



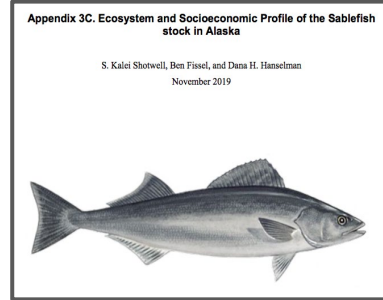
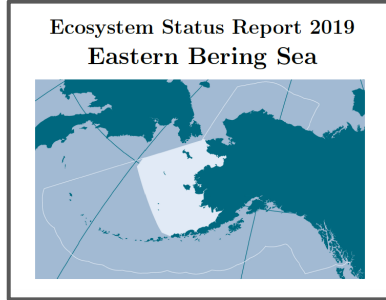
Bering Sea Fishery Ecosystem Plan

*Update on Strategic Ecosystem Evaluation (SEE or
“BS Ecosystem Health Report”) development*

BS FEP Team, April 4, 2022



Distinguishing ESR, ESP, SEE



ESR

ESP

Strategic Ecosystem Evaluation

	ESR	ESP	Strategic Ecosystem Evaluation
Purpose	Tactical - harvest specs	Tactical - harvest specs	Strategic
When issued	Oct-Dec	Oct-Dec	April every 3 yrs
Scope	Aggregated - Indicators that pertain to many stocks at once	Species/Stock-specific - we believe these have an impact on this specific stock	Aggregated - Synthesizing across ecosystem area /activities
Spatial	Large Marine Ecosystem (EBS, GOA, AI)	Large Marine Ecosystem/ FMP (EBS, GOA, AI)	LME -- Basin-scale
Temporal scope	Annual	Mixed	Bi or Triennial / longer term



Fisheries effects on the ecosystem??

- Cumulative, multi-species effects (synthesis needed)
- Informs management strategy, not tactical management decisions
- Diversity of audiences
- Monitors success of EBFM management actions (progress towards goals and objectives)
- *Without* overwhelming



Example of differences

- For “Total groundfish biomass”:
 - An ESR indicator might use BTS (survey) data – a current-year uptick may be a shift of distribution, catchability as well as long-term abundance, that informs interpretations of stock assessments and risk tables in the current year.
 - A SEE indicator might use a running average or other smoothing method, or (since information doesn’t need to be “up to the minute”) use stock assessment results as the best available science on biomass.
- Oceanography indicators:
 - ESR: “Are we in a heat wave now/recent past?” versus SEE: “Have we seen more/are we at greater risk now for heat waves?”



So where is our report starting point?

- Focus of FEP is strategic
 - Strategic versus Tactical advice led to development of this new product to deliver longer-term strategic advice rather than the near-term tactical advice contained in the ESRs.
 - Purpose in FEP: to allow fishery management to more explicitly take into account and be responsive to changes in the ecosystem
- Six ecosystem goals are overarching; FEP associates them with one or more strategic Ecosystem Objectives
- May 3 2021 workshop recommendation: Organize report by six goals, and objectives under those goals. Subteams at workshop brainstormed initial data sources/resources.



Progress by Objective

Ecosystem Goal 1: Maintain, rebuild, and restore fish stocks at levels sufficient to protect, maintain, and restore food web structure and function

Ecosystem Goal 2: Protect, restore, and maintain the ecological processes, trophic levels, diversity, and overall productive capacity of the system

- Objectives measurable by "more familiar" fisheries and ecological data.
 - Much of the raw data already gathered/reported by stock assessments, ESRs, and ESPs.
 - Desired indicators conducive to time series format (similar to ESRs).
 - May have different formats/analysis for "tactical" (SAs, ESRs, ESPs) versus "strategic" (SEE).
 - Many indicators already gathered/data assembled by team.
 - Categorizing of data sources including time and space scales began at March meeting.
 - Data shortlist by ~May 2022 to produce draft report by Sept 2022.



Progress by Objective

Ecosystem Goal 3: Conserve habitats for fish and other wildlife

Ecosystem Goal 4: Provide for subsistence, commercial, recreational, and non-consumptive uses of the marine environment

- Requires more data discussion/availability.
- Requires more consultation with data providers not at the Plan Team table.
- More spatial considerations outside time series format.
- Using Goal 1-2 work as an example, reach out to providers/determine candidate indicators and needed expertise by Sept 2022 (data gathering and reporting to proceed after that).



Progress by Objective

Ecosystem Goal 5: Avoid irreversible or long-term adverse effects on fishery resources and the marine environment

Ecosystem Goal 6: Provide a legacy of healthy ecosystems for future generations

- Active collaboration with CCTF.
- May affect interpretation of Goal 1-4 indicators as well as suggesting goal-specific indicators.
- Similar timeline to Goal 3-4 report sections.



Goal 1-2 working plan

- Steps by May 2022
 - List potential indicators for each goal (expansive shortlist)
 - Get current or recent data/check data availability
 - Summarize individual indicators and reason for inclusion

- Steps after May 2022 check-in
 - Review shortlist - anything missing (including Council body/stakeholder)
 - Graphical/statistical synthesis (time range, etc.)
 - Final indicator recommendations from Plan teams for broader review ~Sept 2022
 - Final report *draft goals 1-2 section* ~Sept 2022

