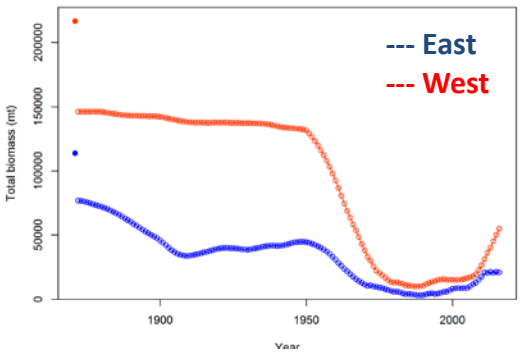
SEDAR 52 Gulf of Mexico Red Snapper (*Lutjanus campechanus*)

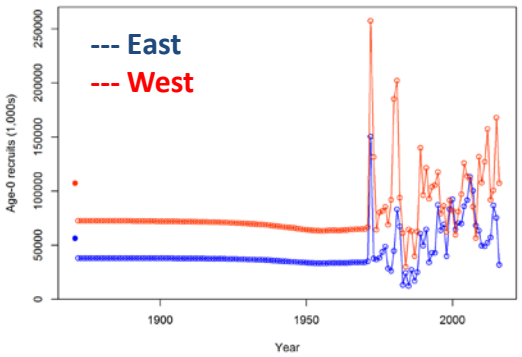
Stock Assessment Model

- The stock synthesis 3 (SS3) modeling framework was utilized to assess the status of the resource with an additional three years of data (2014 - 2016).
- The SEDAR 52 model utilized similar assumptions as the 2014 SEDAR 31 Update Assessment.
- A number of indices of abundance demonstrated increasing trends, which reflected continued rebuilding of the population.

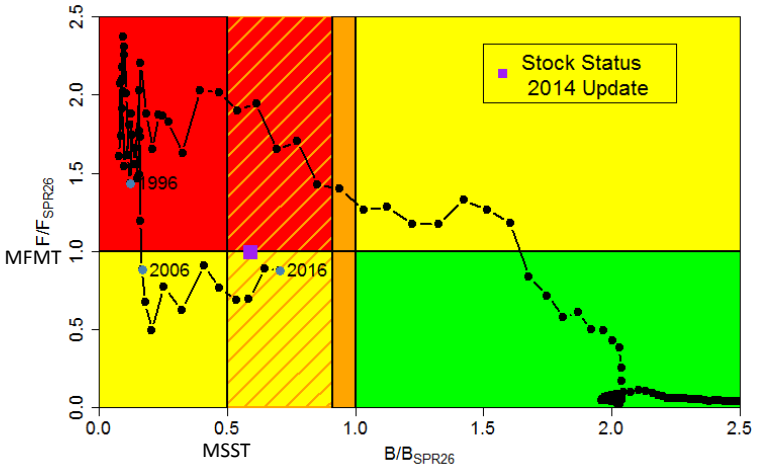
Biomass



Recruitment



Stock Status



Criteria	2014 SEDAR 31 Update	SEDAR 52
MFMT ($F_{SPR26\%}$; # killed / total number)	0.05	0.06
$F_{Terminal}$/MFMT	0.99	0.82
MSST (0.5 * $SSB_{SPR26\%}$; # eggs)	6.40E+14	6.15E+14
$SSB_{Terminal}$/MSST	1.08	1.41
$SPR_{Terminal}$	0.14	0.18

- The resource is *not overfished* and *overfishing is not occurring*, but it has *not yet recovered* to the gulf-wide rebuilding target of SPR 26%. Stock status change is due mostly to a redefinition of MSST as 0.5*$SSB_{SPR26\%}$.
- The western unit continues to increase, while the eastern unit has demonstrated limited biomass growth in recent years.

Projections

	Reference Point OFL		Catch Limit OFL		
Year	SPR	Yield (Million lbs.)	SPR	OFL (Million lbs.)	ABC (P* = 0.40; Million lbs.)
2017	0.20	20.7	0.20	--*	--*
2018	0.20	19.1	0.21	--$^{+}$	--$^{+}$
2019	0.21	17.3	0.22	16.6	16.0
2020	0.21	15.7	0.23	15.4	15.0
2021	0.21	14.6	0.24	14.6	14.3

* Assumed Provisional 2017 Landings of 15.4 million lbs. $^{+}$ Assumed 2018 ACL of 13.7 million lbs.

- Two sets of OFL projections were carried out: reference point OFL (used to determine MFMT and MSST without provisional landings) and catch limit OFL (with 2017 provisional landings and 2018 ACLs).
- Based on provisional landings, overfishing did not occur in 2017 (F_{2017} / MFMT = 0.93).