Investigating & Improving Applications of Ecosystem Status Reports – August 2021 EBFM Workshop

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Goals of the Workshop

To identify ways to integrate ecosystem status reports (ESRs) with achieving other EBFM milestones and improve connections with fishery management through:

- Identifying management priorities that would benefit from ecosystem information in ESRs;
- Identifying types of on-ramps to deliver this information into fishery management decision making; and
- Engaging regional offices, councils, and other policy-makers in the use of EBFM science products.

ESR Basics (aka State of the Ecosystem Report)

System	First year produced	Frequency	Written report?	Publicly presented?	Automated?	Data portal?	Main target audience
New England	2002*	Annual since 2016	Y	Y	partly	Y	NEFMC
Mid-Atlantic		Annual since 2017	Y	Y	partly	Y	MAFMC
South Atlantic	2021	TBD	Y	Y	no	no	SAFMC
Caribbean	TBD	TBD	Y	Y	no	TBD	CFMC
Gulf of Mexico	2013	Intermittent	Y	Y	partly	Y	GMFMC, academia
California Current	2012	Annual since 2014	Y	Y	partly	Y	PFMC
Eastern Bering	1994*	Annual	Y	Y	no	Y	NPFMC
Gulf of Alaska		Annual	Y	Y	no	Y	NPFMC
Aleutian Islands		Annual	Y	Y	no	Y	NPFMC
West Hawai'i	2015*	Intermittent	Y	Y	no	N	State managers

Pre-Meeting Survey

Solicited input from NMFS Regional Offices and Councils on:

- How current ESRs are being used
- What they liked and what could be improved
- What management challenges could benefit from more ecosystem information

Summary of Responses

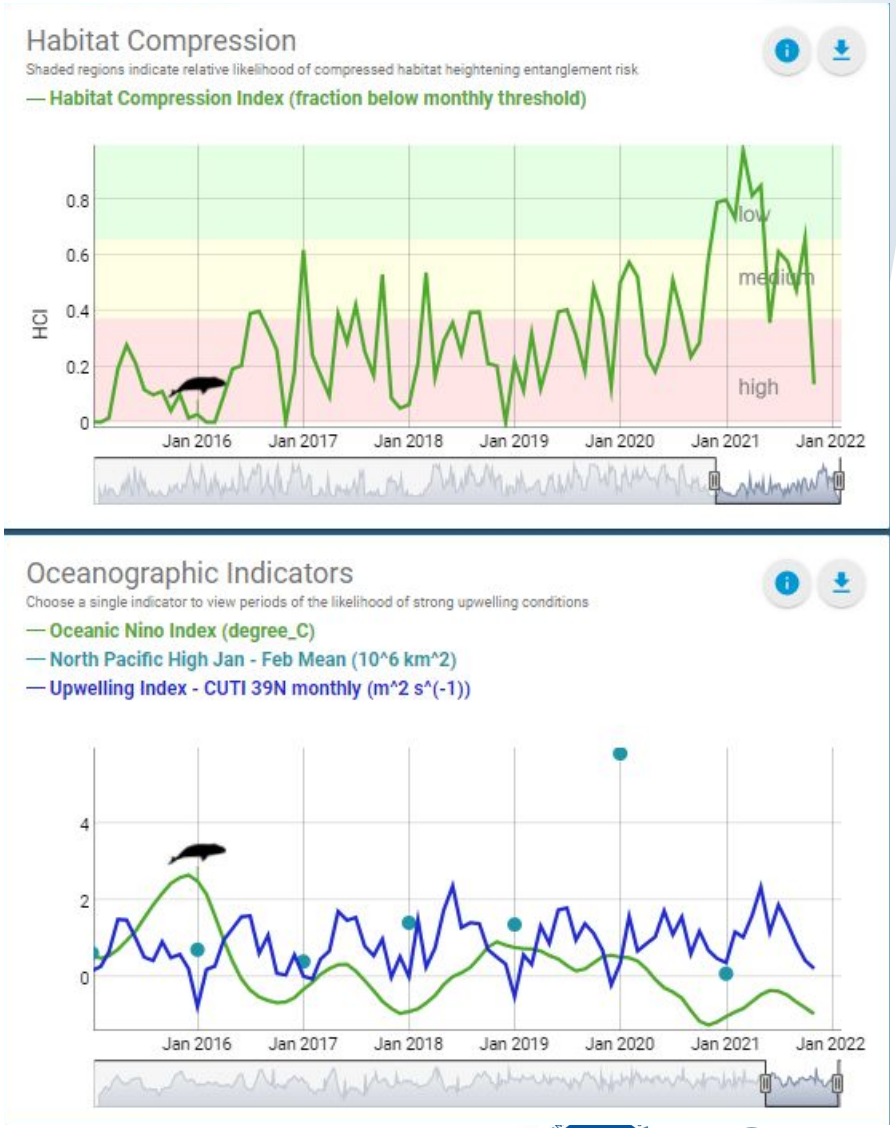
- Current ESRs are mostly meeting expectations
- ESRs are great reference, education, and communication tools
- There is interest in using the information more directly in management decisions, but most are unsure how
- Regions/Councils are struggling with a lot of EBFM-related challenges, esp. related to climate and socioeconomic impacts
- Many are also dealing with process-related challenges of implementing EBFM, such as interpreting complex info and communicating uncertainty

California Current

ESR provides useful context &:

- Elevates ecosystem-related discussions in PFMC
- Spurs engagement with other users of indicators
- Sets the table for discussions of emerging issues
- Promotes interdisciplinary collaboration

Led to the development of a Habitat Compression Index and a whale entanglement dashboard – periods when cool habitat is compressed onshore leads to more entanglements



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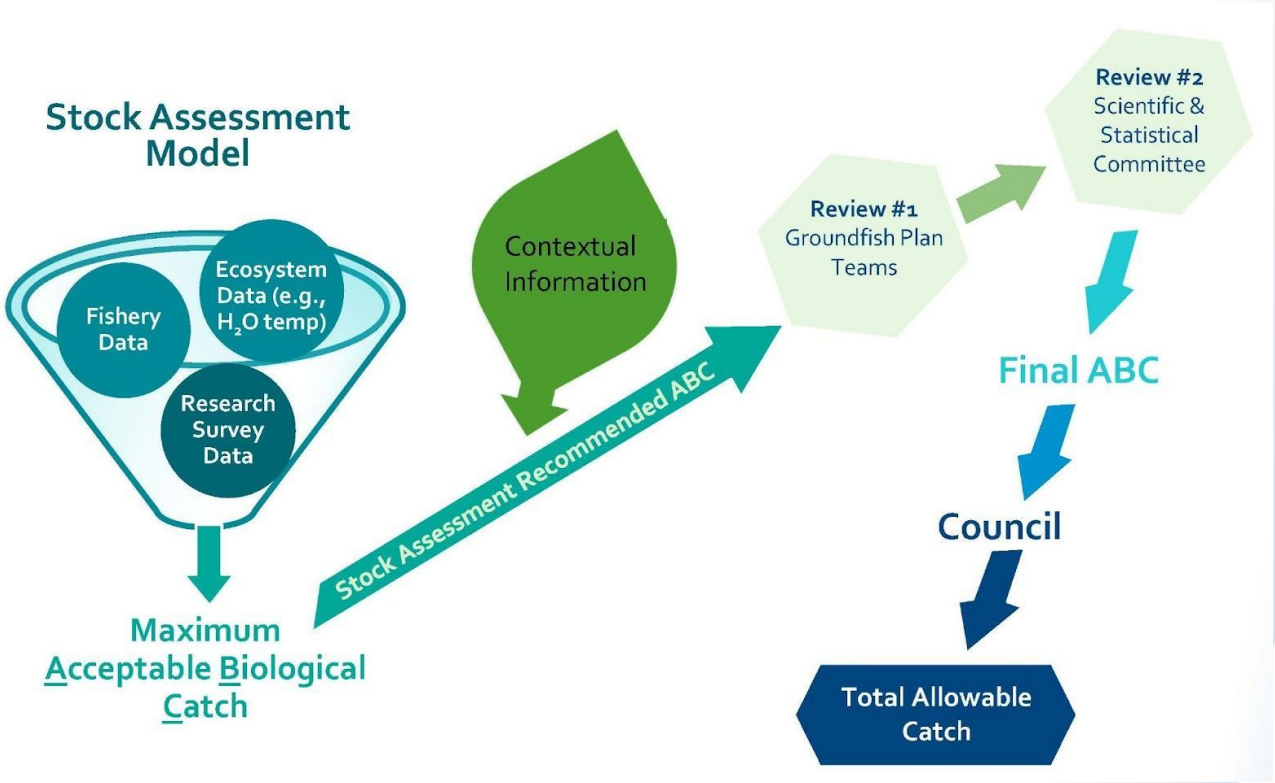
Alaska



ESR led to the development of:

- Ecosystem Socio-economic Profiles (ESPs) and risk tables for each stock to incorporate ecosystem information into ABCs

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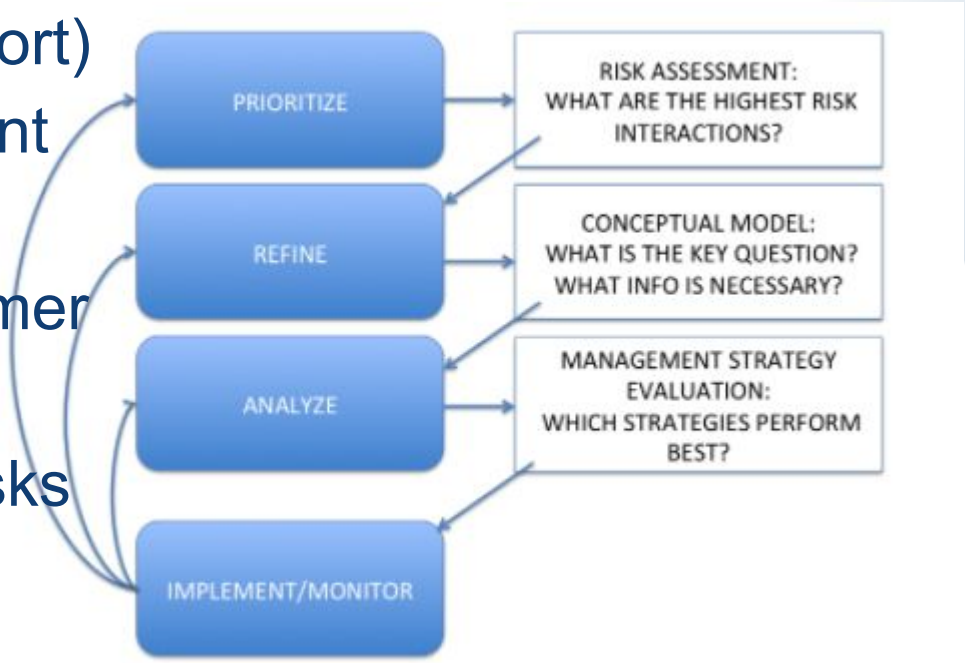
Mid-Atlantic

Indicators in the ESR (called a State of the Ecosystem Report) are used in a risk assessment that is updated annually:

- MAFMC focused on summer flounder due to its vulnerability to multiple risks
- Conceptual model helped frame a management question to test in a management strategy evaluation



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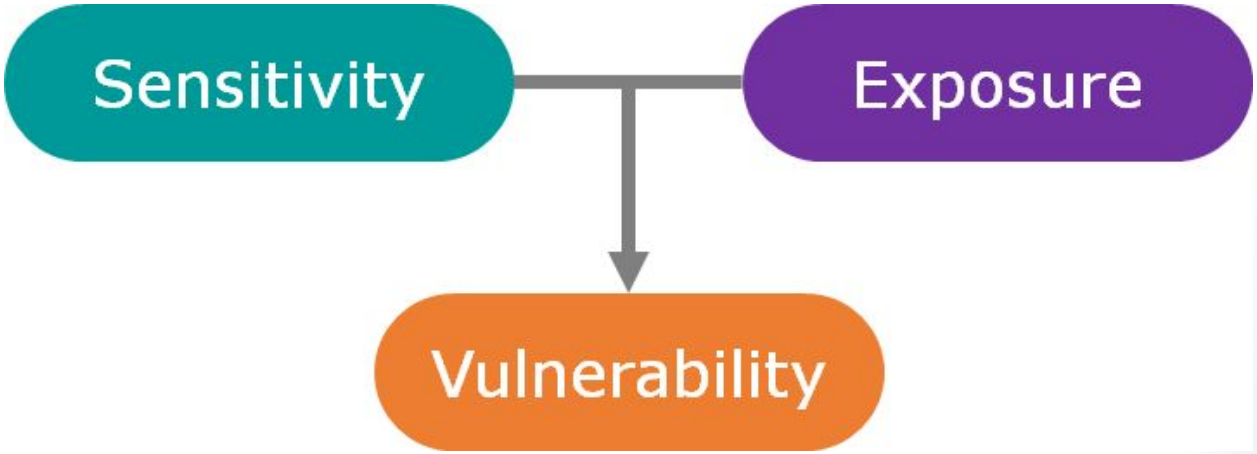
Climate Vulnerability Assessments

CVAs have been created for fish and invertebrates, marine mammals, sea turtles, and marine habitats.

They have been mostly developed independently of ESRs but the NEFSC is working to include some info from their habitat CVA in their next ESR linking highly vulnerable habitats to species that depend on them.



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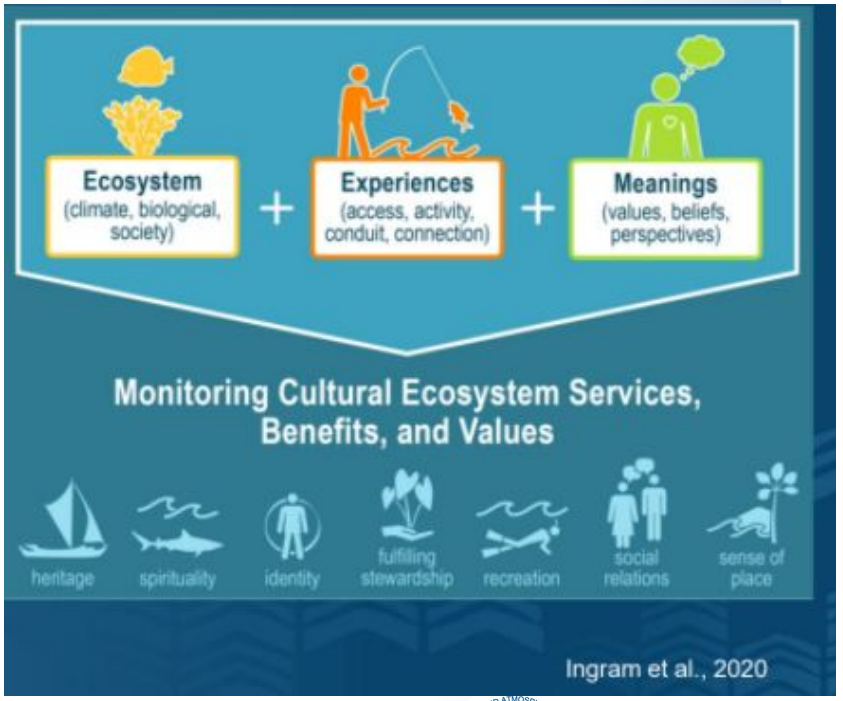
Resilience Indicators

A newer concept that many regions are struggling with.

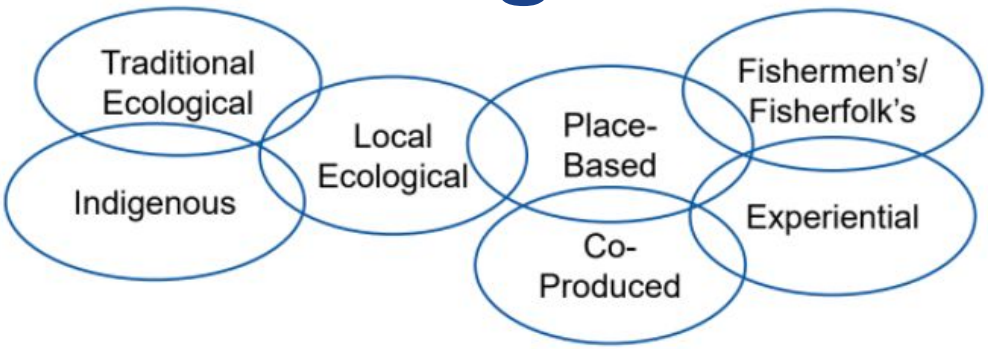
The West Hawaii IEA tracks herbivorous fish abundance as an indicator of coral reef resilience.

They are also exploring indicators of human well-being, but a complex area of study that has not been invested in similarly to biological and physical sciences.

Paradigms around resilience assumes a steady state confound what to track in a changing climate.



Traditional Ecological Knowledge



Variety of methods to incorporate TEK into ESRs. Best choice considers the capacity of the researchers and burden on the knowledge holders. It's best to involve knowledge holders early on in the management process, including during question development.

In the Gulf of Mexico, participatory system dynamics modeling was used to understand extent and impacts of red tide affecting fishermen – led to collaborative monitoring and identifying actions to increase resilience during severe events.

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Engagement

Science centers of mature ESRs give presentations to multiple audiences: Councils, SSCs, and Regional Offices.

They are experimenting with multiple forms of communication: briefs, web stories, videos.

The AFSC recently added a feedback session in the Spring to kick off the ESR season.

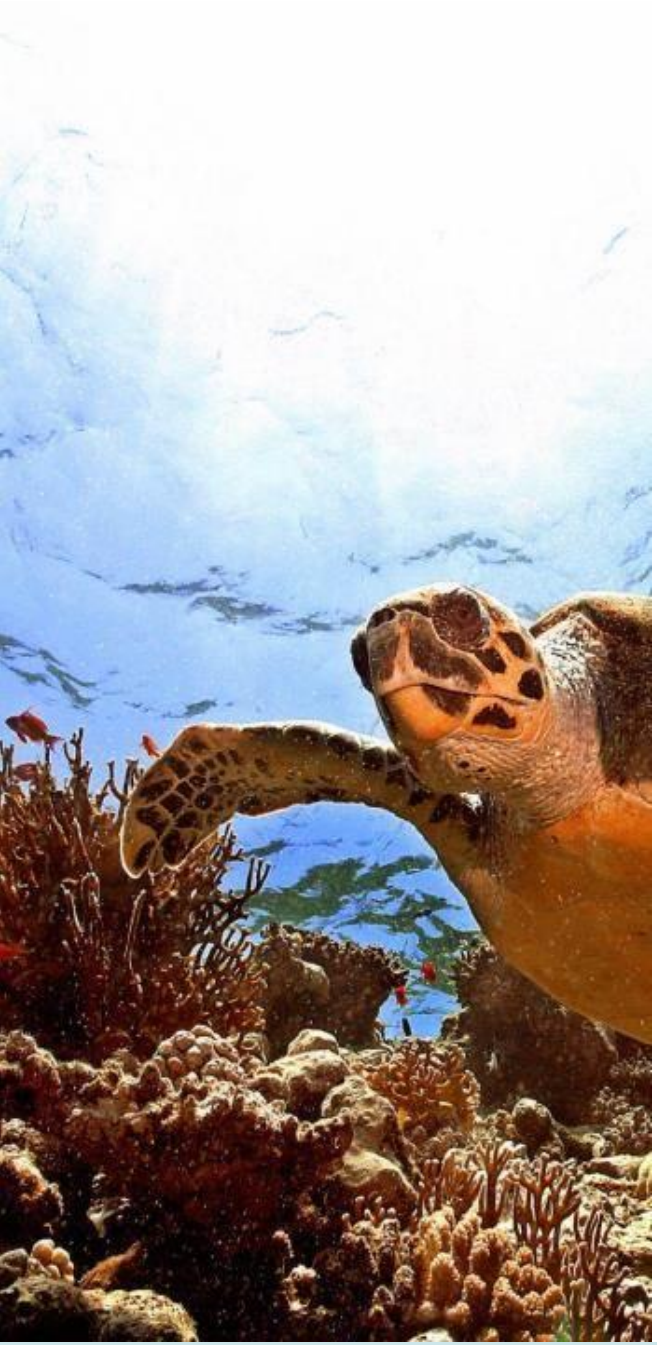
The NEFSC structures their ESRs around fisheries management objectives drawn from MSA. Working with stakeholders to clarify these objectives could make the reports more useful and relevant to other products.

SE Regional Breakout Discussion

- Given ESRs have only recently been developed for this region it was helpful for council staff to learn what other councils are doing.
- Ecosystem reporting should be better aligned with the assessment and management process, but this is a challenge given time available on SSC/Council schedules and current staff workloads.
- Next Steps:
  - Finalize the South Atlantic and Caribbean ESRs
  - Develop a strategic approach to engage Councils and managers on the type of ecosystem reporting that would be most useful
  - Develop an approach for updating ESRs given current resource constraints, including partner collaboration

National Takeaways & Next Steps

- Ecosystem info in ESRs can be used in other products that serve as on-ramps into the management process. Info from other products could also be integrated into ESRs.
- Council staff & regional office engagement is critical to clarifying fishery management priorities that could benefit from more ecosystem information.
- Trying to make ESRs do too much could result in them not doing anything well. Balancing staff work-load on ESRs vs other things.
- The EBFM Working Group is finalizing a tech memo that summarizes the workshop and leveraging outcomes of the regional roundtable discussions.



Questions?

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