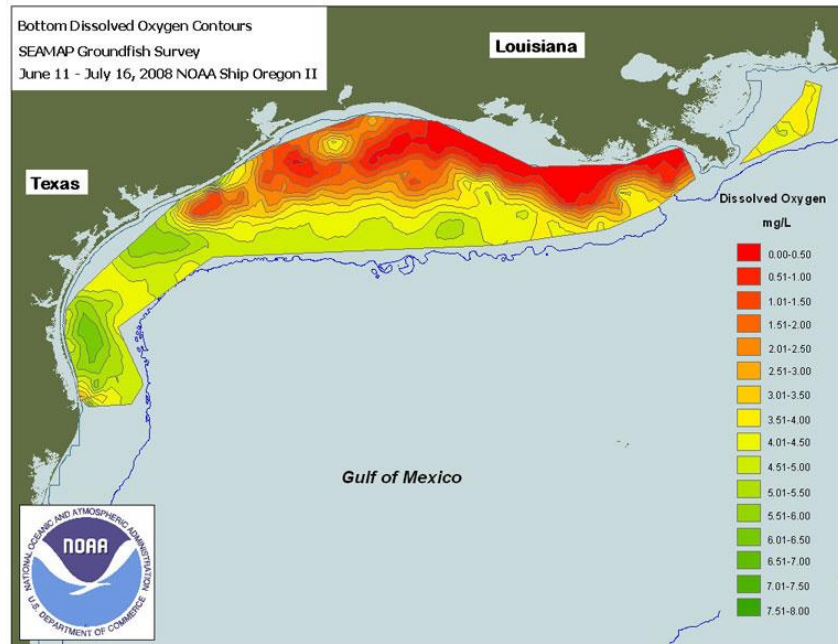




NOAA
FISHERIES

User-driven tools to predict and assess effects of reduced nutrients and hypoxia on living resources in the Gulf of Mexico



Kim de Mutsert, Kristy A. Lewis, Matthew Campbell, Stephen Brandt, Arnaud Laurent, Joe Buszowski and Jeroen Steenbeek

Management Application

NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them.



NOAA-NMFS is one of many moving pieces that comprise federal management
Advisory panel likely reflects personal networking

We're seeking advice on expansion to other user groups.
At the state and federal level who is managing nutrient input?
What kind of data is out there and who do we need to be speaking with?
Parameterization and calibration
Advice on contacts



SEDAR Framework

SouthEast Data, Assessment, and Review (SEDAR)

Cooperative process to conduct stock assessments in NOAA's Southeast Region.

Improve planning and coordination of stock assessment activities.

Improve the quality and reliability of assessments.

Open and transparent approach for development and review of the scientific information on fish stocks.

Partners include:

South Atlantic Fishery Management Council

NOAA Fisheries Southeast Fisheries Science Center and Southeast Regional Office,

Gulf of Mexico and Caribbean Fishery Management Councils,

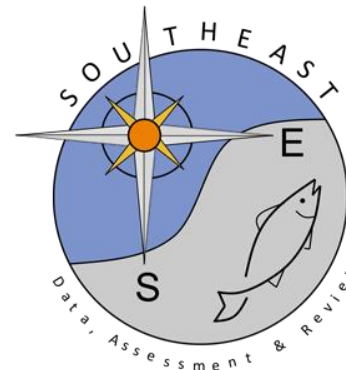
Atlantic States and Gulf States Marine Fisheries Commissions,

NOAA Fisheries HMS Division.

The basic SEDAR products are stock assessment reports prepared through SEDAR assessment projects.

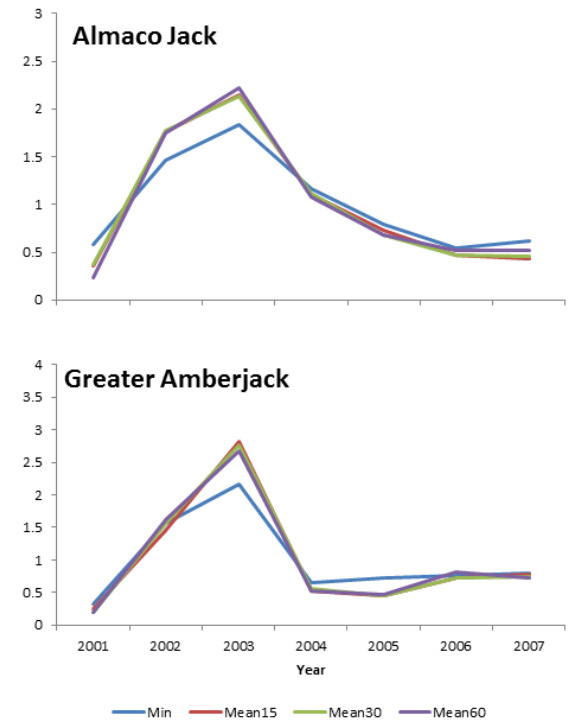
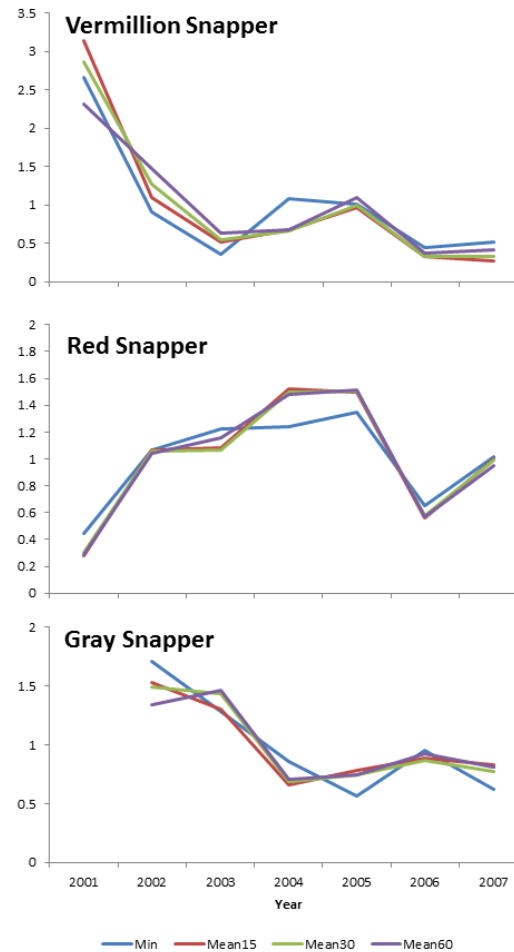
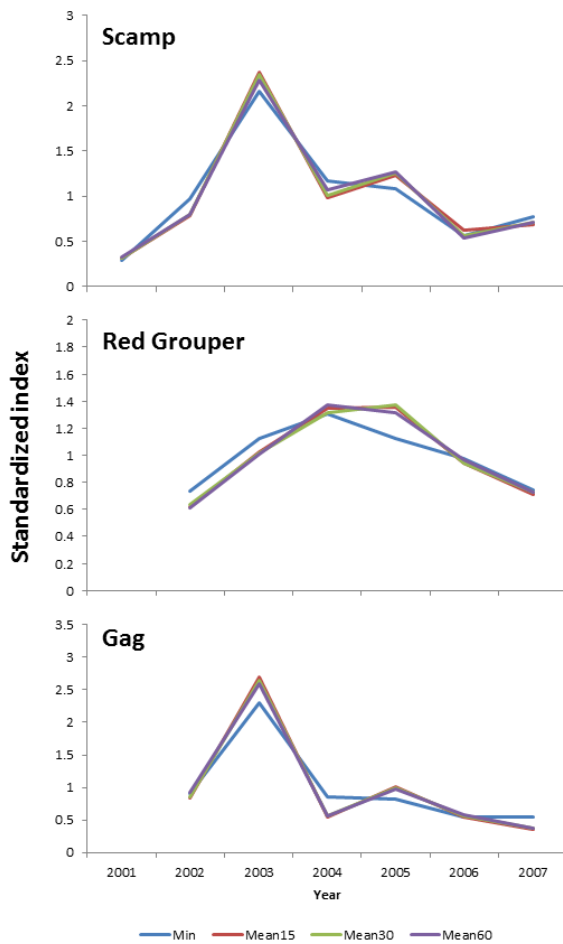
SEDAR workshops and webinars are open to the public and available on their website.

<http://sedarweb.org/>



NOAA FISHERIES

Standardized Indices



Integrated Ecosystem Assessments (IEAs)

Updated management measures have mandated consideration of ecological processes within stock assessments (MSFCMA 2007). Thus NMFS is moving from single-species management to an Ecosystem-Based Approach to Fishery Management (EBFM).

EBFM requires ecosystem-level data gathering and synthesis known as Integrated Ecosystem Assessment (IEA) for each of the Large Marine Ecosystems (LMEs).

IEA is a formal synthesis and quantitative analysis of information on relevant natural and socioeconomic factors in relation to specified ecosystem management goals. IEAs also provide a means of evaluating tradeoffs in management objectives among potentially competing ocean-use sectors.

SEFSC has begun to build a formal Gulf of Mexico IEA spanning several NOAA line offices, several universities, as well as international agencies via the Gulf of Mexico Large Marine Ecosystem project. As part of the IEA development, an Ecosystem Status Report (ESR) for the Gulf of Mexico is being initiated.

Recent advancements in integrated analysis (see Methot and Wetzel 2013 for review) have enabled linkage of life-history processes such as natural mortality and recruitment to external stressors within a traditional single-species stock assessment framework (Maunder and Watters 2003; Methot 2009).



Red Grouper Benchmark - 2015

Sagarese, S.R., M.D. Bryan, J.F. Walter, M. Schirripa, A. Grüss, M. Karnauskas. 2015. Incorporating ecosystem considerations within the Stock Synthesis integrated assessment model for Gulf of Mexico Red Grouper (*Epinephelus morio*). SEDAR42-RW-01. SEDAR, North Charleston, SC. 27 pp.

Assessed the impact of incorporating two environmental processes into the assessment conducted using Stock Synthesis: (1) red tide mortality and (2) recruitment anomalies due solely to oceanographic factors.

For red tide, we: (1) determine whether inclusion of red tide mortality increases the plausibility of the model; (2) evaluate different configurations for incorporating red tide mortality; and (3) identify age classes susceptible to red tide mortality given the model and data used.

Incorporation of red tide mortality improved model fit in comparison to the model with no red tide. Recruitment deviations produced by SS were not significantly related to the index of recruitment anomalies.



SEDAR and Shrimp Assessment Schedules (2017)

Title	Assessment species	Assessment track	Terminal year	Organizing entity	Data workshop	Assessment workshop	Contact
51	Gulf of Mexico Gray Snapper	Benchmark (new data sets)	2015	SEDAR	April 24-28, 2017	February 13-15, 2018	julie.neer@safmc.net
52	Gulf of Mexico Red Snapper	Standard (update from benchmark)	2016	SEDAR	Undecided	Undecided	julie.neer@safmc.net
54	Sandbar Shark (HMS)	Standard (update from benchmark)	2015	SEDAR	May-Aug, 2017	Late 2017	julie.neer@safmc.net
	White shrimp			SEFSC Galveston			Rick.Hart@noaa.gov
	Brown shrimp			SEFSC Galveston			Rick.Hart@noaa.gov
	Pink shrimp			SEFSC Galveston			Rick.Hart@noaa.gov
	Royal Red?			SEFSC Galveston			Rick.Hart@noaa.gov
For further information on assessment scheduling etc visit:							
http://sedarweb.org/							
http://sedarweb.org/docs/page/SEDAR_PlanSchedule_Nov2016_FINAL.pdf							
http://www.galvestonlab.sefsc.noaa.gov/research/fishery_management/index.html#safe							

* Need information on any state assessments that are on the horizon

Advisory Panel

Name	Affiliation	Advisory Panel Member	Workshop 1 participant
Robert Twilley	Louisiana State University & Louisiana Sea Grant	Yes	Yes
Mandy Karnouskas	NMFS-SEFSC-Miami	Yes	No
John Walter	NMFS-SEFSC-Miami	Yes	No
Skyler Sagarese	NMFS-SEFSC-Miami	Yes	No
Bonnie Ponwith	NMFS-SEFSC-Miami	Yes	No
Shannon Martin	NMFS	Yes	Yes
Steve Giordano	NMFS - SERO	Yes	?
James Nance	NMFS SEFSC-Galveston	Yes	No
Rick Hart	NMFS SEFSC-Galveston	Yes	No
Steve Ashby	Northern Gulf Institute	Yes	Yes
Pat Montanio	NOAA Habitat Program	?	?
James Tolan	TPWD - Coastal Fisheries Division	Yes	Yes
Luiz Barbieri	Florida Fish and Wildlife Conservation Commission	Yes	?
Lisa Desfosse	NMFS-SEFSC-Mississippi Laboratories	Yes	No
Jeff Rester	Gulf States Marine Fisheries Commission	Yes	Yes
James H. Cowan	Louisiana State University	Yes	Yes
Andy Fisher	Louisiana Dept. Wildlife and Fisheries	Yes	No
Dave Lindquist	CPRA	No	Yes + 2

* Need suggestions for representatives from Mississippi and Alabama

Thank You!



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