



Assessment process improvements and data availability by species

GMFMC SSC Meeting

July 31st-August 1st, 2024



Outline

- Update on assessment process changes
- What data are available for which species?
- Next steps...





The 8-2 approach

- 1) Conduct full stock assessments of up to 12 species every 8 years.
- 2) Update management advice for up to 12 species every other year using simpler approaches.
 - Options are Interim Analyses, Management Procedures, update assessment, updated projections or a simple review of the available data (after a data pull).
 - The Center will work with the Council to determine which one is most appropriate, but this calendar will allow us to conduct update assessments if that is warranted.
- 3) This proposed calendar intentionally holds some analyst time for:
 - a) SEDAR procedural workshops on high priority research topics
 - b) Work on data-limited stock complexes
 - c) Attempt to assess a new stock
 - d) Further development of desk MSEs and MSE tested MPs



Advantages

- 1) This calendar increases the throughput of management advice from about 3 species a year to 5.
- 2) We can continue to assess most stocks that are currently assessed in using age-structured assessments, and update management advice for those stocks every other year.
- 3) We avoid exceeding the capacity of data providers, and we retain sufficient work time to advance important research and development initiatives (e.g. through SEDAR PWs and internal efforts)
- 4) This approach was developed in cooperation with the Gulf Council staff.



Potential calendar:



	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8				Year 9				Year 10				Year 11				Year 12							
Analyst	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Gulf 1	Stock 1								IA7				IA-	Stock 7				IA-1								IA7	IA-1	Stock 1								IA7								IA-								
Gulf 2	IA2				Stock 2								IA8				IA2	Stock 8				IA2								IA8	IA2	Stock 2								IA8												
Gulf 3		IA9	IA3		Stock 3								IA9				IA3	Stock 9				IA3								IA9	IA3	Stock 3								IA9												
Gulf 4					IA1	IA4			Stock 4								IA1				IA4	Stock 10				IA4								IA1	IA4	Stock 4								IA1								
Gulf 5					IA1	IA5			Stock 5								IA1				IA5	Stock 11				IA5								IA1	IA5	Stock 5																
Gulf 6									IA1	IA6			Stock 6								IA12				IA6	Stock 12				IA6								IA1	IA6	Stock 6												
	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8				Year 9				Year 10				Year 11				Year 12							
Analyst	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Gulf 1	D	D	A	A	A	A	M		IA								IA	D	D	A	A	A	A	A	M	IA							IA	IA	D	D	A	A	A	A	M				IA				IA	D		
Gulf 2	IA		D	D	A	A	A	A	M				IA				IA	D	D	A	A	A	A	A	M	IA							IA	IA	D	D	A	A	A	A	M				IA							
Gulf 3		IA	IA		D	D	A	A	A	A	M		IA								IA	D	D	A	A	A	A	M	IA							IA	IA	D	D	A	A	A	A	M				IA				
Gulf 4					IA	IA			D	D	A	A	A	A	M		IA				IA	D	D	A	A	A	A	M	IA							IA	IA	D	D	A	A	A	A	M				IA				
Gulf 5						IA	IA		D	D	A	A	A	A	M		IA								IA				IA	D	D	A	A	A	A	A	M	IA														
Gulf 6									IA	IA			D	D	A	A	A	A	M		IA								IA	D	D	A	A	A	A	A	M	IA														
Data Provision	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
IA	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0	2	0	2	0	1	0	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1
SDC	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0				
Management Advice	4				5				5				5				5				5				5				7				5				5				5				5							





Addressing Primary Council Concerns

- Insufficient frequency and timeliness of management advice
- Lack of access to key data streams leads to extra council requests
- Current process is insufficiently transparent (e.g. to allow external reviewers to reproduce results)
- TORs may not be met (the intentions)
- Documentation fragmented (e.g. final projections not in SEDAR report)



Progress on Recommended Changes

Which stocks could be assessed using less time-consuming approaches?

- Stock assessments with limited webinars/workshops
 - TORs are developed collaboratively, with the Center taking the first stab in order to address lingering issues from the previous assessment.
 - Negotiations where trade offs between more participation and throughput are made clear.
- Update assessments or updated projections
 - More possible with data automation improvements
- Less complex assessment approaches, data limited methods and interim analyses/MPS
 - Need testing through desk MSE simulations (see Cassidy's presentation)

Data Provision/Analysis Improvements



- Standardization and automation efforts have streamlined the provision of commercial finfish landings, recreational removals, length data, and observer data
- Working papers documenting data analyses routinely provided, and many are automated
- AI work is underway to identify fish species in the camera surveys
 - Careful progress is being made to ensure continuity of our survey data.
- Additional work needed to improve a few data provision processes (e.g. age composition which affects most/all assessments)



Data availability request

- Which species can be assessed, and are any species candidates for simpler modeling approaches.
- First step is the effort to catalog data available for as many species as possible without a full data triage.
- A number of species have data available for an assessment or revised assessment at this time.



Yellowedge Grouper

- Commercial handline and longline
- Negligible recreational component
- SEAMAP Summer and Fall Groundfish index
- NMFS BLL index
- Life history and compositions



Spanish Mackerel

- Commercial Hook and Line
- Commercial Gillnet
- Recreational Private
- Recreational shore
- Recreational Charter/Headboat
- Shrimp bycatch
- FWC Vertical Line index
- SEAMAP groundfish early
- SEAMAP groundfish late
- Life history and compositions

Gray Snapper



- Commercial Handline
- Commercial Longline
- Commercial Trap
- Recreational Private
- Recreational Shore
- Recreational Charter/Headboat
- GFISHER index
- SEAMAP Summer Groundfish
- FWRI Age 0 and Age 1 survey
- Reef Visual Census Survey
- Life history and compositions



Gag

- Commercial Handline
- Commercial Longline
- Recreational Headboat
- Recreational Charterboat
- Recreational Private/Shore
- Red Tide
- MRIP index
- GFISHER (subset was used for the last assessment due to selectivity issue)
- Age-0 survey (seagrass)
- Life history and compositions



Greater Amberjack

- Commercial Hook and Line
- Commercial Longline
- Recreational Headboat
- Recreational Charter/Private
- MRIP index
- Commercial longline index
- Headboat index
- GFISHER (and expanding to oil platforms)



Scamp/Yellowmouth

- Commercial Handline
- Commercial Longline
- Recreational Headboat
- Recreational Charter/Private
- Reef Fish Observer Program VL Survey
- GFISHER



King Mackerel

- Commercial Hook and Line
- Commercial Gillnet
- Recreational Headboat
- Recreational Charter/Private
- Shrimp bycatch
- SEAMAP Fall Groundfish index
- SEAMAP Plankton Survey



Cobia

- Commercial Combined landings
- Recreational Combined landings
- Shrimp bycatch
- MRIP index
- Headboat index



Vermilion Snapper

- Commercial Combined landings
- Recreational Combined landings
- Shrimp bycatch
- GFISHER
- SEAMAP Summer Groundfish
- SEAMAP Plankton Survey
- MRIP index (no longer supported)
- Commercial logbook index (truncated)
- Headboat index



Red Grouper

- Commercial Handline
- Commercial Longline
- Commercial Trap
- Recreational Combined
- Red Tide
- GFISHER
- SEAMAP Summer Groundfish
- NMFS Bottom Longline
- FWRI Repetitive Time Drop Hook and Line Survey



Gray Triggerfish

- Commercial Combined landings
- Recreational Combined landings
- Shrimp bycatch
- GFISHER
- SEAMAP Fall Groundfish
- SEAMAP Plankton Survey



Tilefish

- Commercial Handline
- Commercial Longline
- NMFS Bottom Longline

Other Species captured by GFISHER



- **Lane Snapper – catches and life history information**
- **Almaco Jack – catches and minimal life history information**
- **Lesser Amberjack – catches and minimal life history information**
- **Snowy Grouper, Speckled Hind, Wenchman Snapper, and Black Seabass – catches, life history, and size/age information**



Next Steps

- Analyze data available for any other species of interest, keeping in mind the usefulness of any management advice.
- Continue conversations with Council Staff to establish and describe the process
- Develop project schedules for stocks to be assessed beginning in 2026
- Conduct research
 - Determine best course of action for providing management advice with uncertain or biased data.
 - Determine usefulness of MPs and interims between assessments. Are there ideal intervals, and how does it affect the risks of overfishing.