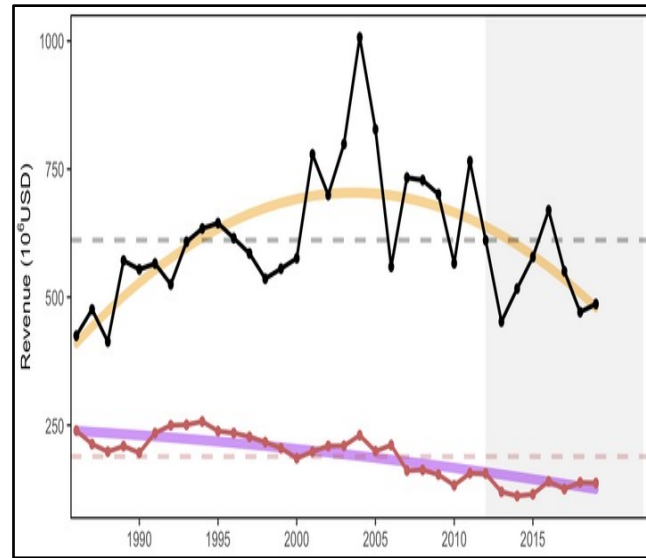




Ecosystem Approach to Fisheries Management Guidance Document

Approved by Council August 8, 2016

Revised February 8, 2019



Species	FControl	Interact	OSW1	OSW2	OtherUse	RegComplex	Discards	Allocation
Ocean Quahog-C	low	low				low	modhigh	low
Surfclam-C	low	low				low	modhigh	low
Summer flounder-R	lowmod	low				high	modhigh	high
Summer flounder-C	lowmod	lowmod				lowmod	modhigh	low
Scup-R	high	low				high	modhigh	high
Scup-C	low	lowmod				lowmod	modhigh	low
Black sea bass-R	high	low				high	modhigh	high
Black sea bass-C	lowmod	lowmod				lowmod	high	low
Atl. mackerel-R	lowmod	low				lowmod	lowmod	low
Atl. mackerel-C	low	lowmod				high	lowmod	low
Butterfish-C	low	lowmod				modhigh	modhigh	low
Longfin squid-C	low	modhigh				modhigh	modhigh	low
Shortfin squid-C	lowmod	lowmod				modhigh	low	low
Golden tilefish-R	na	low				low	low	low
Golden tilefish-C	low	low				low	low	low
Blueline tilefish-R	low	low				lowmod	low	low
Blueline tilefish-C	lowmod	low				low	low	low
Bluefish-R	lowmod	low				modhigh	lowmod	high
Bluefish-C	low	low				lowmod	lowmod	low
Spiny dogfish-R	low	low				low	lowmod	low
Spiny dogfish-C	low	modhigh				high	lowmod	low
Chub mackerel-C	low	lowmod				low	low	low
Unmanaged forage	low	low				low	low	low
Deepsea corals	na	na				na	na	na

EAFM Risk Assessment

Review of Draft 2024 Report


April 9, 2024

Atlantic City, New Jersey



MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

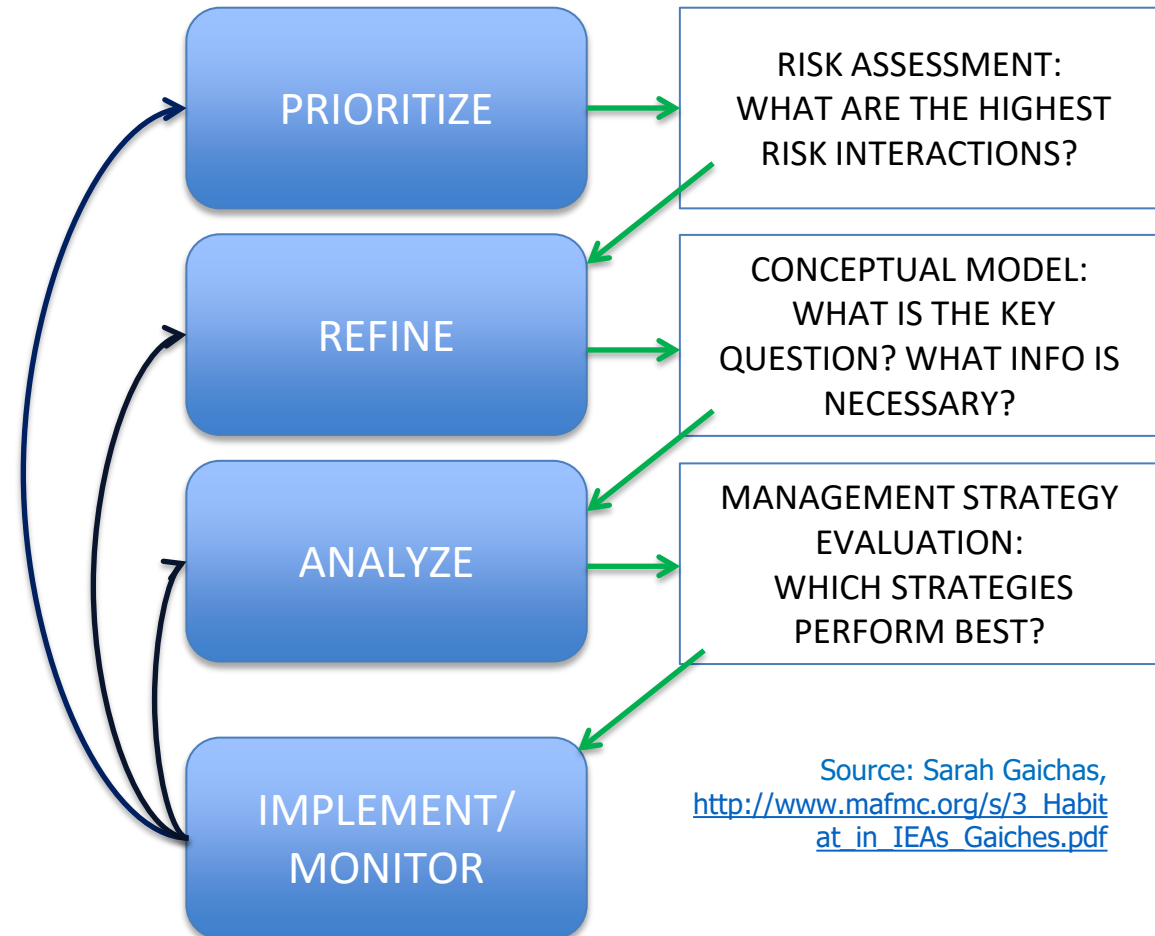
EAFM Guidance Document



MID-ATLANTIC
FISHERY MANAGEMENT COUNCIL

Ecosystem Approach to Fisheries Management Guidance Document

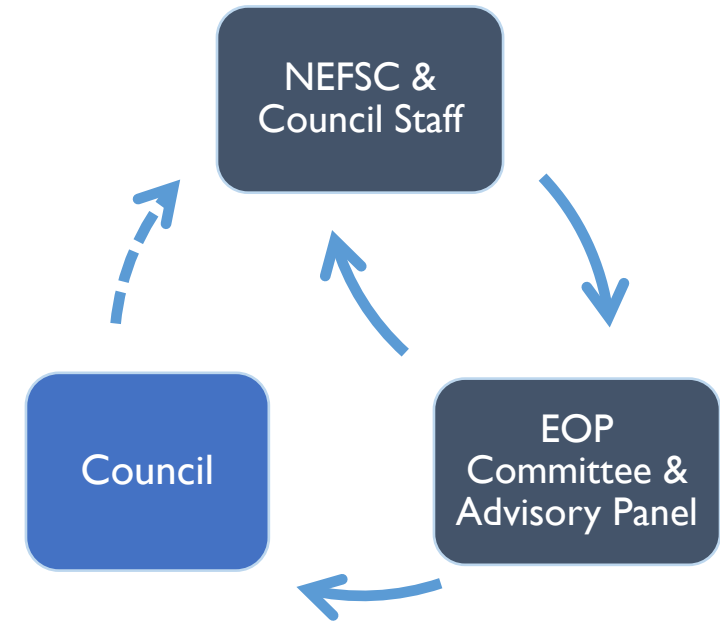
Approved by Council August 8, 2016
Revised February 8, 2019



Risk assessment – opportunity to look across species/sectors and identify risk and used as a strategic planning and prioritization tool to look further at ecosystem interactions

2023 Comprehensive Review

- Conducted by EOP Comm and AP; reviewed by the Council in October
- Reflect current risks – existing, new, anticipated
- Incorporate latest information and analyses
- Adaptive and responsive to new and changing conditions and Council needs
- Potential to expand the use of risk assessment/ecosystem information in Council process
- Considered **43** possible risk elements
 - **28** for inclusion in updated assessment (**4** new)
 - **6** placed in parking lot for future development/consideration
 - **9** removed as stand-alone elements



Risk Assessment Development

- Initial timeline – draft report to EOP/AP in March; Council review/approval in April
- Activities since October
 - Updated indicators from SOE
 - Started to develop new elements/indicators
 - Identified code/data to be updated
 - Incorporated new indicators and developed draft risk criteria
- Presenting draft today with updates and complete assessment later this year

Risk Assessment - A Quick Refresher

Key Definitions

Risk Elements: *what are we measuring?*

Risk Definition: *why are we measuring it?*

Indicator: *how are we measuring it?*

Risk Ranking Criteria: *what is the risk?*

Risk assessment currently framed around risks to meeting Council management objectives, generally aligned with MSA:

Optimum yield (OY)

Supporting Seafood Production

Recreational Opportunities

Community & Fishery Resilience

Minimizing Bycatch

Protected Species Interactions

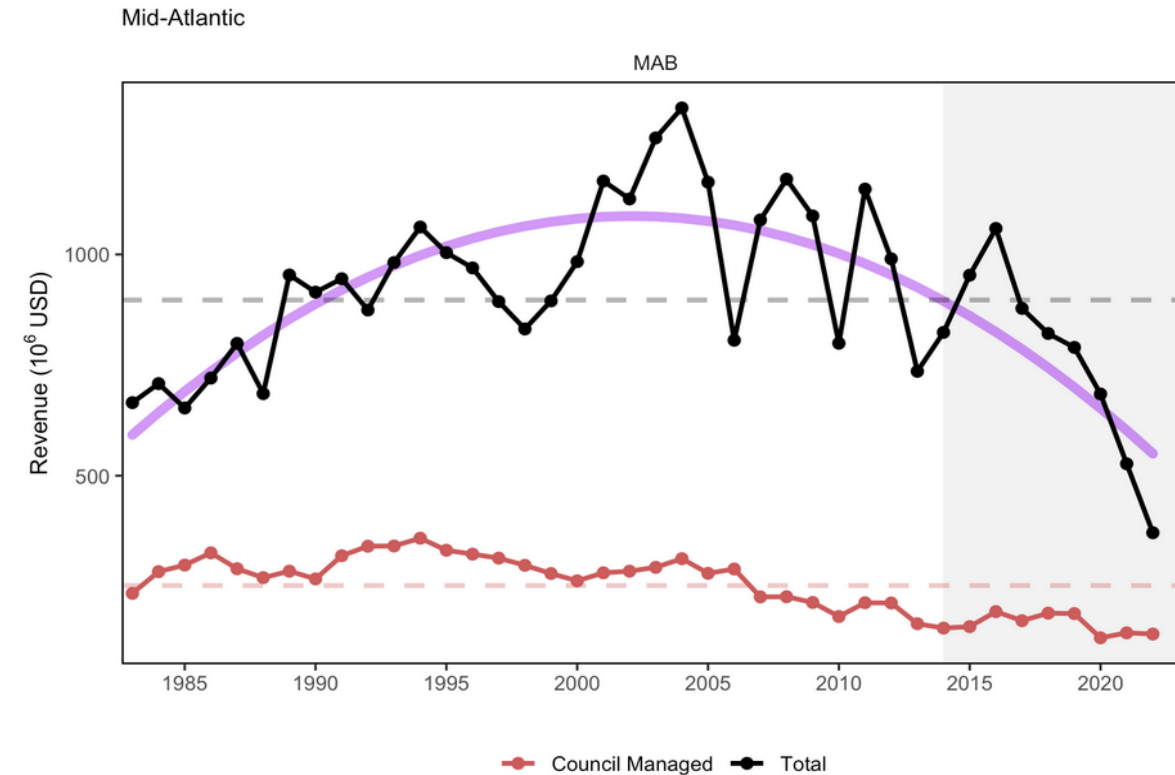
Risk Element Example – Commercial Revenue

This element is applied at the ecosystem level. Revenue serves as a proxy for commercial profits.

Risk Level	Definition
Low	No trend and low variability in revenue
Low-Moderate	Increasing or high variability in revenue
Moderate-High	Significant long term revenue decrease
High	Significant recent decrease in revenue

Ranked moderate-high risk due to the significant long term revenue decrease

Risk element: **CommRev**



Ecological Risk Elements

Risk Element – Stock Assessment Performance

This risk element is applied at the species level, and addresses risk to achieving OY due to scientific uncertainty based on analytical and data limitations.

Risk Level	Definition
Low	Assessment model(s) passed peer review, high data quality, small retrospective pattern
Low-Moderate	Assessment passed peer review but some data and/or reference points may be lacking
Moderate-High	Assessment passed peer review but with major data quality issue or large retrospective pattern
High	Assessment failed peer review or no assessment, data-limited tools applied

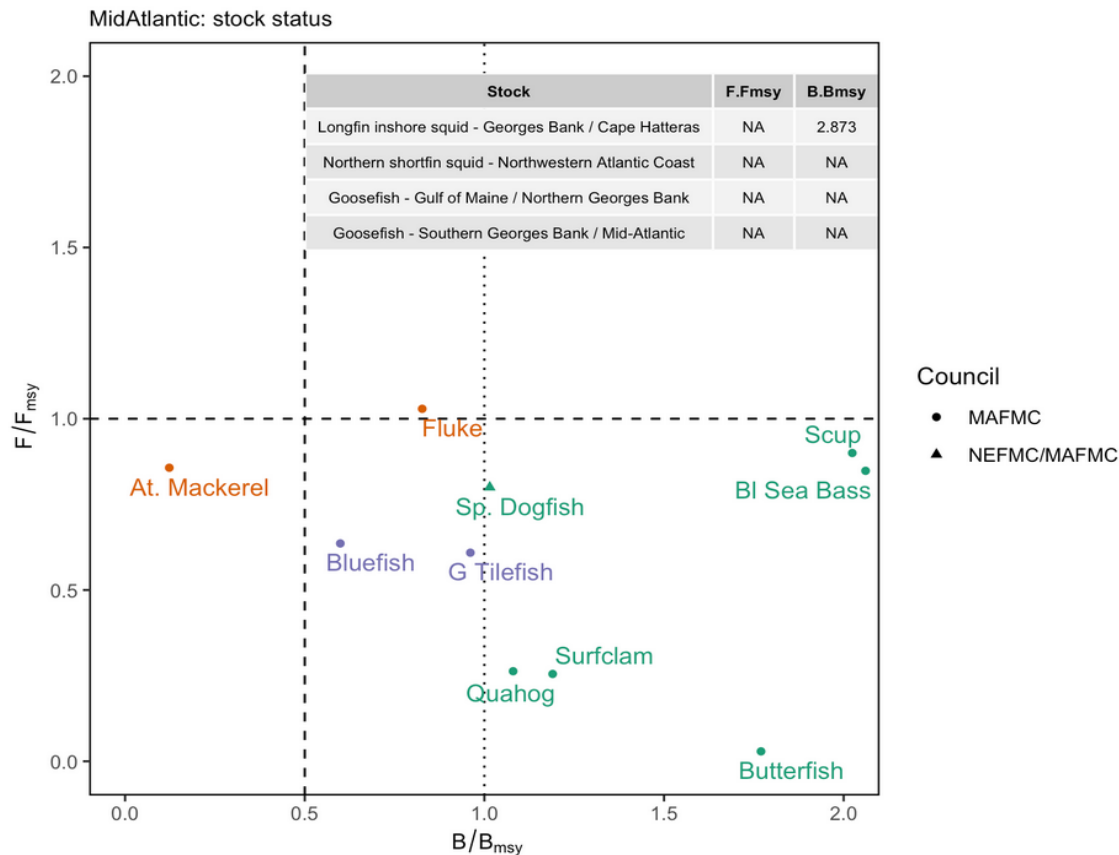
Species	Assess
Ocean Quahog	lowest
Surfclam	lowest
Summer flounder	lowest
Scup	lowest
Black sea bass	lowest
Atl. mackerel	lowest
Chub mackerel	highest
Butterfish	lowest
Longfin squid	lowmod
Shortfin squid	highest
Golden tilefish	lowest
Blueline tilefish	highest
Bluefish	lowest
Spiny dogfish	lowest
Monkfish	highest
Unmanaged forage	na
Deepsea corals	na

Risk Element – F and B Status

These elements are applied at the species level. They indicate the level of risk to achieving OY from either overfishing or stock depletion, respectively.

Indicator: Stock status

Risk Level	Definitions
Low	$F < F_{msy}$; $B > B_{msy}$
Low-Moderate	Unknown, but weight of evidence indicates low overfishing risk; $B_{msy} > B > 0.5 B_{msy}$ or weight of evidence indicates low risk
Moderate-High	Unknown status
High	$F > F_{msy}$; $B < 0.5 B_{msy}$



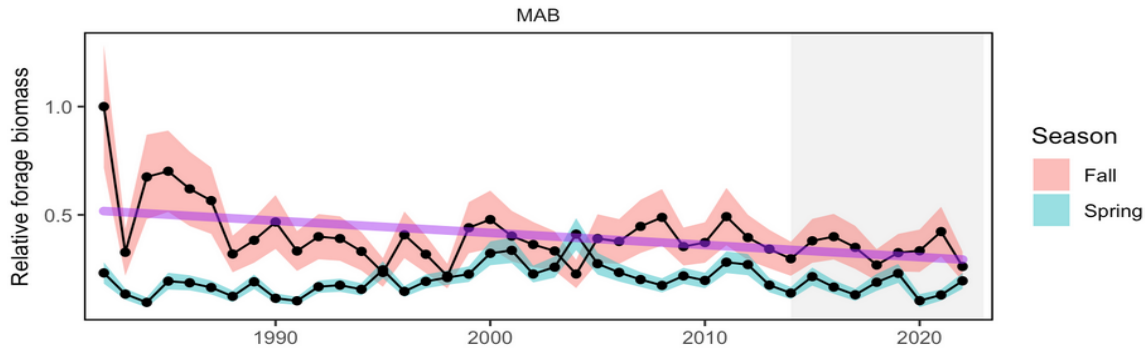
Species	Fstatus	Bstatus
Ocean Quahog	lowest	lowest
Surfclam	lowest	lowest
Summer flounder	highest	lowmod
Scup	lowest	lowest
Black sea bass	lowest	lowest
Atl. mackerel	lowest	highest
Chub mackerel	lowmod	lowmod
Butterfish	lowest	lowmod
Longfin squid	lowmod	lowmod
Shortfin squid	lowmod	lowmod
Golden tilefish	lowest	lowmod
Blueline tilefish	highest	modhigh
Bluefish	lowest	lowmod
Spiny dogfish	highest	lowest
Monkfish	lowmod	lowmod
Unmanaged forage	na	na
Deepsea corals	na	na

Risk Element – Food Web (I) – Prey Availability

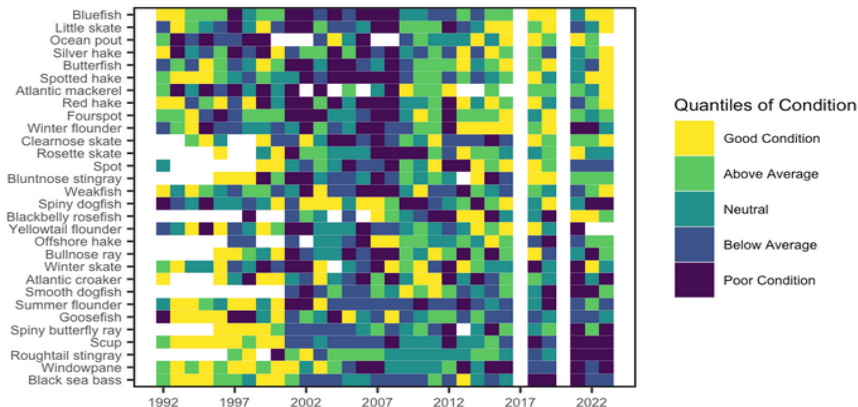
This element will be applied at the species level. This element is one of two separating food web risks to achieving OY for Council managed species from two sources. This first element assesses prey availability for each species, and the second food web risk element assesses predation pressure on each species (see next element).

Potential indicators

Aggregate forage fish index



Condition factor for species sampled in MAB



Potential criteria

Risk Level	Definition
Low	Prey availability high (not limiting) and/or good fish condition past 5 years
Low-Moderate	Aggregate prey available for this species has stable or increasing trend, moderate condition
Moderate-High	Aggregate prey available for this species has significant decreasing trend, poor condition
High	Managed species highly dependent on prey with limited and declining availability, poor condition

Risk Element – Food Web (2) – Predation Pressure

This element will be applied at the species level. This element is one of two separating food web risks to achieving OY for Council managed species from two sources. This second food web risk element assesses predation pressure on each species, and the first element assesses prey availability for each species (see element above).

Potential indicators

- Predation pressure index
- Model-derived predation mortality
- Aggregate predator biomass

Potential criteria

Risk Level	Definition
Low	Predation pressure represents low proportion of overall mortality
Low-Moderate	Predation pressure moderate proportion of overall mortality, decreasing mortality trend
Moderate-High	Predation pressure moderate proportion of overall mortality, increasing mortality trend
High	Predation pressure represents high proportion of overall mortality, increasing mortality trend

Risk Element – Food Web (3) – Protected Species Prey

This element is applied at the species level. This element ranks the risks of not achieving protected species objectives due to species interactions with Council managed species.

Risk Level	Definition
Low	Few interactions with any protected species
Low-Moderate	Important prey of 1-2 protected species, or important prey of 3 or more protected species with management consideration of interaction
Moderate-High	Important prey of 3 or more protected species
High	Managed species is sole prey for a protected species

Species	FW3Prey
Ocean Quahog	lowest
Surfclam	lowest
Summer flounder	lowest
Scup	lowest
Black sea bass	lowest
Atl. mackerel	lowest
Chub mackerel	lowest
Butterfish	lowest
Longfin squid	lowmod
Shortfin squid	lowmod
Golden tilefish	lowest
Blueline tilefish	lowest
Bluefish	lowest
Spiny dogfish	lowest
Monkfish	lowest
Unmanaged forage	lowmod
Deepsea corals	lowest

Risk Element – Ecosystem Productivity

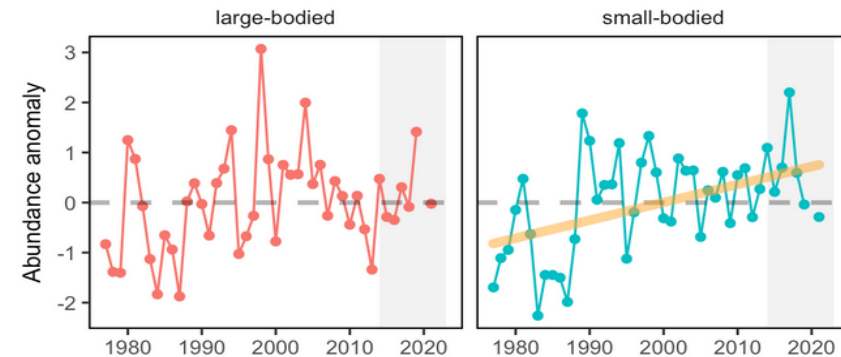
This element is applied at the ecosystem level (the Mid-Atlantic Ecosystem Production Unit). Productivity at the base of the food web supports and ultimately limits the amount of managed species production in an ecosystem.

Risk Level	Definition
Low	No trends in ecosystem productivity
Low-Moderate	Trend in ecosystem productivity (1-2 measures, increase or decrease)
Moderate-High	Trend in ecosystem productivity (3+ measures, increase or decrease)
High	Decreasing trend in ecosystem productivity, 4+ measures

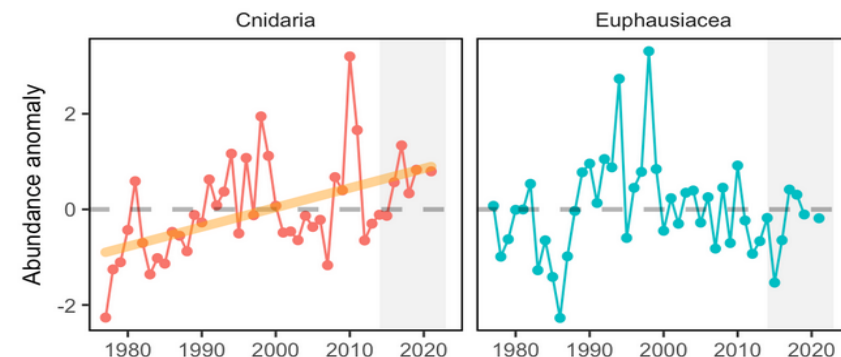
Ranked Low-moderate due to increasing zooplankton and decreasing forage trends. Patterns in fish condition and productivity also observed. No trend in primary production.

Risk Element: **EcoProd**

MidAtlantic: Small and large-bodied copepod abundance anomaly

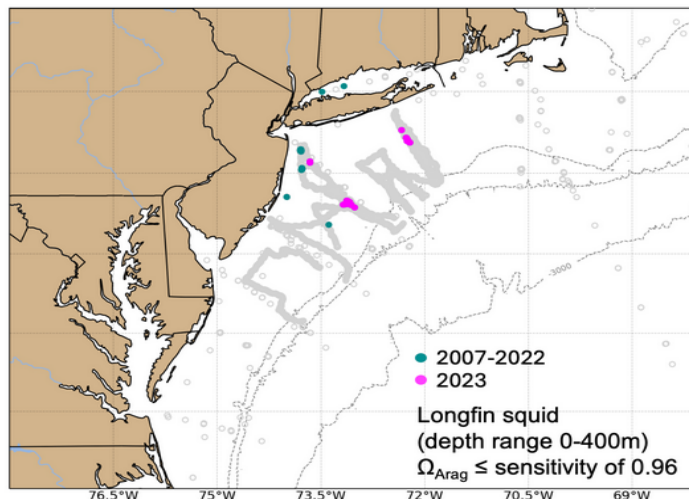
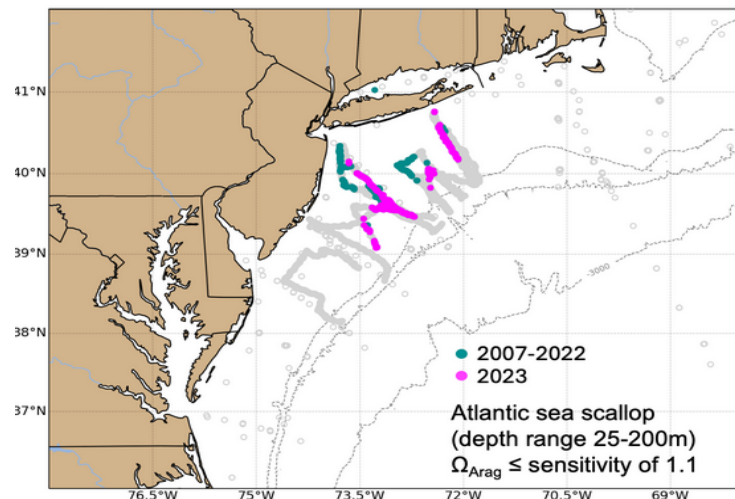


MidAtlantic: Zooplankton abundance anomaly



Risk Element – Climate

This element is applied at the species level, and evaluates risks to species productivity (and therefore to achieving OY) due to projected climate change factors in the region.

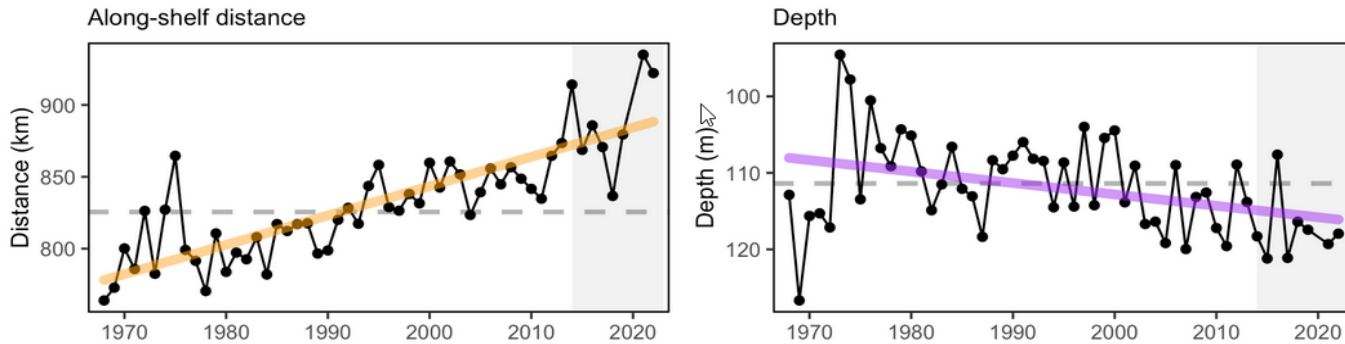


Species	Climate
Ocean Quahog	highest
Surfclam	modhigh
Summer flounder	lowmod
Scup	lowmod
Black sea bass	modhigh
Atl. mackerel	lowmod
Chub mackerel	na
Butterfish	lowest
Longfin squid	lowest
Shortfin squid	lowest
Golden tilefish	modhigh
Blueline tilefish	modhigh
Bluefish	lowest
Spiny dogfish	lowest
Monkfish	lowest
Unmanaged forage	na
Deepsea corals	na

Risk Level	Definition
Low	Low climate vulnerability ranking
Low-Moderate	Moderate climate vulnerability ranking
Moderate-High	High climate vulnerability ranking, climate indicators impacting the stock increasing (worsening)
High	Very high climate vulnerability ranking, climate indicators impacting the stock increasing (worsening)

Risk Element – Distribution Shifts

This element is applied at the species level, and evaluates risks of species distribution shifts due to projected climate change in the Northeast US.

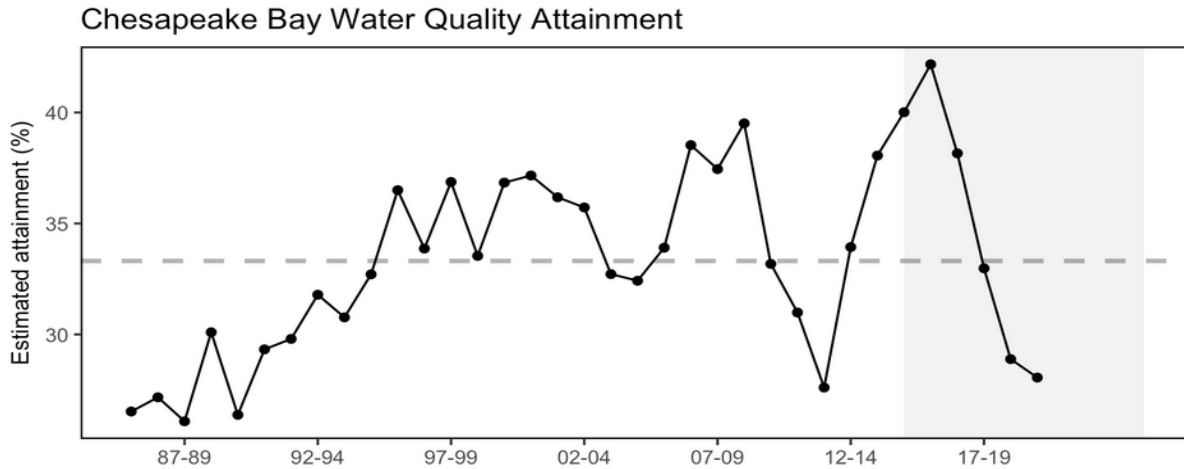


Species	DistShift
Ocean Quahog	modhigh
Surfclam	modhigh
Summer flounder	modhigh
Scup	modhigh
Black sea bass	modhigh
Atl. mackerel	modhigh
Chub mackerel	na
Butterfish	highest
Longfin squid	modhigh
Shortfin squid	highest
Golden tilefish	lowest
Blueline tilefish	lowest
Bluefish	modhigh
Spiny dogfish	highest
Monkfish	modhigh
Unmanaged forage	na
Deepsea corals	na

Risk Level	Definition
Low	Low potential for distribution shifts
Low-Moderate	Moderate potential for distribution shifts
Moderate-High	High potential for distribution shifts, observed distribution shifts
High	Very high potential for distribution shifts, observed distribution shifts

Risk Element – Estuarine & Coastal Habitat

This element is applied at the species level, and evaluates risk of not achieving OY due to threats to estuarine and nearshore coastal habitat/nursery grounds.



Species	EstHabitat
Ocean Quahog	lowest
Surfclam	lowest
Summer flounder	highest
Scup	highest
Black sea bass	highest
Atl. mackerel	lowest
Chub mackerel	lowest
Butterfish	lowest
Longfin squid	lowest
Shortfin squid	lowest
Golden tilefish	lowest
Blueline tilefish	lowest
Bluefish	highest
Spiny dogfish	lowest
Monkfish	lowest
Unmanaged forage	na
Deepsea corals	na

Risk Level	Definition
Low	Not dependent on nearshore coastal or estuarine habitat
Low-Moderate	Estuarine dependent, estuarine condition stable
Moderate-High	Estuarine dependent, estuarine condition fair
High	Estuarine dependent, estuarine condition poor

Risk Element – Offshore Habitat

This element will be applied at the species level, and evaluates risk of not achieving OY due to changes in offshore habitat quality and quantity.

Potential indicators

- Amount of habitat
- Quality of habitat
- Other aspects of habitat important to support fish productivity (e.g. cold pool extent, duration, temperature)

Potential criteria

Risk Level	Definition
Low	No trends in offshore habitat
Low-Moderate	Trend in offshore habitat (1-2 measures, increase or decrease)
Moderate-High	Trend in offshore habitat (3+ measures, increase or decrease)
High	Decreasing trend in offshore habitat, 4+ measures

Social & Economic Risk Elements

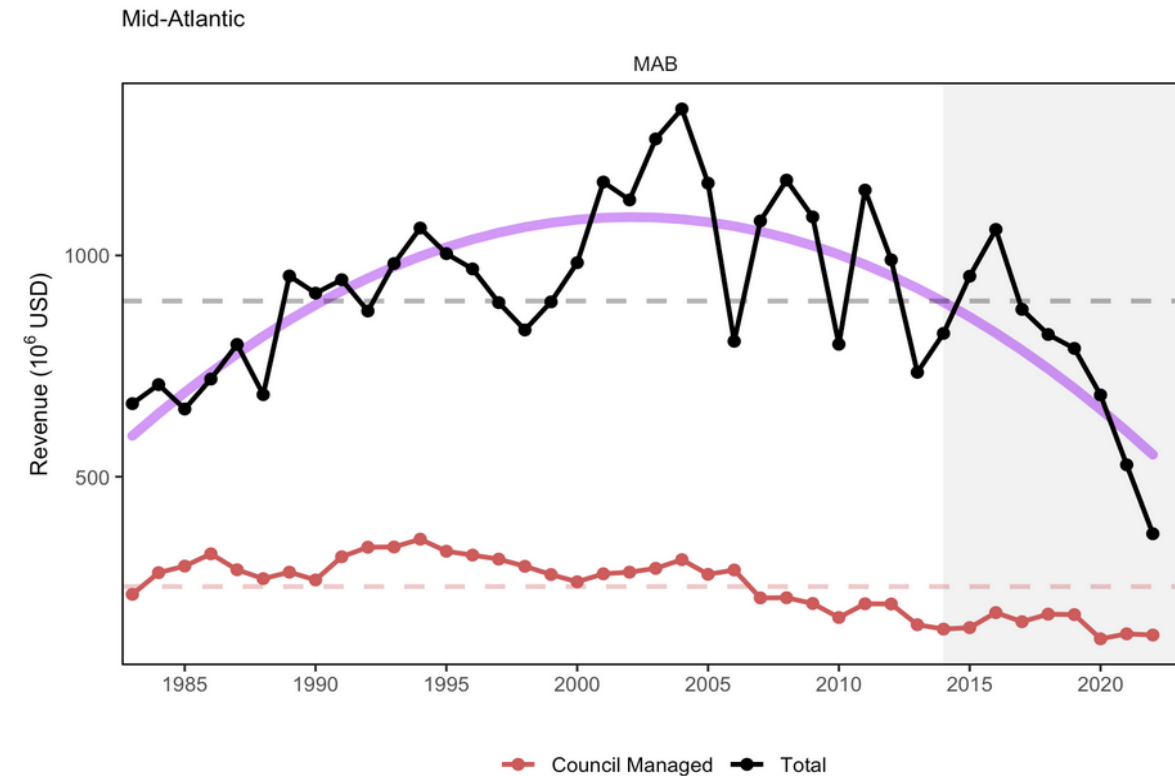
Risk Element – Commercial Revenue

This element is applied at the ecosystem level. Revenue serves as a proxy for commercial profits.

Risk Level	Definition
Low	No trend and low variability in revenue
Low-Moderate	Increasing or high variability in revenue
Moderate-High	Significant long term revenue decrease
High	Significant recent decrease in revenue

Ranked moderate-high risk due to the significant long term revenue decrease

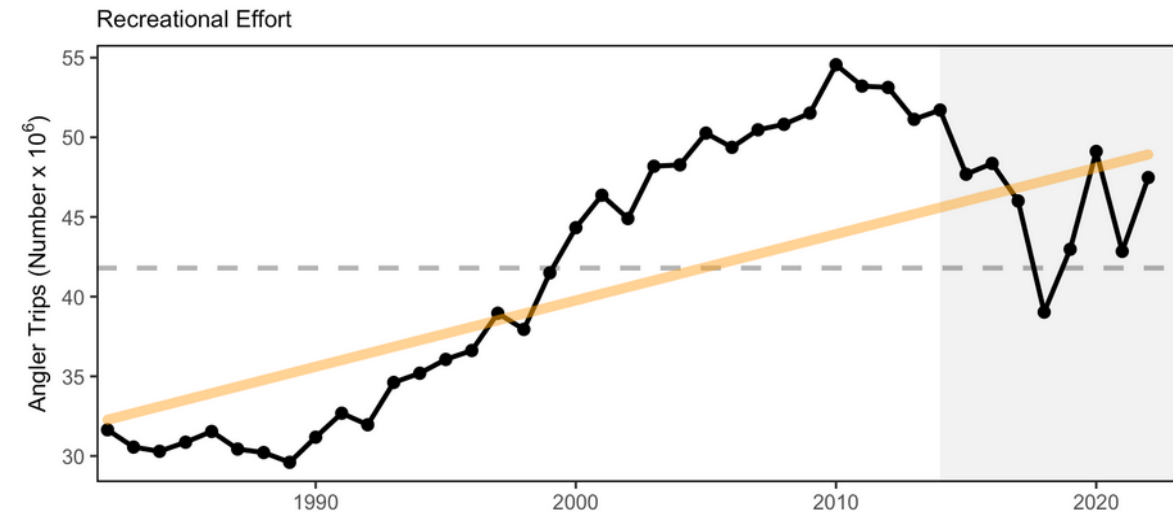
Risk element: **CommRev**



Risk Element – Recreational Angler Trips

This element is assessed at the ecosystem level where it applies equally to all recreationally fished species. It addresses the risk of not maximizing recreational fishery value and opportunities.

Risk Level	Definition
Low	No trends in angler trips
Low-Moderate	Increasing or high variability in angler trips
Moderate-High	Significant long term decreases in angler trips
High	Significant recent decreases in angler trips



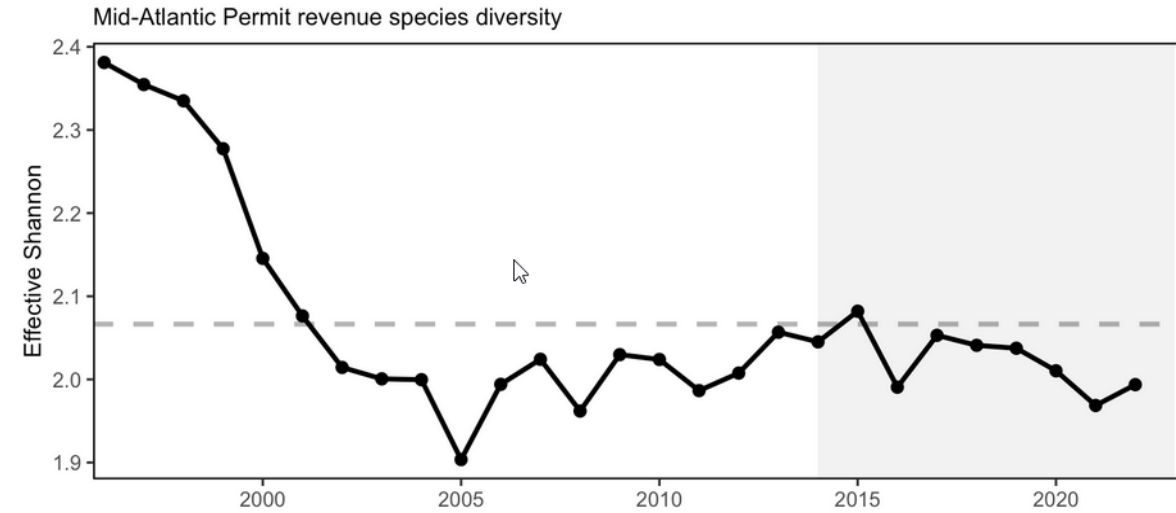
Ranked low-moderate risk due to the significant long term increase with high recent variability.

Risk element: **RecVal**

Risk Element – Comm. Resilience (I) – Revenue Diversity

This element is applied at the ecosystem level, and addresses the potential risk of reduced commercial fishery business resilience by evaluating species diversity of revenue at the permit level.

Risk Level	Definition
Low	No trend in diversity measures
Low-Moderate	Increasing trend or high variance in diversity measure
Moderate-High	Significant long term downward trend in diversity measure
High	Significant recent downward trend in diversity measure



Species revenue diversity in the Mid Atlantic.

With less than 30 years in the time series, trend was not assessed. With no trend, this element ranks low risk. However, a decline prior to 2000 is visually apparent and could be assessed with updated methods for the 2025 risk assessment.

Risk element: FishRes1

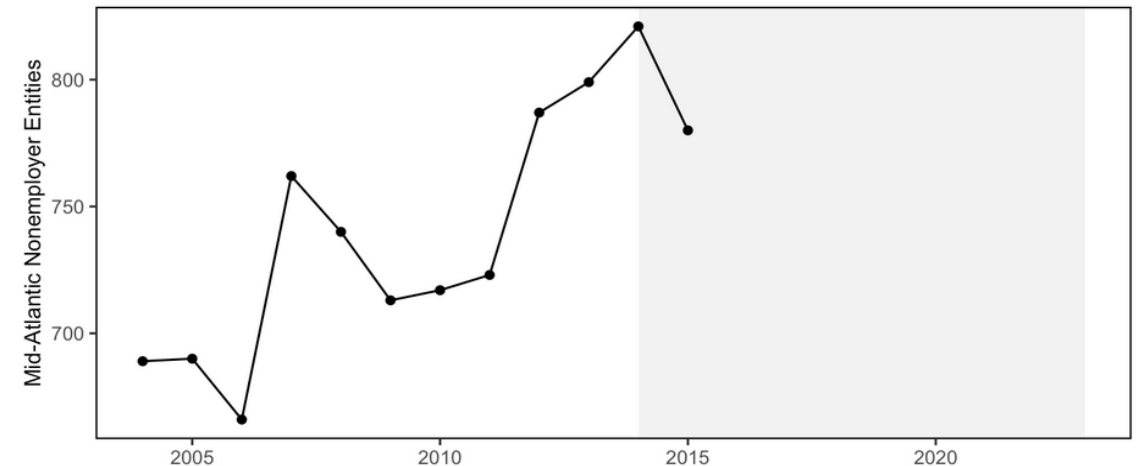
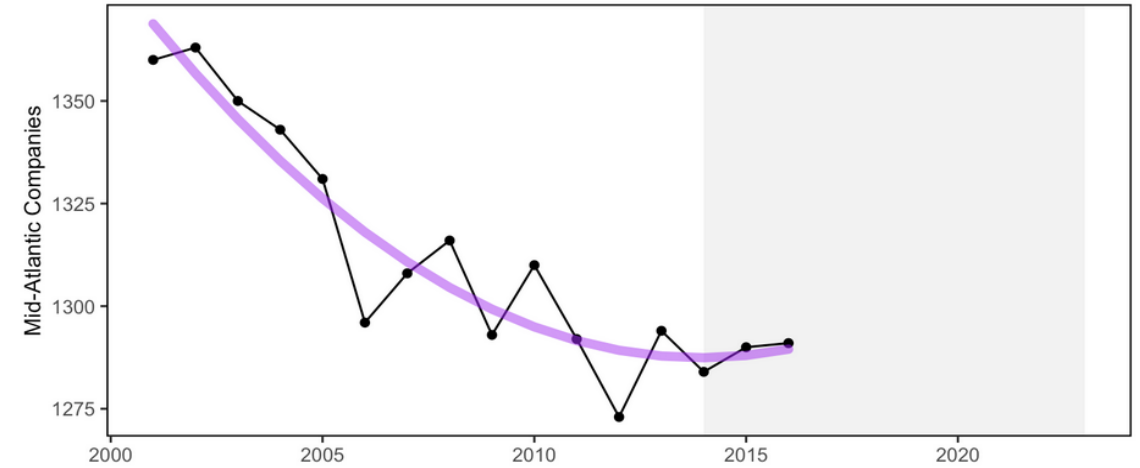
Risk Element – Comm. Resilience (2) – Shoreside Support

This element is applied at the ecosystem level, and ranks the risk of reduced commercial fishery business resilience due to shoreside support infrastructure.

Risk Level	Definition
Low	No trend in shoreside support businesses
Low-Moderate	Increasing or high variability in shoreside support businesses
Moderate-High	Significant recent decrease in one measure of shoreside support businesses
High	Significant recent decrease in multiple measures of shoreside support businesses

One indicator showed a decrease, which represents moderate-high risk to fishery resilience. Data access has changed but updates should be possible.

Risk element: **FishRes2**

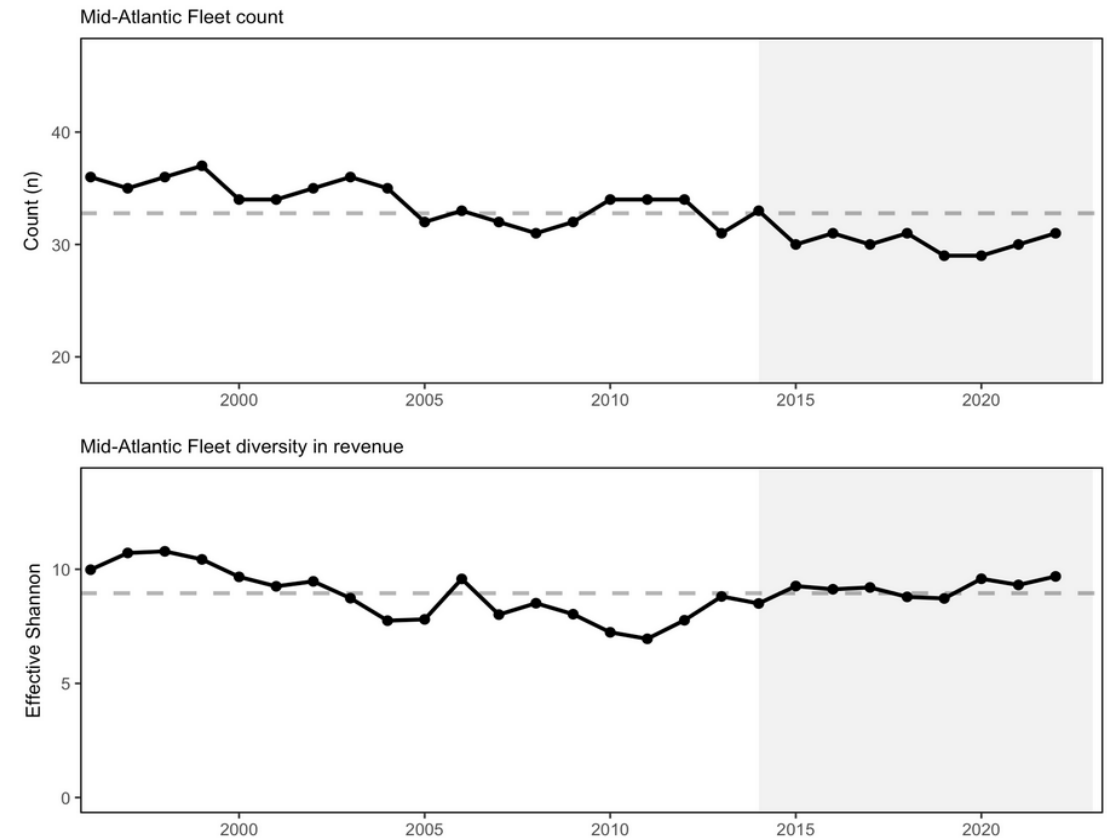


Risk Element – Comm. Resilience (3) – Fleet Diversity

This element is applied at the ecosystem level, and ranks the risk to maintaining equity in access to fishery resources.

Risk Level	Definition
Low	No trend in diversity measures
Low-Moderate	Increasing trend or high variance in diversity measure
Moderate-High	Significant long term downward trend in diversity measure
High	Significant recent downward trend in diversity measure

With less than 30 years in the time series, trend was not assessed. For fleet count a visual trend may be apparent, while for revenue diversity no apparent visual trend exists. With no trend, this element ranks low risk.

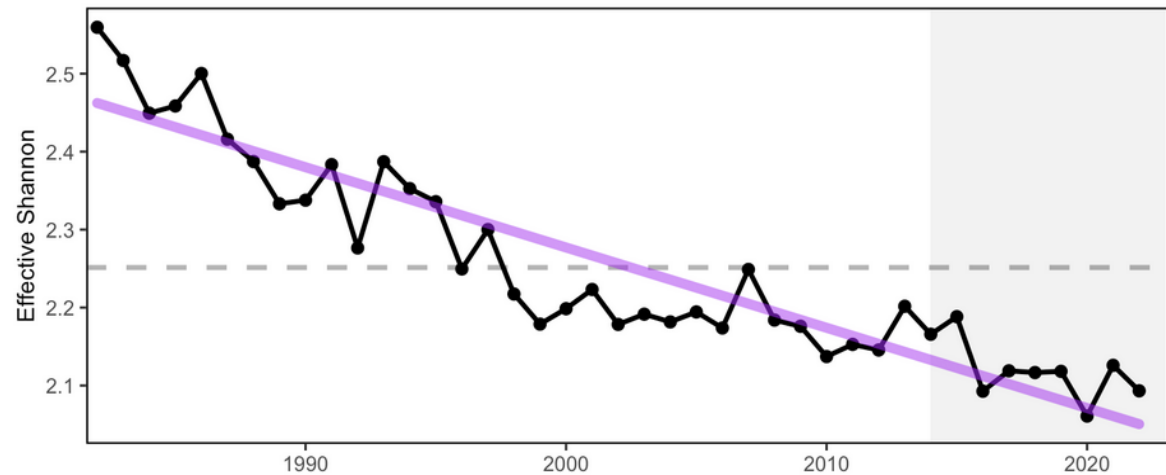


Risk Element – Recreational Fleet Diversity

This element is applied at the ecosystem level, and ranks the risk to maintaining equity in recreational access to fishery resources.

Potential Indicator

Recreational fleet effort diversity



Potential criteria

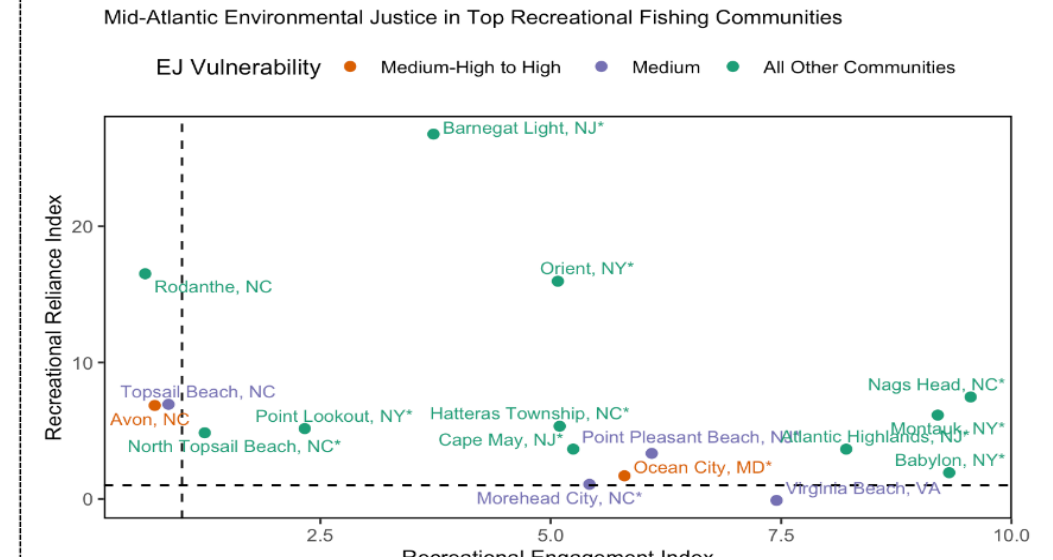
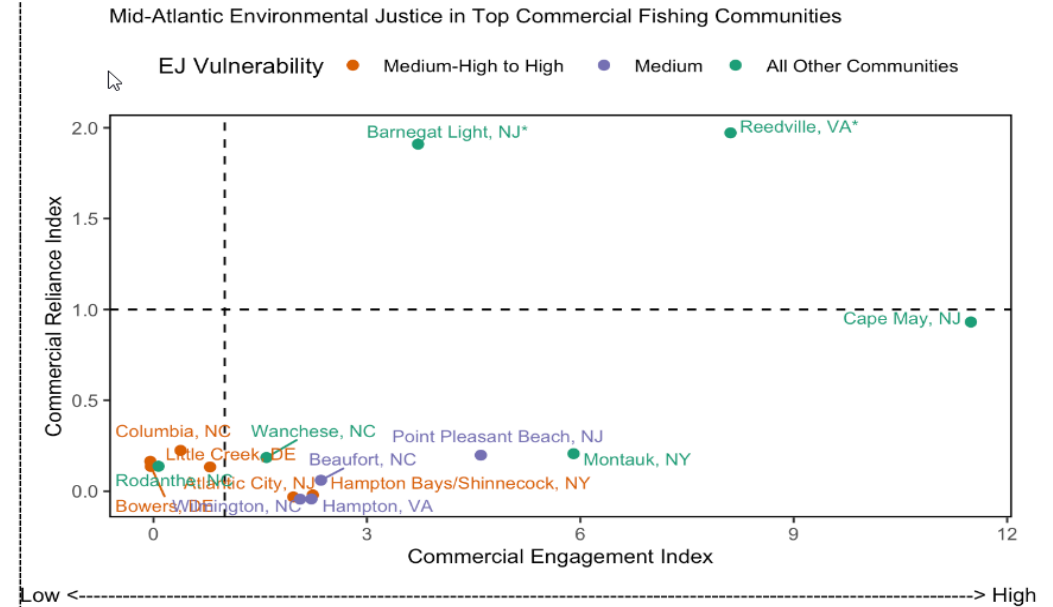
Risk Level	Definition
Low	No trend in diversity measure
Low-Moderate	Increasing trend or high variance in diversity measure
Moderate-High	Significant long term downward trend in diversity measure
High	Significant recent downward trend in diversity measure

Risk Element – Fishing Community Vulnerability

This element is applied at the ecosystem level, and evaluates the risk of reduced community resilience (vulnerability, reliance, engagement).

Risk Level	Definition
Low	Few (<10%) vulnerable fishery dependent communities
Low-Moderate	10-25% of fishery dependent communities with >3 high vulnerability ratings
Moderate-High	25-50% of fishery dependent communities with >3 high vulnerability ratings
High	Majority (>50%) of fishery dependent communities with >3 high vulnerability ratings

In past risk assessments, four of the top communities (20%) had three or more of these high risk rankings, so we ranked overall social-cultural risk as low-moderate for these Mid-Atlantic communities. However, newer analyses evaluating EJ vulnerability could be incorporated into this analysis.



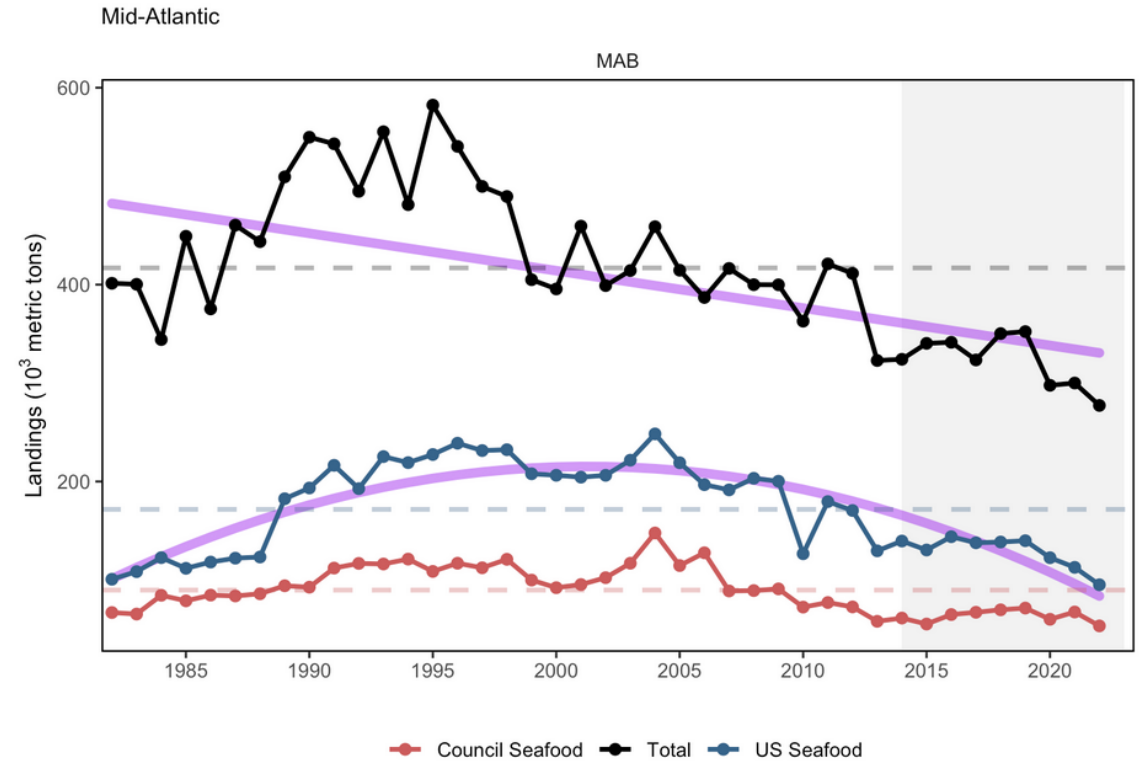
Risk Element – Commercial Fishing Production

This element is applied at the ecosystem level, and describes the risk of not optimizing domestic commercial fishing production from Council-managed species and total commercial fishing production in the Mid-Atlantic.

Risk Level	Definition
Low	No trend or increase in seafood landings
Low-Moderate	Increasing or high variability in seafood landings
Moderate-High	Significant long term decrease in seafood landings
High	Significant recent decrease in seafood landings

There is a significant long term decrease in total commercial landings and U.S. seafood landings in the Mid-Atlantic, indicating moderate-high risk using previous criteria.

Risk element: **ComFood**

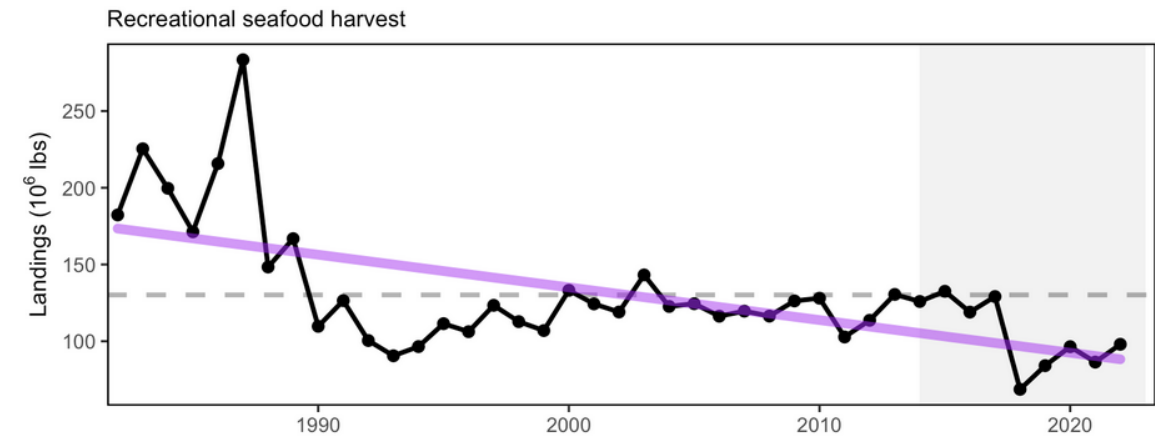


Risk Element – Rec/Subsistence Food Production

This element is applied at the ecosystem level, and describes the risk of not maintaining personal food production.

Risk Level	Definition
Low	No trend or increase in recreational landings
Low-Moderate	Increasing or high variability in recreational landings
Moderate-High	Significant long term decrease in recreational landings
High	Significant recent decrease in recreational landings

Indicators: Recreational harvest



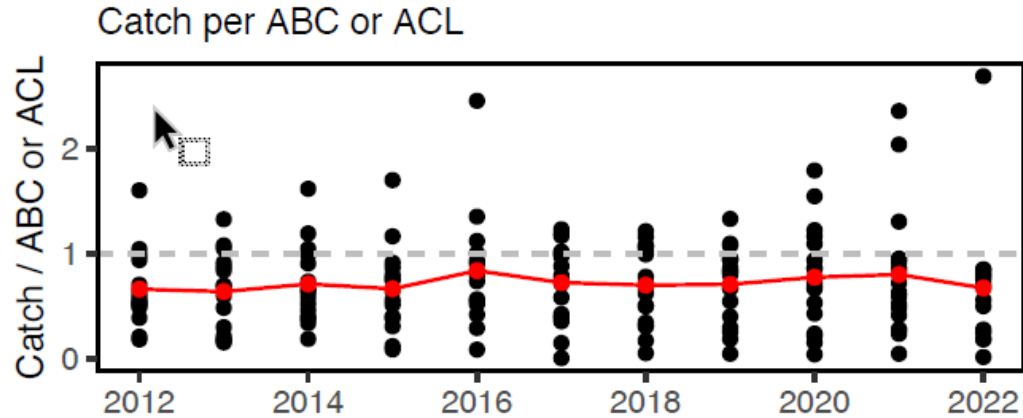
This significant long term decrease in both recreational landings represents a moderate-high risk to food production.

Risk element: **RecFood**

Management Risk Elements

Risk Element – Fishing Mortality Control

Def: Risk of not achieving OY due to inadequate control; applied at species and sector level



Risk Level	Criteria
Low	No recent history (last 5 years) of overages
Low-Moderate	Small recent overages, but infrequent
Moderate-High	Routine recent overages, but small to moderate
High	Routine recent significant overages

Species/Sector	Risk
SCOQ	I
S. Flounder – R	Im
S. Flounder – C	Im
Scup – R	h
Scup – C	I
B. Sea Bass – R	h
B. Sea Bass – C	Im
A. Mackerel – R	Im
A. Mackerel – C	I
Butterfish	I
Longfin Squid	I
Illex Squid	Im
G.Tilefish – R	na
G.Tilefish – C	I
B.Tilefish – R	I
B.Tilefish – C	Im
Bluefish – R	Im
Bluefish – C	I
S. Dogfish – R	I
S. Dogfish – C	I
C. Mackerel	I

Risk Element – Technical Interactions

Def: Risk of not achieving OY due to interactions with non-Council managed species; applied at species and sector level

Indicators: MMPA category level; occurrence of AMs and documented interactions(non-Council managed); new/anticipated regs to minimize protected species interactions

Risk Level	Criteria
Low	No interactions with non-Council managed species; Category III fishery under MMPA
Low-Moderate	Interactions with non-Council managed species but infrequent; Category II fishery under MMPA with limited takes; or AMs not likely triggered
Moderate-High	AMs in non-Council managed species may be triggered; or Category I fishery under MMPA (but takes less than PBR)
High	AMs in non-Council managed species triggered; or Category I fishery under MMPA and takes above PBR

Species/Sector	Risk
SCOQ	I
S. Flounder – R	I
S. Flounder – C	Im
Scup – R	I
Scup – C	Im
B. Sea Bass – R	I
B. Sea Bass – C	Im
A. Mackerel – R	I
A. Mackerel – C	Im
Butterfish	Im
Longfin Squid	mh
Illex Squid	Im
G.Tilefish – R	I
G.Tilefish – C	I
B.Tilefish – R	I
B.Tilefish – C	I
Bluefish – R	I
Bluefish – C	I
S. Dogfish – R	I
S. Dogfish – C	mh
C. Mackerel	Im

Risk Element – Reg Complexity & Stability

Def: Risk of not achieving OY due to complex regulations effecting compliance; applied at species and sector level

Indicators: relative complexity of regs in FMP; frequency of reg changes in last 5 years; rec sector – number of states with different regulations

Risk Level	Criteria
Low	Simple/few regulations; rarely/if ever change; same recreational regulations for all states in the management unit
Low-Moderate	Low-moderate complexity; occasional changes within last 5 years; few (1-2) recreational regulations across states in the management unit
Moderate-High	Moderate-high complexity; occasional changes within last 5 years; moderate (3-4) recreational regulations across states in management unit
High	Might complexity; frequent changes within last 5 years; many (5+) recreational regulations across states in management unit

Species/Sector	Risk
SCOQ	l
S. Flounder – R	h
S. Flounder – C	lm
Scup – R	h
Scup – C	lm
B. Sea Bass – R	h
B. Sea Bass – C	lm
A. Mackerel – R	lm
A. Mackerel – C	h
Butterfish	mh
Longfin Squid	mh
Illex Squid	mh
G.Tilefish – R	l
G.Tilefish – C	l
B.Tilefish – R	lm
B.Tilefish – C	l
Bluefish – R	mh
Bluefish – C	lm
S. Dogfish – R	l
S. Dogfish – C	h
C. Mackerel	l

Risk Element – Discards

Def: Risk of not minimizing regulatory discards and bycatch to the extent practicable; applied at species and sector level

Indicators: discards of target and non-target species, proportion of dead discards to total catch; discard mortality of dominant gear

Risk Level	Criteria
Low	No significant discards or incidental catch; no significant discard mortality
Low-Moderate	Low or episodic discards and incidental catch; low discard mortality
Moderate-High	Regular discards and incidental catch but managed; moderate discard mortality
High	High discards and incidental catch, difficult to manage; high discard mortality.

Species/Sector	Risk
SCOQ	mh
S. Flounder – R	mh
S. Flounder – C	mh
Scup – R	mh
Scup – C	mh
B. Sea Bass – R	mh
B. Sea Bass – C	h
A. Mackerel – R	lm
A. Mackerel – C	lm
Butterfish	mh
Longfin Squid	mh
Illex Squid	l
G.Tilefish – R	l
G.Tilefish – C	l
B.Tilefish – R	l
B.Tilefish – C	l
Bluefish – R	lm
Bluefish – C	lm
S. Dogfish – R	lm
S. Dogfish – C	lm
C. Mackerel	l

Risk Element – Allocation

Def: Risk of not achieving OY due to spatial mismatch of stocks and management; applied at species and sector level

Indicators: Council considering/ongoing action that has allocation implications

Risk Level	Criteria
Low	No recent or ongoing Council discussion about allocation
Low-Moderate	This category not used
Moderate-High	This category not used
High	Recent or ongoing Council discussion about allocation

Species/Sector	Risk
SCOQ	l
S. Flounder – R	h
S. Flounder – C	l
Scup – R	h
Scup – C	l
B. Sea Bass – R	h
B. Sea Bass – C	l
A. Mackerel – R	l
A. Mackerel – C	l
Butterfish	l
Longfin Squid	l
Illex Squid	l
G.Tilefish – R	l
G.Tilefish – C	l
B.Tilefish – R	l
B.Tilefish – C	l
Bluefish – R	h
Bluefish – C	l
S. Dogfish – R	l
S. Dogfish – C	l
C. Mackerel	l

Risk Elements – Under Development

- Offshore Wind (1) – Biological/Ecosystem
 - Offshore Wind (2) – Fishery Science and Access
 - Other Ocean Activities
-
- Description and definitions final
 - Potential indicators identified – all require technical analysis, GIS mapping to conduct
 - Need to develop risk criteria

EAFM Risk Assessment Output – 2024 Summary

Species level risk elements

Species	Assess	Fstatus	Bstatus	PreyA	PredP	FW2Prey	Climate	DistShift	EstHabitat	OffHab
Ocean Quahog	lowest	lowest	lowest			lowest	highest	modhigh	lowest	
Surfclam	lowest	lowest	lowest			lowest	modhigh	modhigh	lowest	
Summer flounder	lowest	highest	lowmod			lowest	lowmod	modhigh	highest	
Scup	lowest	lowest	lowest			lowest	lowmod	modhigh	highest	
Black sea bass	lowest	lowest	lowest			lowest	modhigh	modhigh	highest	
Atl. mackerel	lowest	lowest	highest			lowest	lowmod	modhigh	lowest	
Chub mackerel	highest	lowmod	lowmod			lowest	na	na	lowest	
Butterfish	lowest	lowest	lowmod			lowest	lowest	highest	lowest	
Longfin squid	lowmod	lowmod	lowmod			lowmod	lowest	modhigh	lowest	
Shortfin squid	highest	lowmod	lowmod			lowmod	lowest	highest	lowest	
Golden tilefish	lowest	lowest	lowmod			lowest	modhigh	lowest	lowest	
Blueline tilefish	highest	highest	modhigh			lowest	modhigh	lowest	lowest	
Bluefish	lowest	lowest	lowmod			lowest	lowest	modhigh	highest	
Spiny dogfish	lowest	highest	lowest			lowest	lowest	highest	lowest	
Monkfish	highest	lowmod	lowmod			lowest	lowest	modhigh	lowest	
Unmanaged forage	na	na	na			lowmod	na	na	na	
Deepsea corals	na	na	na			lowest	na	na	na	

- Mackerel and dogfish **Fstatus** risk reduced to low, Summer flounder risk increased to high. Spiny dogfish **Bstatus** risk decreased to low
- Indicators in development for new Prey Availability, Predation Pressure, and Offshore Habitat elements

Ecosystem level risk elements

System	EcoProd	CommVal	RecVal	FishRes1	FishRes2	ComDiv	RecDiv	Social	ComFood	RecFood
Mid-Atlantic	lowmod	modhigh	lowmod	lowest	modhigh	lowest		lowmod	modhigh	modhigh

- Recreational value risk increased from low to low-moderate
- Recreational diversity added, risk criteria in development

Species and Sector level risk elements

Species	FControl	Interact	OSW1	OSW2	OtherUse	RegComplex	Discards	Allocation
Ocean Quahog-C	lowest	lowest				lowest	modhigh	lowest
Surfclam-C	lowest	lowest				lowest	modhigh	lowest
Summer flounder-R	lowmod	lowest				highest	modhigh	highest
Summer flounder-C	lowmod	lowmod				lowmod	modhigh	lowest
Scup-R	highest	lowest				highest	modhigh	highest
Scup-C	lowest	lowmod				lowmod	modhigh	lowest
Black sea bass-R	highest	lowest				highest	modhigh	highest
Black sea bass-C	lowmod	lowmod				lowmod	highest	lowest
Atl. mackerel-R	lowmod	lowest				lowmod	lowmod	lowest
Atl. mackerel-C	lowest	lowmod				highest	lowmod	lowest
Butterfish-C	lowest	lowmod				modhigh	modhigh	lowest
Longfin squid-C	lowest	modhigh				modhigh	modhigh	lowest
Shortfin squid-C	lowmod	lowmod				modhigh	lowest	lowest
Golden tilefish-R	na	lowest				lowest	lowest	lowest
Golden tilefish-C	lowest	lowest				lowest	lowest	lowest
Blueline tilefish-R	lowest	lowest				lowmod	lowest	lowest
Blueline tilefish-C	lowmod	lowest				lowest	lowest	lowest
Bluefish-R	lowmod	lowest				modhigh	lowmod	highest
Bluefish-C	lowest	lowest				lowmod	lowmod	lowest
Spiny dogfish-R	lowest	lowest				lowest	lowmod	lowest
Spiny dogfish-C	lowest	modhigh				highest	lowmod	lowest
Chub mackerel-C	lowest	lowmod				lowest	lowest	lowest
Unmanaged forage	lowest	lowest				lowest	lowest	lowest
Deepsea corals	na	na				na	na	na

- Management fully updated for existing elements
- Offshore wind (OSW) risks split into 2 new elements in development, non-OSW uses added

Anticipated Next Steps

- **Today** – review draft risk assessment; provide any feedback and direction on risk elements/components for additional work
- **Summer** – meet with EOP Committee and AP; develop risk criteria (where needed), prioritize analysis/indicator development (where needed)
- **Fall** – present completed draft EAFM risk assessment to EOP Comm and AP for feedback and recommendations
- **December** – Council reviews recommendations and completed risk assessment. Approve for use.
 - Process to update and modify risk assessment going forward
 - Recommendations to expand use of risk assessment and ecosystem information into other Council products and decisions

Outcomes for today

- No specific action needed today
- Provide any other feedback and direction on risk assessment
 - Overall definitions, data, indicators, criteria
 - Priority elements, indicators, criteria
 - Future updates and areas of applications
- Note: potential to further develop and operationalize ecosystem and habitat indicators through IRA funds (if approved)

Questions??

