

AFSC Ecosystem Efforts, including the Ecosystem SAFE



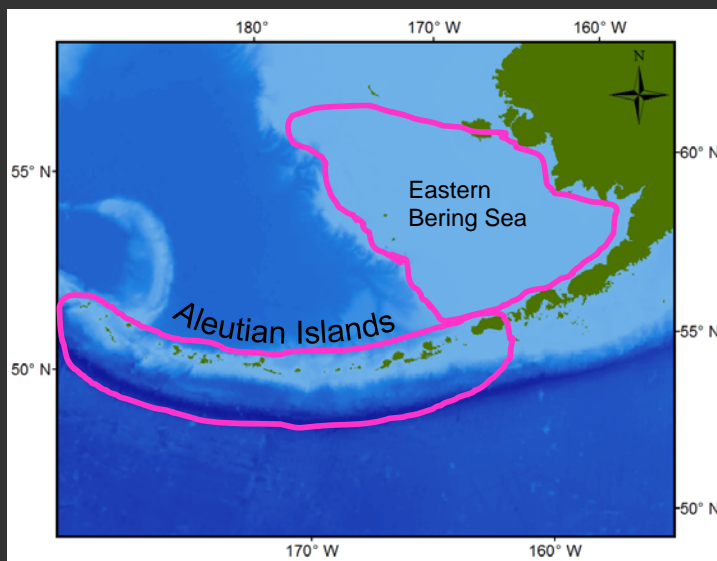
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Briefing to the North Pacific Fishery
Management Council Ecosystem Committee

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Development of the AI Report Card and Assessment



Assessment methods



“Team-based Synthesis Approach”

- Created Ecosystem Assessment Synthesis teams: regional scientific experts, fisheries managers, others
- Met 1-2 times
- Chose structuring themes to guide indicator selection
- Developed list of 8-10 indicators:
 - “vital signs”
 - updatable

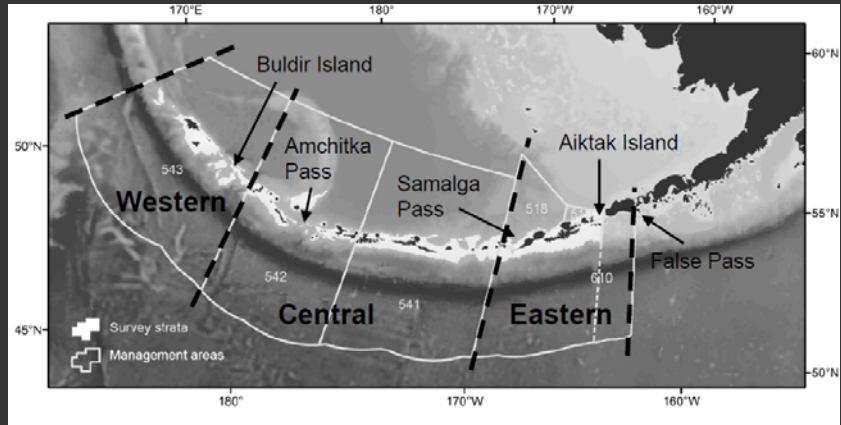
Same Method  Different Product

Ecosystem comparison



| | Eastern Bering Sea | Aleutian Islands |
|-------------------|--|---|
| Habitat | Broad, flat, muddy shelf. Valuable fisheries -> Lots of fish-related research. | Extensive rocky island chain, deep trenches, oceanic basins. Smaller-scale fisheries (and research) |
| Team members: | | |
| NOAA | 17 | 10 |
| Academia | 2 | 4 |
| Management | 1 (3) | 1 |
| Commercial | | 1 |
| Other Fed | | 2 |
| Non Profit | | 1 |
| Research sponsor | | 1 |
| Structuring theme | Production | Variability |
| Indicator focus | Broad, community-level, indicators of ecosystem-wide productivity, and those most informative for managers | Characterize global attributes with local behavior |

Aleutian Islands Ecoregions



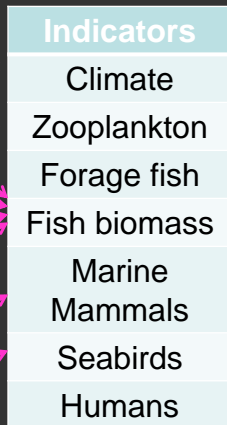
Results – selected indicators

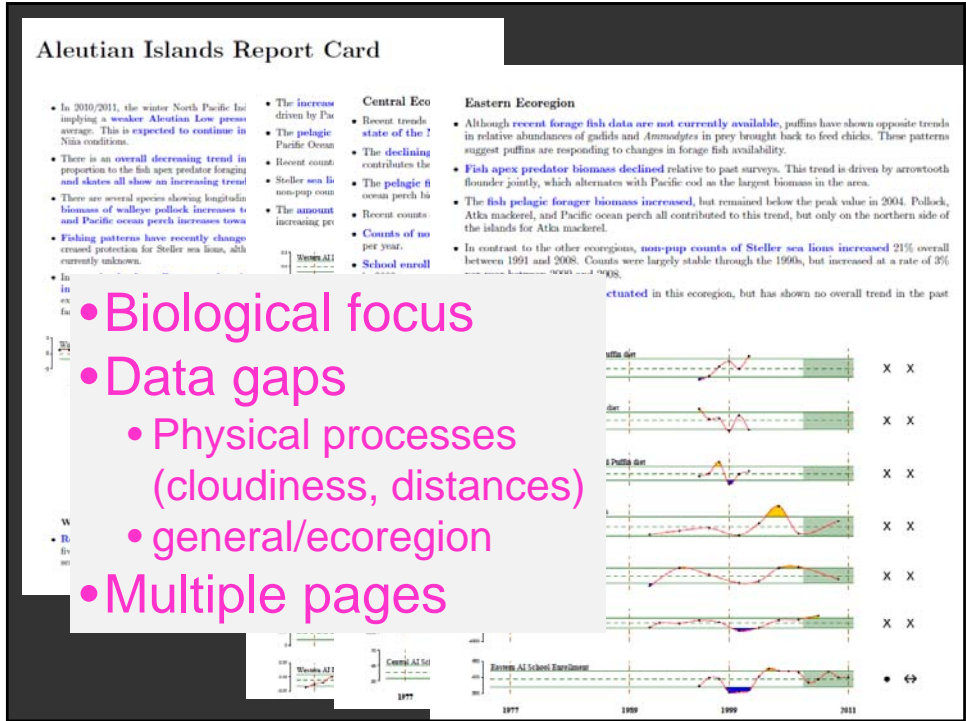
EBS

- North Pacific Index
- Ice Retreat Index
- Euphausiids/Copepods
- Motile epifauna biomass
- Benthic foragers biomass
- Pelagic foragers biomass
- Fish apex predator biomass
- St Paul fur seal pups
- St George thick-billed murre reproductive success
- Area trawled

AI

- North Pacific Index
- Auklet reproductive success
- Tufted puffin chick diets
- Pelagic foragers biomass
- Fish apex predator biomass
- Sea otters
- Steller sea lion non-pups
- Area trawled
- K-12 enrollment





- ## Conclusions: developing the AI assessment
- Ecosystem assessments influenced by:
 - Physical and biological nature of ecosystem
 - Extent of regional scientific knowledge
 - Expertise and interests of Team members
 - Discussion of structuring themes should precede indicator selection
 - Assessment development should be iterative process with frequent review by managers

AI assessment: feedback so far

- Council/SSC review
- Other science
- Research proposal justification
- Agency funding justification

December 2012 SSC Comments

The SSC commends the Ecosystem editors and contributors for continued improvement and for their responsiveness to SSC comments. The Eastern Bering Sea (EBS) and Aleutian Islands (AI) (new) Report Cards and the Hot Topics sections highlight interesting changes and are informative. It might be preferable to move the Hot Topics section to the report card, as it is short and provides information of immediate concern. The SSC looks forward to the preparation of a Gulf of Alaska (GOA) Report Card.

events. Recent

considerable

progress applied to the Bering Sea. Given the multiple local ecosystems in the Aleutian Islands, the lack of causal understanding, and the lack of potential for continuous observations, at the present time it is not possible to develop a complete “early warning system” set of indicators. The current NPFMC Appendix approach of integrative indicators such as tracking bird and mammal populations is optimal at present.

Outline

- **AFSC ecosystem overview**
 - Ecosystem Considerations Report
 - IEA process (Integrated Ecosystem Assessment)
- **Aleutian Islands ecosystem assessment**
 - Process
 - Results
 - Feedback
 - Future
- **Potential management actions**

Potential actions for the Council

Aleutian Islands:

- Continue evaluation of Steller BiOp
- Continue examination of geographic and spatial management issues
 - Spatial management of stock structure
 - Actions will likely have different impacts among ecoregions
- Data gaps/research needs
- Shipping traffic/oil spill
- Although not strictly NPFMC concern, EC may anticipate more council-level coordination with BOEM, etc
 - e.g., current Chukchi oil spill/food web analysis