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National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
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This brief summarizes the Ecosystem Dynamics and Assessment Branch (EDAB) indicators which align with the New England Risk Policy Framework. These indicators were developed for the State of the Ecosystem report, Ecosystem and Socioeconomic Profiles, or Term of Reference 1 from Research Track stock assessments. Existing indicators have been collaboratively developed and thoroughly reviewed. Additional indicators could be developed if further Risk Policy needs remain.

The objective is to highlight indicators which are most appropriate for use in the Risk Policy Framework. High priority indicators based on our search criteria are highlighted here, but additional, low priority indicators are cataloged should the Risk Policy Working Group have differing criteria for indicators than our own. For risk policy application, we prioritized indicators with a likely mechanistic connection to the risk factor they are proposed to inform over indicators with an indirect connection. However, all of the indicators in the EDAB Product Catalog (high and low priority) have been reviewed and are statistically sound. We also prioritized indicators that have not yet informed management in order to avoid double counting an indicator in the management process.

We welcome any feedback. Next steps are to present the priority indicators to the Risk Policy Work Group and to determine the optimal end product to deliver the information in support of the NEFMC Risk Policy. The Risk Policy Concept and Statement (2025) states “The Council anticipates that the NEFSC will continue to provide timely updates to the State of the Ecosystem report for use by Plan Development Teams in the completion of factor scoring”. If additional communications of the priority Risk Indicators beyond the SOE report would be beneficial to the Risk Policy Framework, we would be happy to discuss potential collaborations with Council staff. Due to personnel cutbacks, any products beyond the SOE report would require a written request to the NEFSC Science and Research Director.



Priority Indicators

Species/ Stock	Factor (from Risk Policy Concept and Statement 2025)	Indicator	Indicator Source	Raw Data Source(s)	Life History Impacted	Additional Information
Atlantic herring	Climate and Ecosystem Considerations	Duration of optimal temperature from September to December	Research track ToR1	OISST	Larval survival	https://www.fisheries.noaa.gov/s3//2025-03/Panel-Summary-Report_Atlantic-Herring_final_508.pdf
SNE Yellowtail	Climate and Ecosystem Considerations	Mid-Atlantic Bight Cold Pool Persistence Index	Research track ToR1	ROMS, GLORYS, PSY	Recruitment	https://noaa-edab.github.io/catalog/cold_pool.html
GB Yellowtail	Climate and Ecosystem Considerations	Bottom temperature	Research track ToR1	NEFSC surveys	Recruitment	https://noaa-edab.github.io/catalog/bottom_temp_insitu.html
American plaice	Climate and Ecosystem Considerations	Annual bottom temperature anomaly	Research track ToR1	ROMS, GLORYS, PSY	Adult distribution	https://noaa-edab.github.io/catalog/bottom_temp_model_anom.html
Atlantic cod	Climate and Ecosystem Considerations	Cumulative Heatwave (C)	Research track ToR1	ROMS, GLORYS, PSY	log recruitment	https://noaa-edab.github.io/catalog/heatwave.html
All	Commercial Fishery Characterization	Effective Shannon index of top n ports	SOE	Commercial Fishery Dealer Database, Vessel Trip Reports, Clam logbooks, Permit database, WPU series producer price index	NA	https://noaa-edab.github.io/catalog/commercial_div.html

All	Commercial Fishery Characterization	Price component of Bennet index	SOE	Commercial Fisheries Database System (CFDBS)	NA	https://noaa-edab.github.io/tech-doc/bennet.html?q=bennet#bennet
All	Commercial Fishery Characterization	Net Revenue	SOE	Commercial Fisheries Database System (CFDBS)	NA	https://noaa-edab.github.io/tech-doc/comdat.html
All	Commercial Fishery Characterization	Commercial Catch and Fleet Diversity	SOE	Commercial Fishery Dealer Database, Vessel Trip Reports, Clam logbooks, Permit database, WPU series producer price index	NA	https://noaa-edab.github.io/tech-doc/commercial_div.html?q=diversity#commercial_div
All	Recreational Fishery Characterization	Recreational Fleet Diversity	SOE	MRIP	NA	https://noaa-edab.github.io/catalog/recdat.html

EDAB Product Catalog

Catalog of additional candidate indicators attached.