA, NMFS and its Science Centers
- The programs address needs identified through input from a variety of sources
 - NMFS Science Board
 - Strategic/Implementation Plans
 - Steering/advisory committees for programs

ToR 4: Addressing Longer-term Priorities

Is the suite of ST ecosystem-related science programs appropriate to address the priority needs of the Science Centers, NOAA managers, Fishery Management Councils and Commissions, and other partners for ecosystem-related information over the next 5-10 years?

- Each program has specific goals and objectives to address high priority needs identified by NOAA, NMFS and its Science Centers
- Address needs identified through input from a variety of sources
 - NMFS Science Board
 - Strategic/Implementation Plans
 - Steering/advisory committees for programs
- Coordinate with NMFS Science Board and NMFS leadership on long-term programmatic priorities
- Active in NOAA strategic planning (budget requests)
- Utilize this review's recommendations (& the Science Centers') to guide priorities for ST programs & strategic planning

ToR 5: Communicate Status & Accomplishments

Does ST appropriately communicate status and accomplishments of national ecosystem-based science programs to NMFS partners, stakeholders, the public, and NOAA and NMFS leadership?

- **Broad Audiences**

- Webpages/highlight stories
- Meetings/workshops/seminars
- Publications

- **NOAA Leadership**

- Briefings to the NMFS Science Board (& higher levels of NOAA when appropriate)

- **Delivery to Stakeholders**

- Integration of program results into assessments
- Programs augment /deliver Ecosystem Status Reports, vulnerability assessments, other products
- Participants in ST programs directly brief Councils and other management bodies

- **ST Strategic Communications Plan**

Strengths



Dedicated, passionate, skilled staff

Unique vantage point allowing a line of sight between mandates, agency guidance, and scientific projects

Valuable, high quality programs/activities — products valued and used

A suite of multi-disciplinary programs managed in one office facilitating coordination

Strong partnerships across NOAA Fisheries, NOAA, Federal/State agencies, academics, ...

Challenges - Solutions

Lack of clear governance mechanisms to utilize ecosystem information

Continue outreach to enhance trust with current management bodies

Refinement of management policies to be more explicit about ecosystem approaches

Work with Fishery Management Councils to refine/develop Fishery Ecosystem Plans

Development of ecosystem-level reference points

Challenges - Solutions *(continued)*

Resources

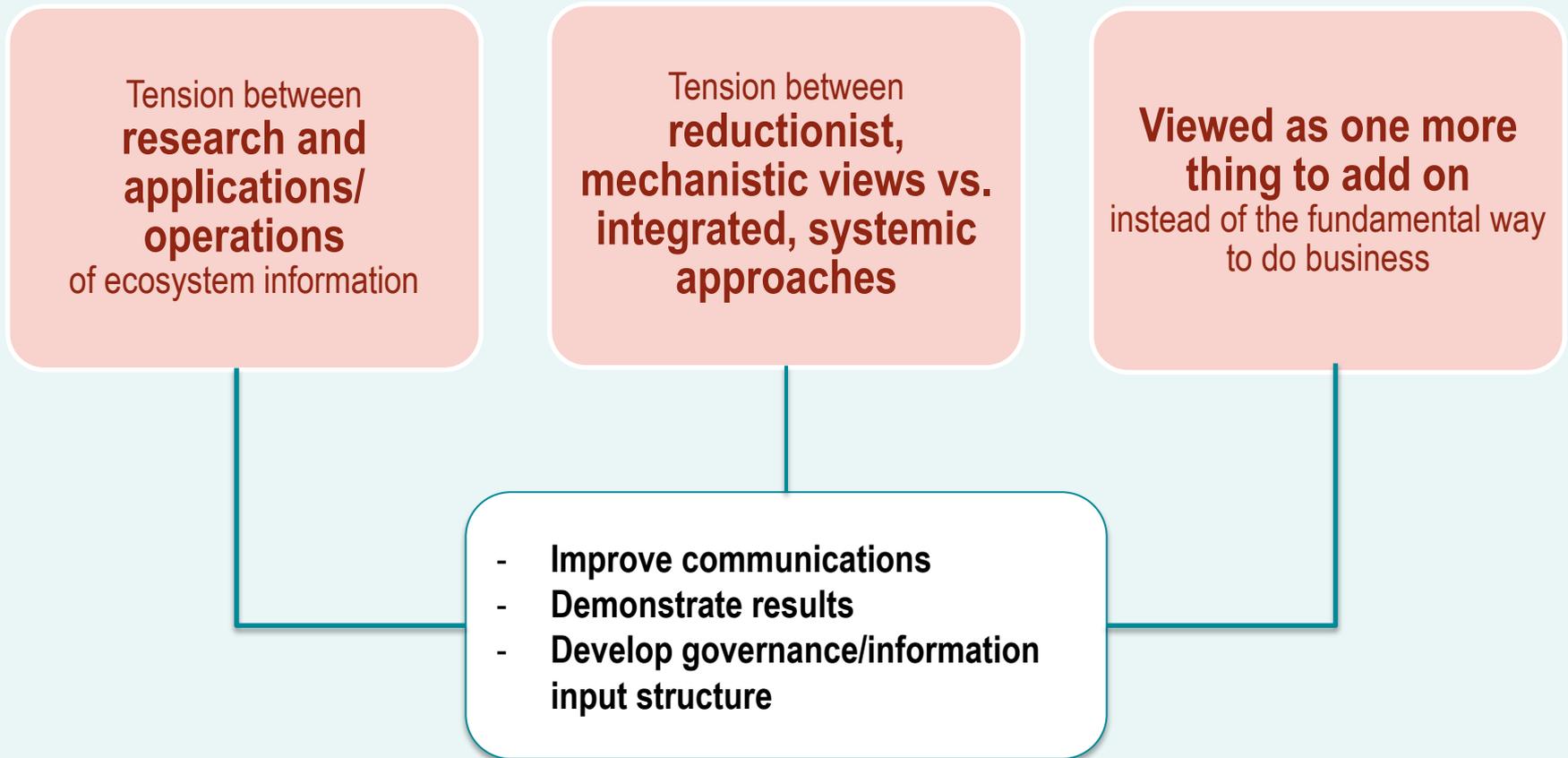
Continue advocating for programs, developing budget initiatives, building partnerships

Do not have a single, national ecosystem program

Enhance coordination between programs & definition of program roles

Develop a national ecosystem implementation plan

Challenges - Solutions *(continued)*



Future Directions

**Address priorities
specified in:**

- EBFM Policy/Road Map
- NOAA Fisheries Climate Science Strategy – RAPs
- Habitat Assessment Improvement Plan
- Multi-year IEA work plan
- Stock Assessment Improvement Plan update

**Better integration of social
& economic components**