

Southeast Reef Fish Survey (SERFS)

MARMAP + SEAMAP-SA + SEFIS



<u>Marine Resoruces Monitoring, Assessment & Prediction Program</u>
<u>Southeast Area Monitoring & Assessment Program (South Atlantic)</u>
<u>Southeast Fishery Independent Survey</u>





Primary Fishing Gears

Chevron Trap





Long Bottom Longline





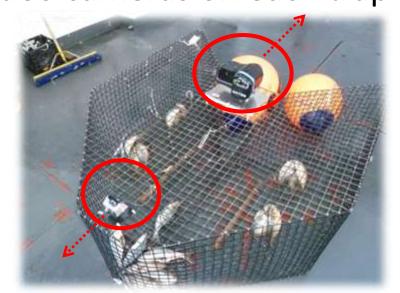


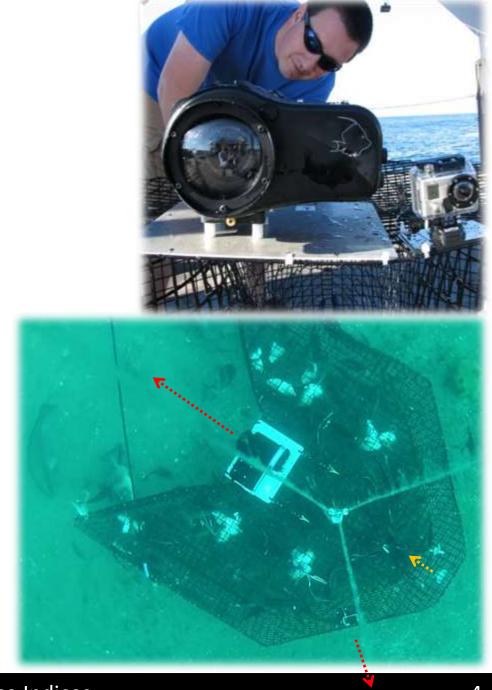
Short Bottom Longline



Chevron Trap

Consistent and standardized use since 1990
Deployed in depths to ≈110 m
Soak time ≈90 minutes, baited with clupeids
1-3 video cameras on each trap





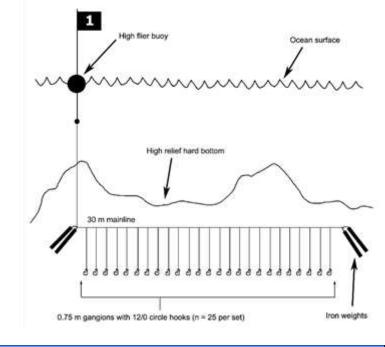
Short Bottom Longline

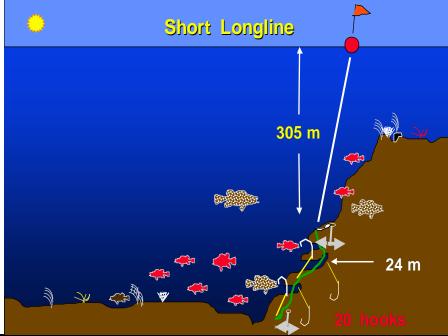
Target Species

Snowy grouper, jacks, tilefish, speckled hind

Soak time ≈90 minutes, baited with whole squid







Long Bottom Longline



Deployed in depths of $\approx 170 - 270$ m (550 – 900 ft) on mud bottom habitat $\approx 60 - 80$ nm offshore

Soak time ≈90 minutes, baited with whole squid

Common species: Golden Tilefish







Sampling Stations

Chevron Trap

≈4,000 sampling stations

1,500 – 2,000 stations randomly selected

Short Bottom Longline

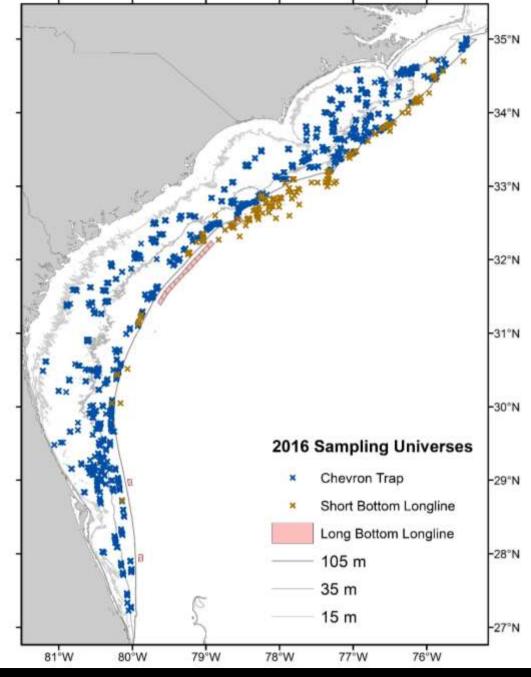
≈ 300 sampling stations

100 – 150 randomly selected and sampled annually

Long Bottom Longline Blocks

15 blocks in "tilefish" habitat

Target min. 2 LBLL/block each year



Sampling Design

Processing and Data Analysis

MARMAP/SEAMAP-SA:

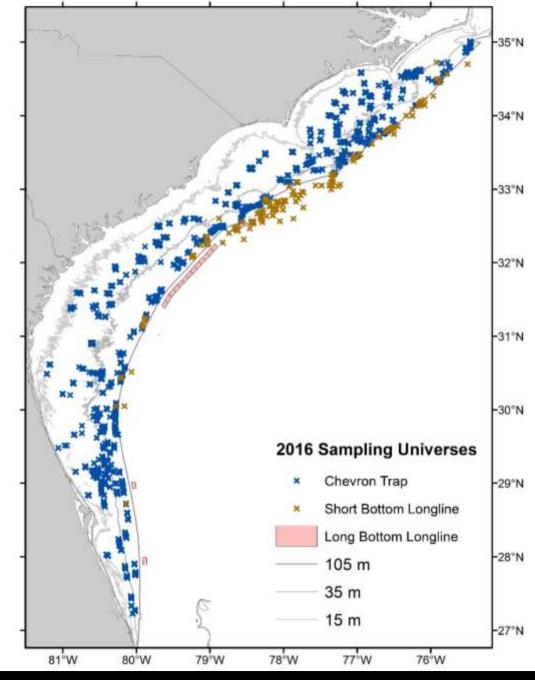
Trap and longline indices

Life history processing & analyses

SEFIS

Video processing & analyses

Data – one combined database



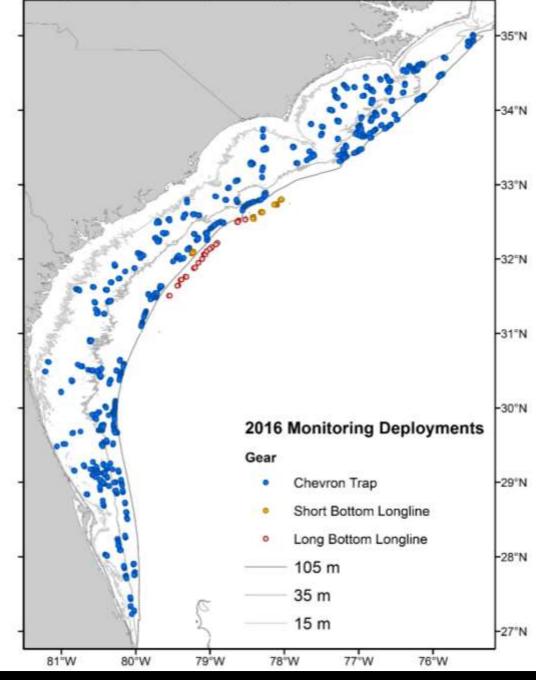
2016 Summary

1,537 Chevron Traps

78 Short Bottom Longlines

31 Long Bottom Longlines

431 Other Gears (e.g. CTD and Rod-&-Reel)



2016 Reef Fish Survey Results

2016 Top 16 Species

		•	•		
Scientific Name	Common Name	Chevron	Short Bottom Longline	Rod-&-Reel	Total
Haemulon aurolineatum	Tomtate	18,559		0	18,559
Centropristis striata	Black Sea Bass	7,989		47	8,036
Rhomboplites aurorubens	Vermilion Snapper	4,555		0	4,555
Stenotomus spp.	Scup & Longspine Porgy	2,945		0	2,945
Balistes capriscus	Gray Triggerfish	2,589		0	2,589
Pagrus pagrus	Red Porgy	1,917	7	0	1,924
Haemulon plumierii	White Grunt	1,275		25	1,300
Lutjanus campechanus	Red Snapper	1,098		16	1,114
Centropristis ocyurus	Bank Sea Bass	734		0	734
Diplectrum formosum	Sand Perch	452		0	452
Diplodus holbrookii	Spottail Pinfish	429		0	429
Calamus nodosus	Knobbed Porgy	137		1	138
Hyporthodus niveatus	Snowy Grouper	27	82	1	110
Seriola rivoliana	Almaco Jack	73	14	0	87
Stephanolepis hispidus	Planehead Filefish	73		0	73
Mycteroperca phenax	Scamp	53	4	4	61

Overview of CPUE

Chevron trap (1990-2016)

Short bottom longline (1996-2016)

Long bottom longline (1996-2016)

Used species' specific depth ranges

CPUE in
$$\frac{Catch}{Trap*hr}$$

Method

Delta-GLM standardized Index normalized to long term average Error bars are ± 95% CI





Caveats

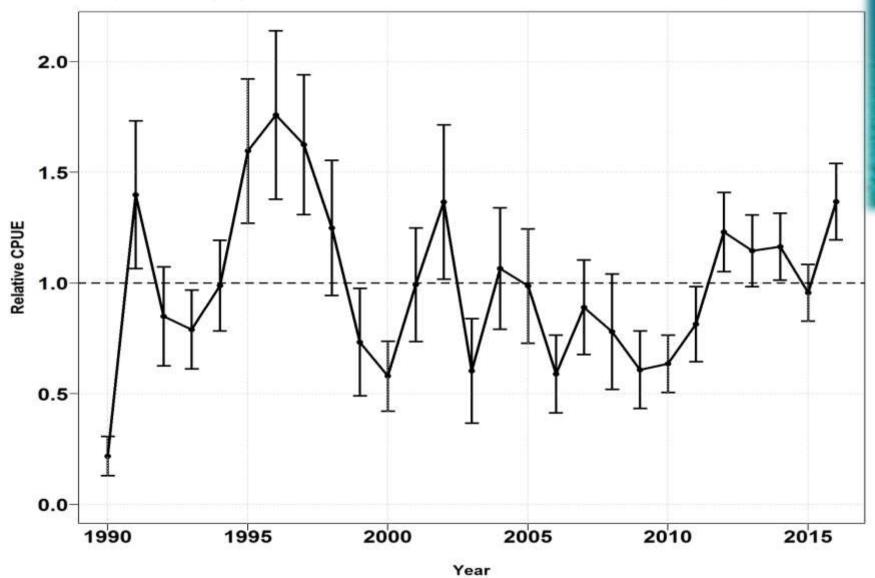
Summary overview, not an update of stock status



Constraints, stratification, units, and models for CPUE may be different from those used in (SEDAR) stock assessments

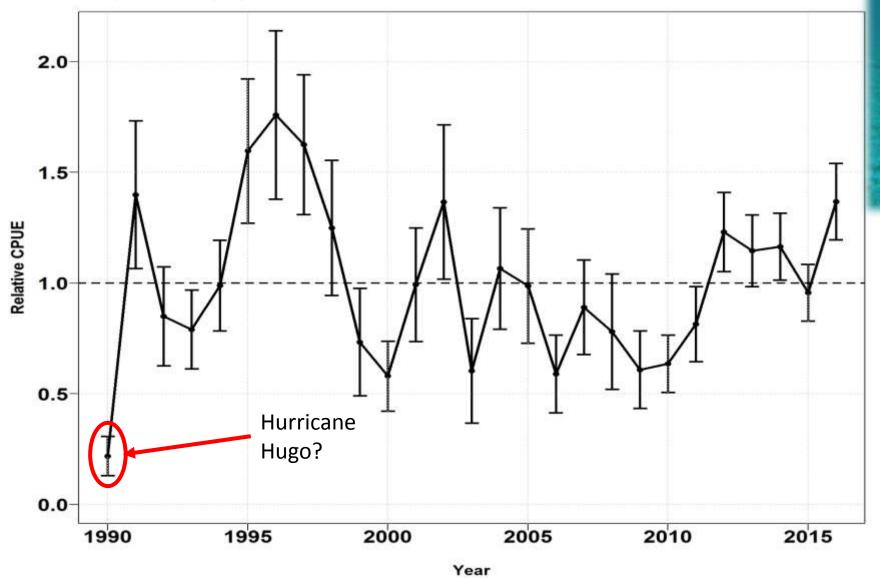
Many species have not been assessed or updated through SEDAR process and not all trends in analyses have been discussed in SEDAR framework

Gray Triggerfish – Chevron Trap

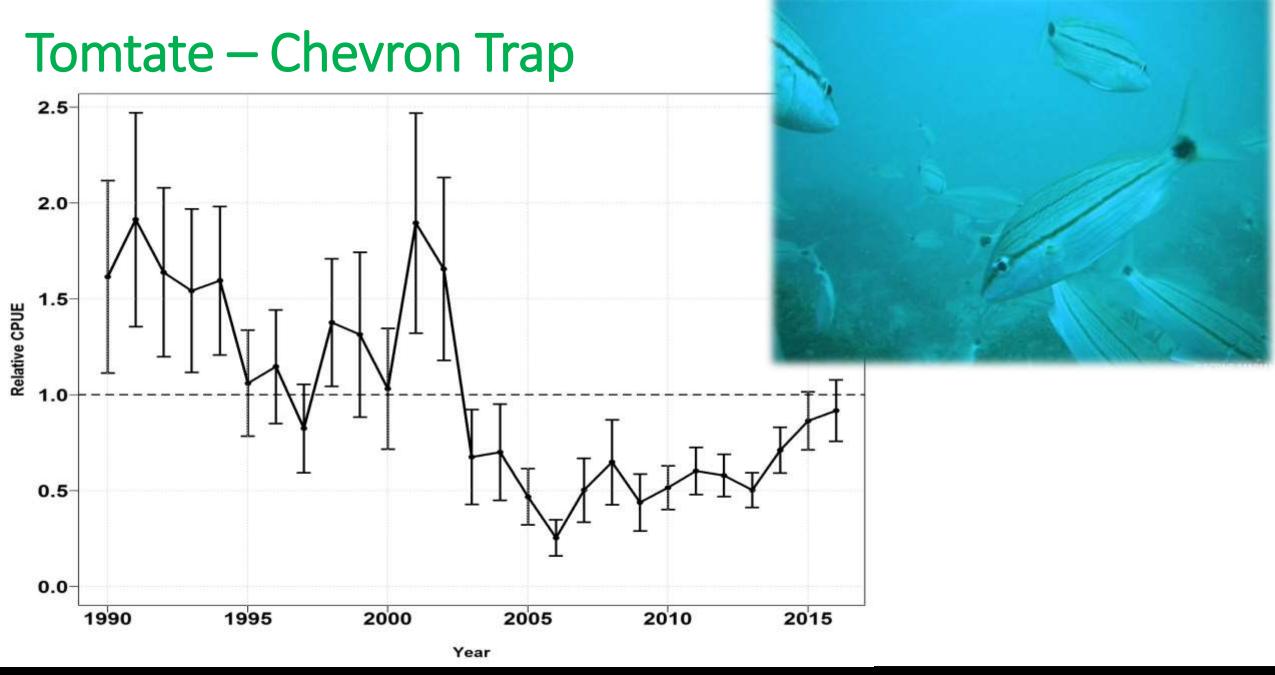




Gray Triggerfish – Chevron Trap

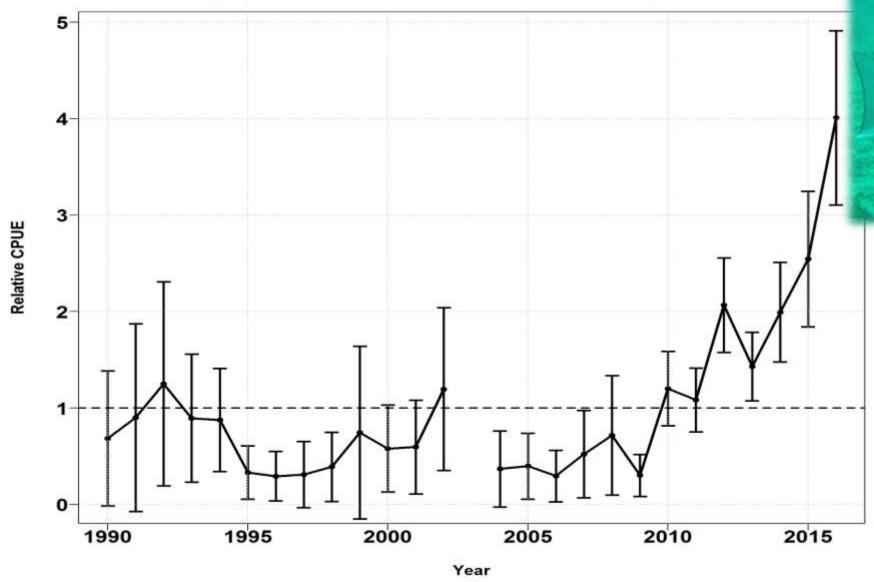




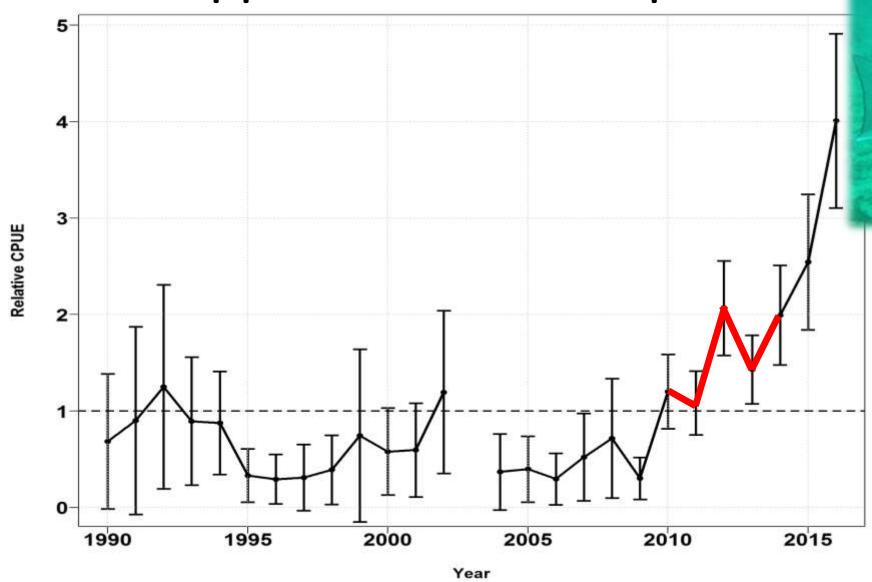


White Grunt – Chevron Trap 2.5 2.0 Relative CPUE 1.5 1.0 0.5 0.0 1995 2005 2010 2015 1990 2000 Year

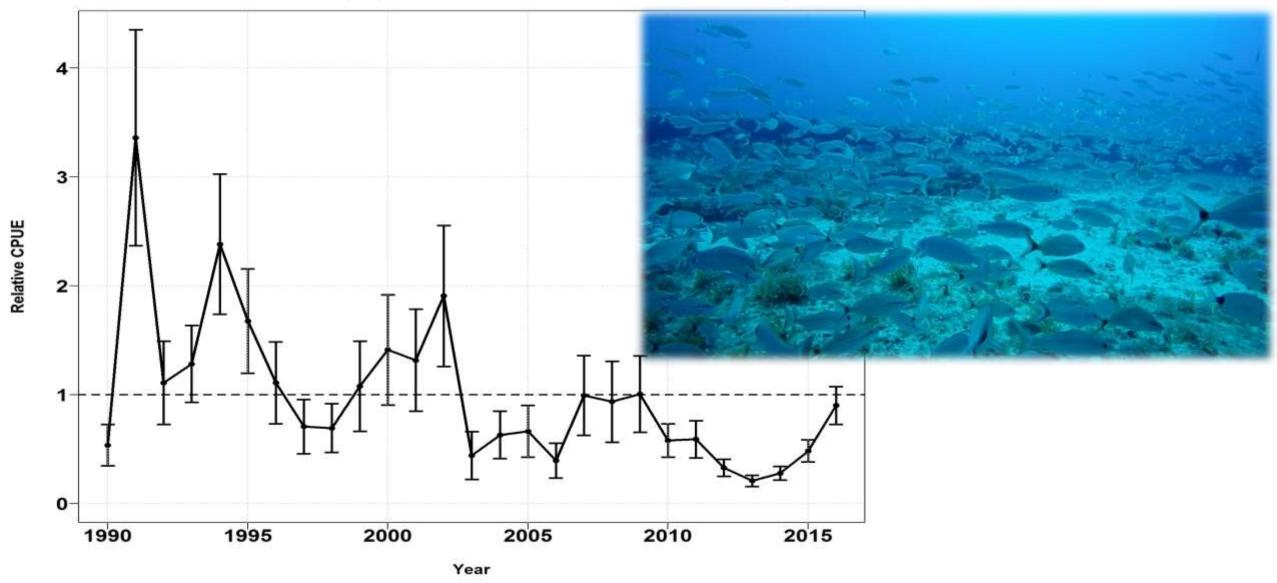
Red Snapper – Chevron Trap



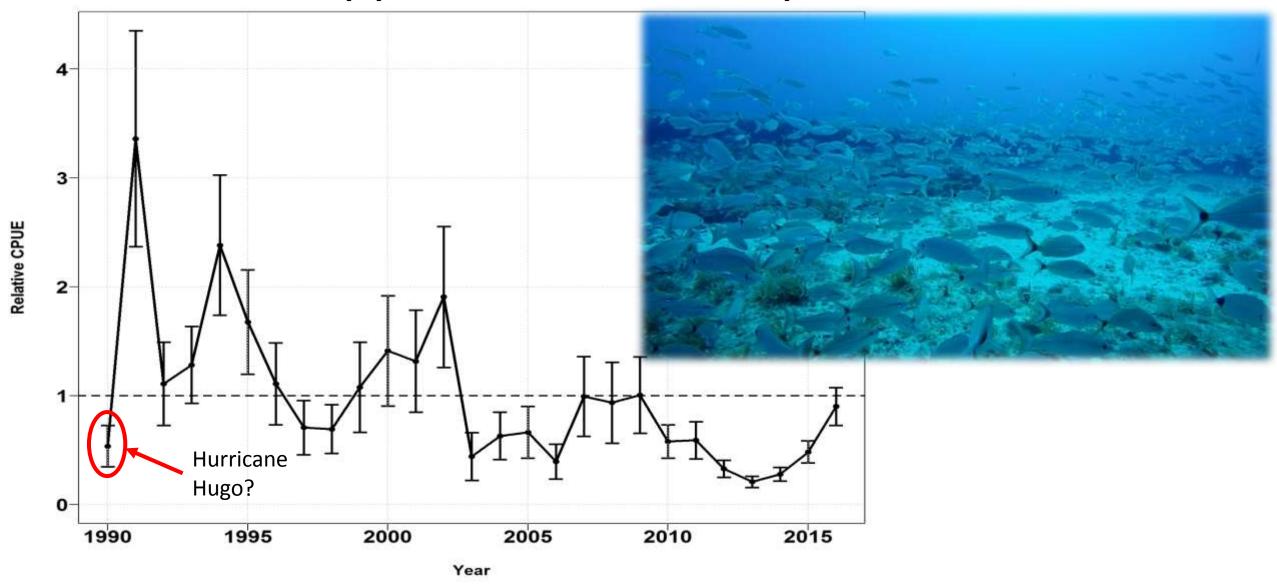
Red Snapper – Chevron Trap



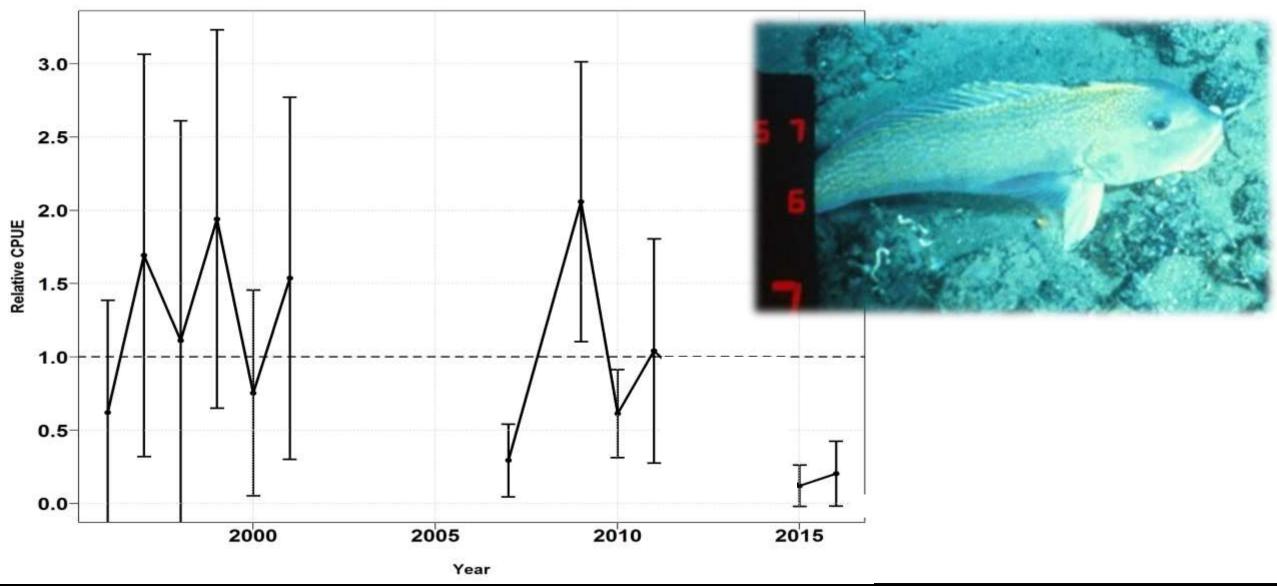
Vermilion Snapper – Chevron Trap

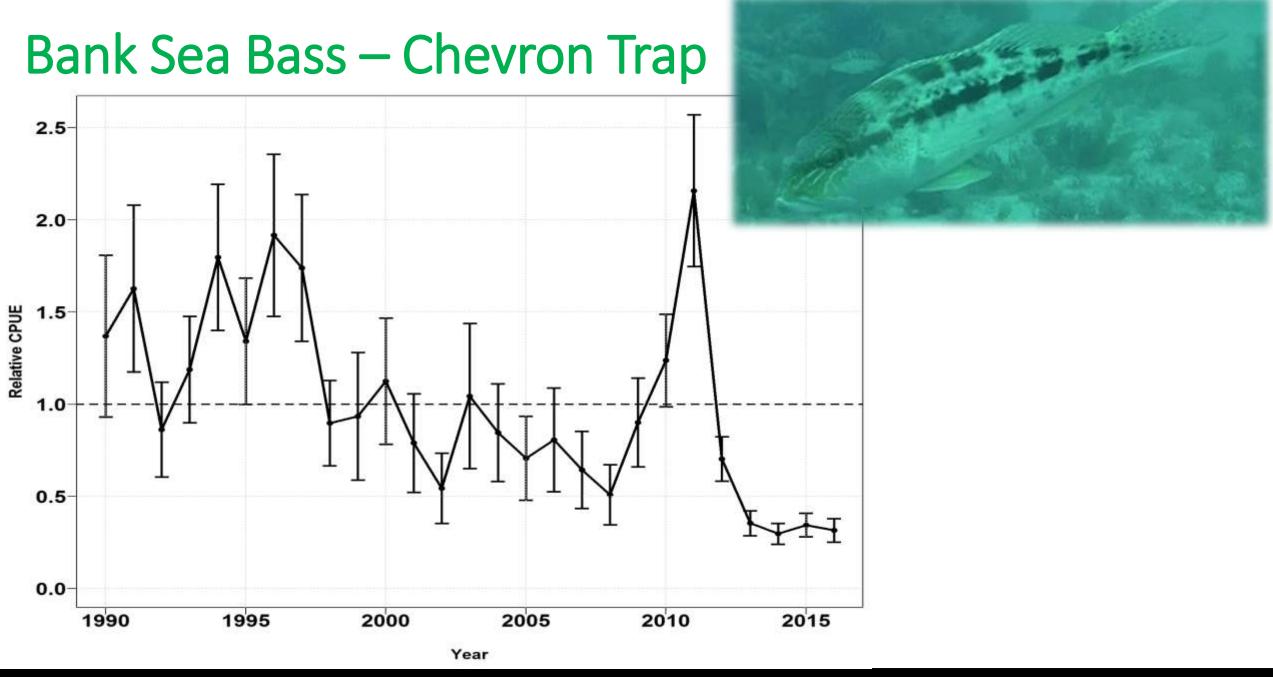


Vermilion Snapper – Chevron Trap

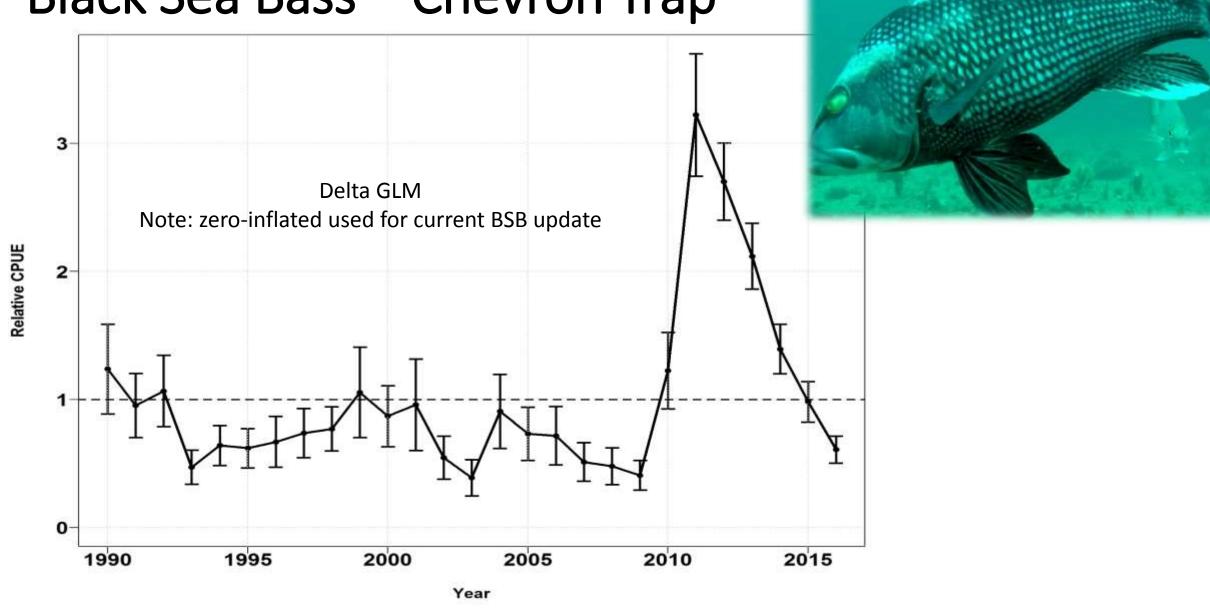


Golden Tilefish – Long Bottom Longline

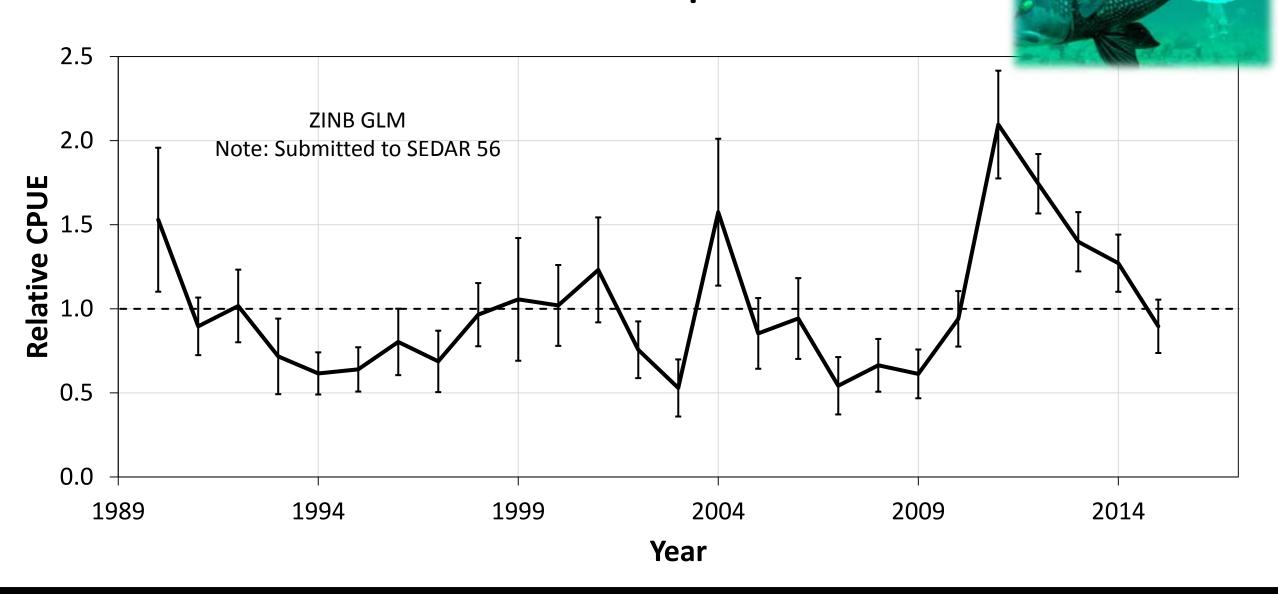




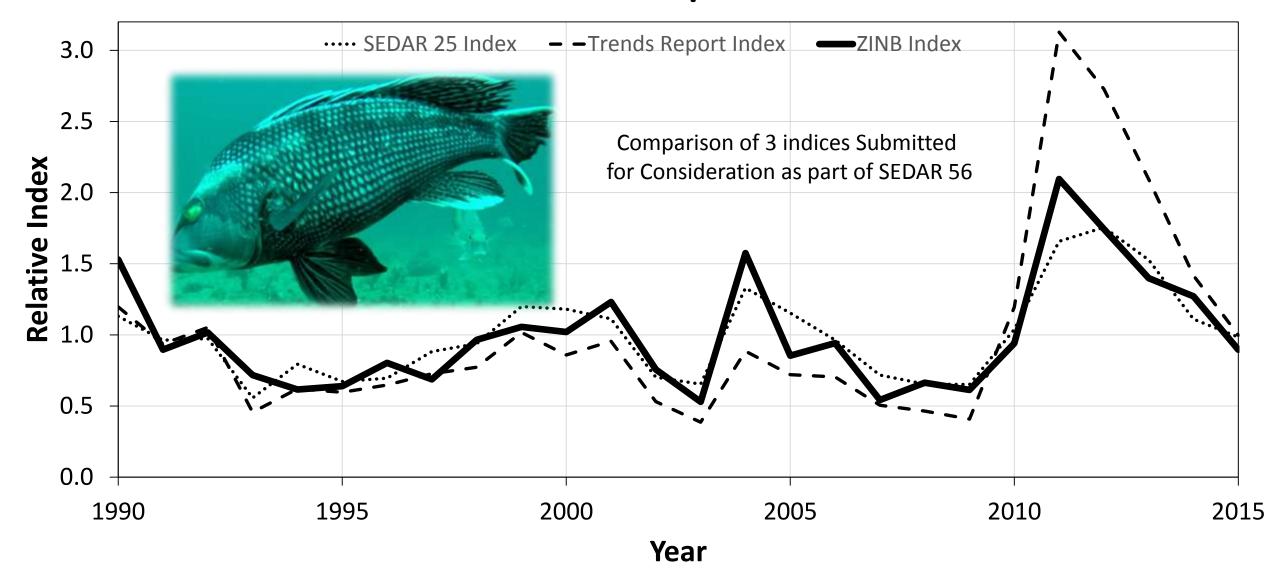
Black Sea Bass – Chevron Trap

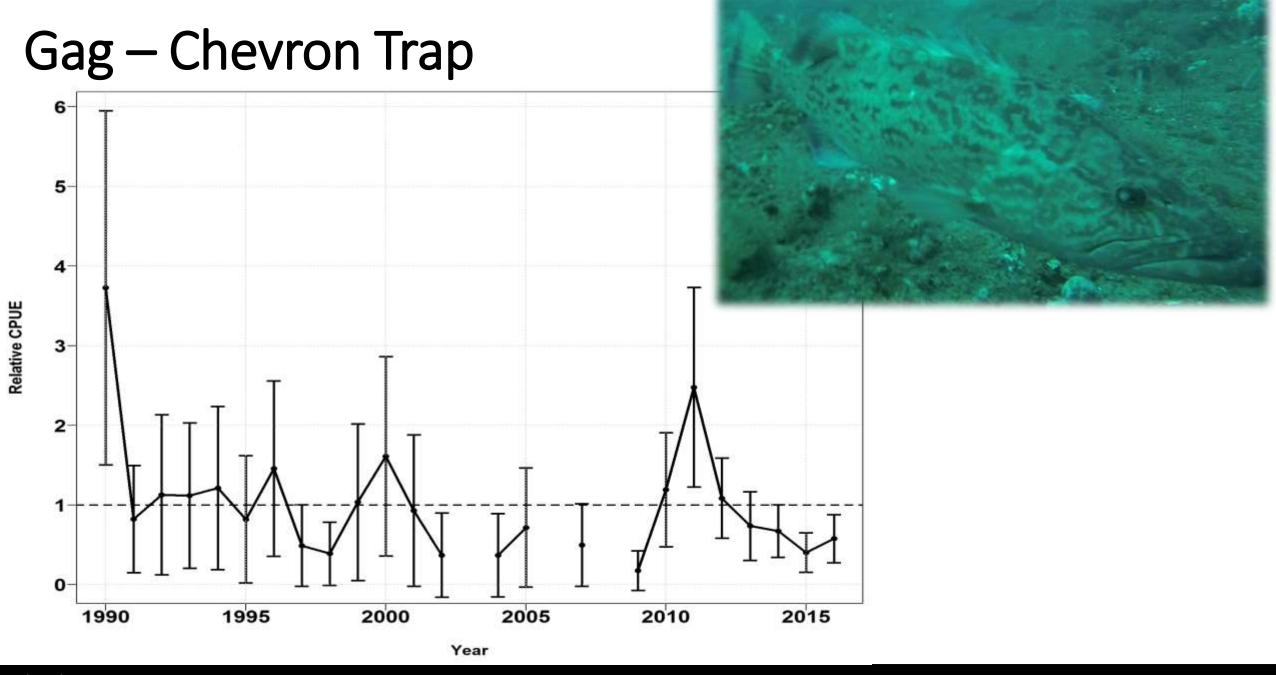


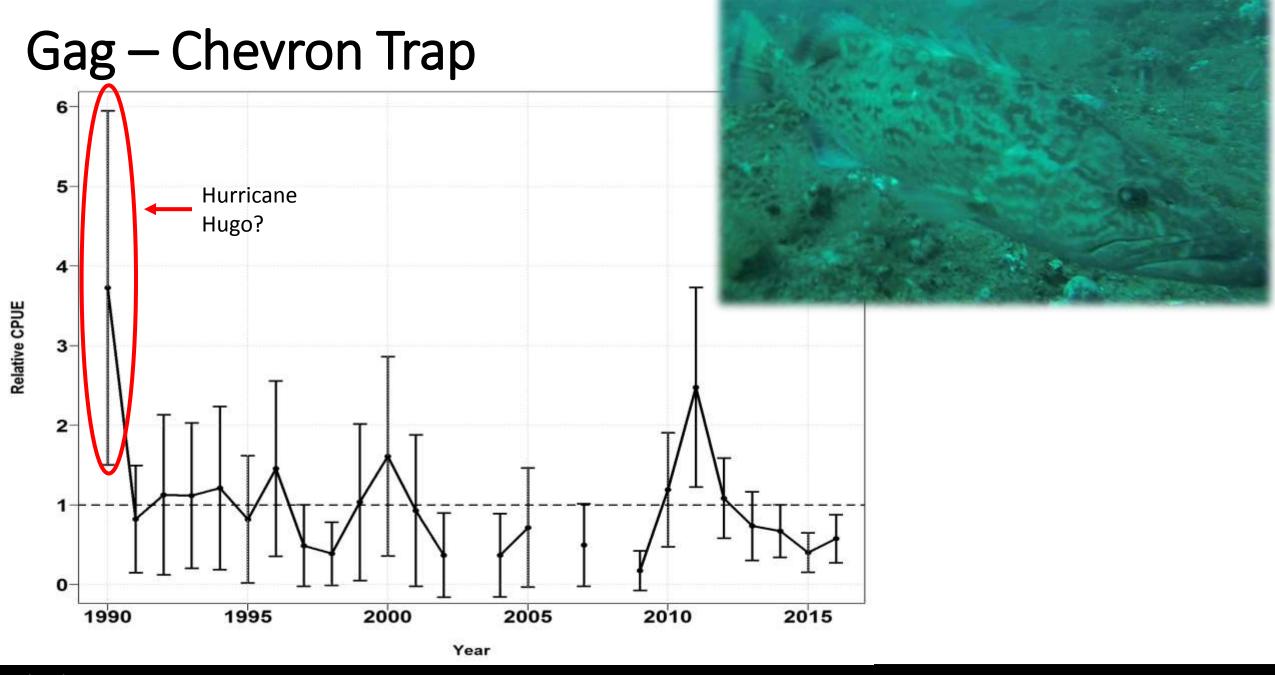
Black Sea Bass – Chevron Trap



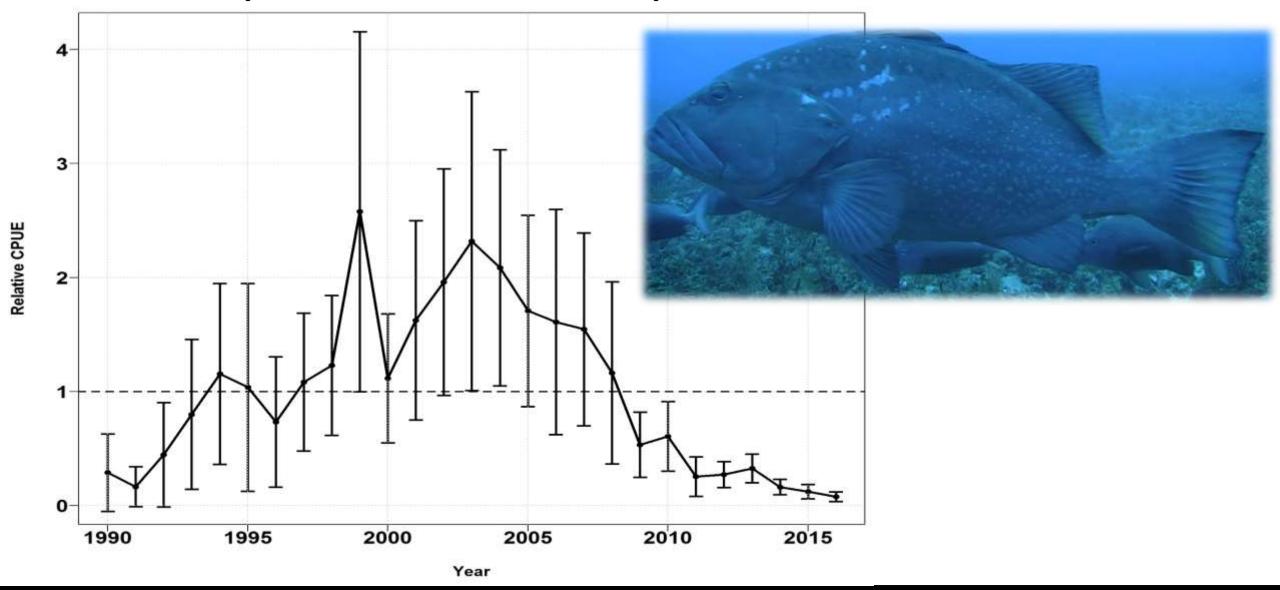
Black Sea Bass – Chevron Trap

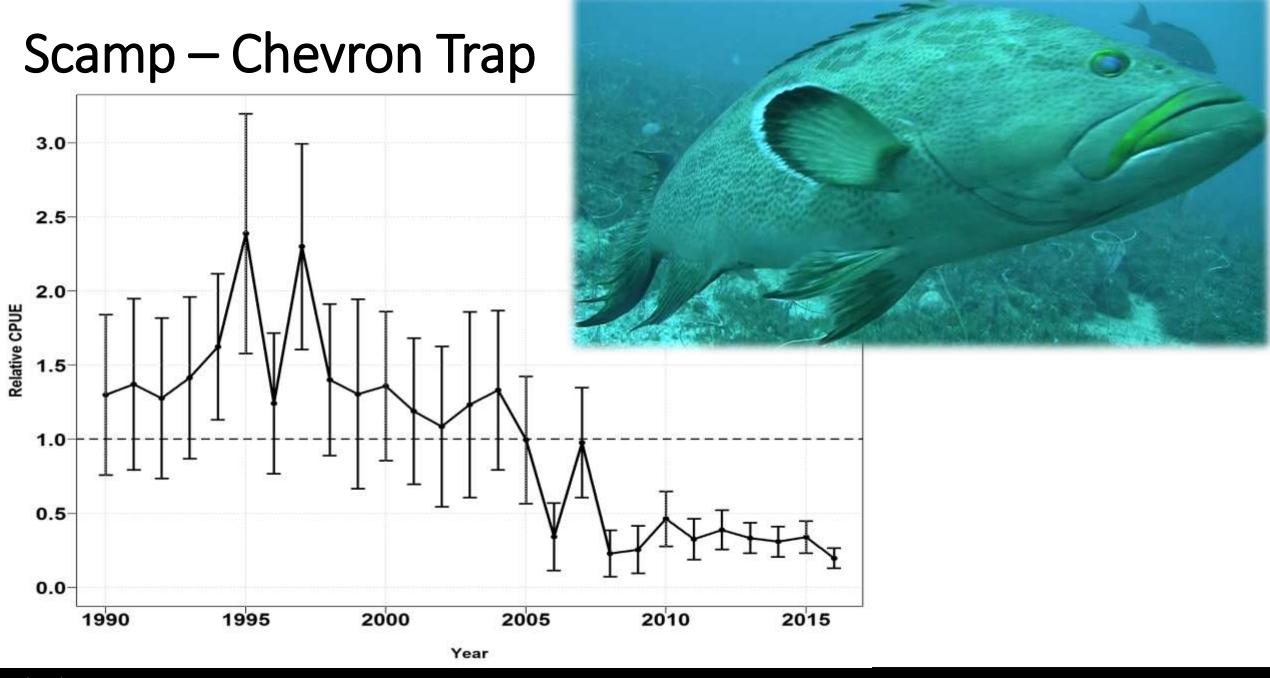




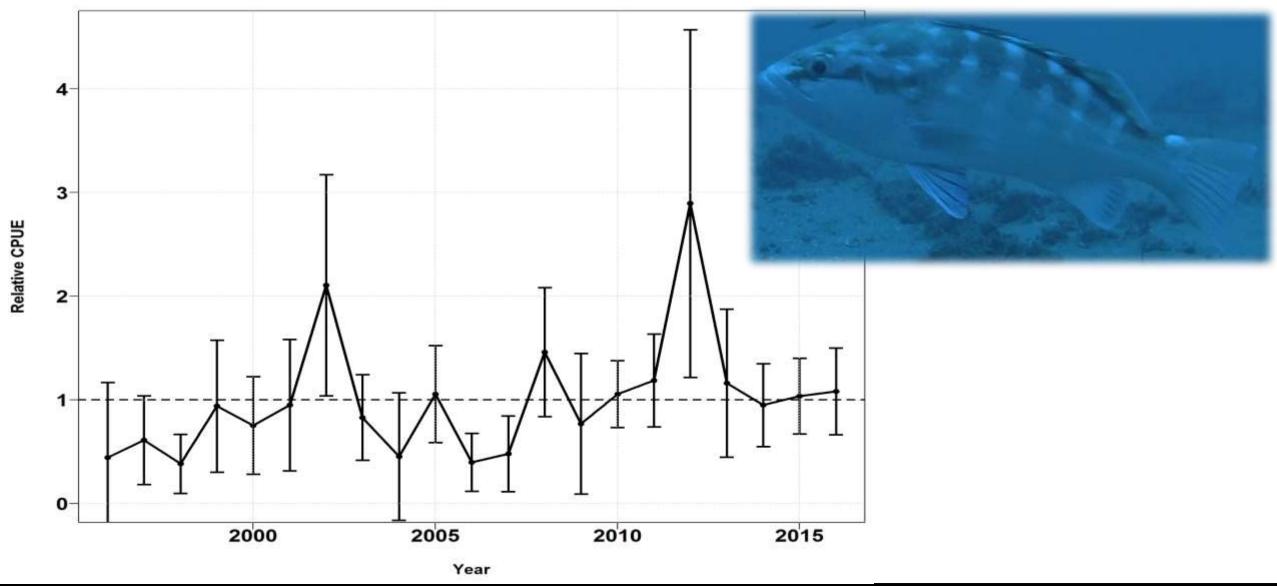


Red Grouper – Chevron Trap

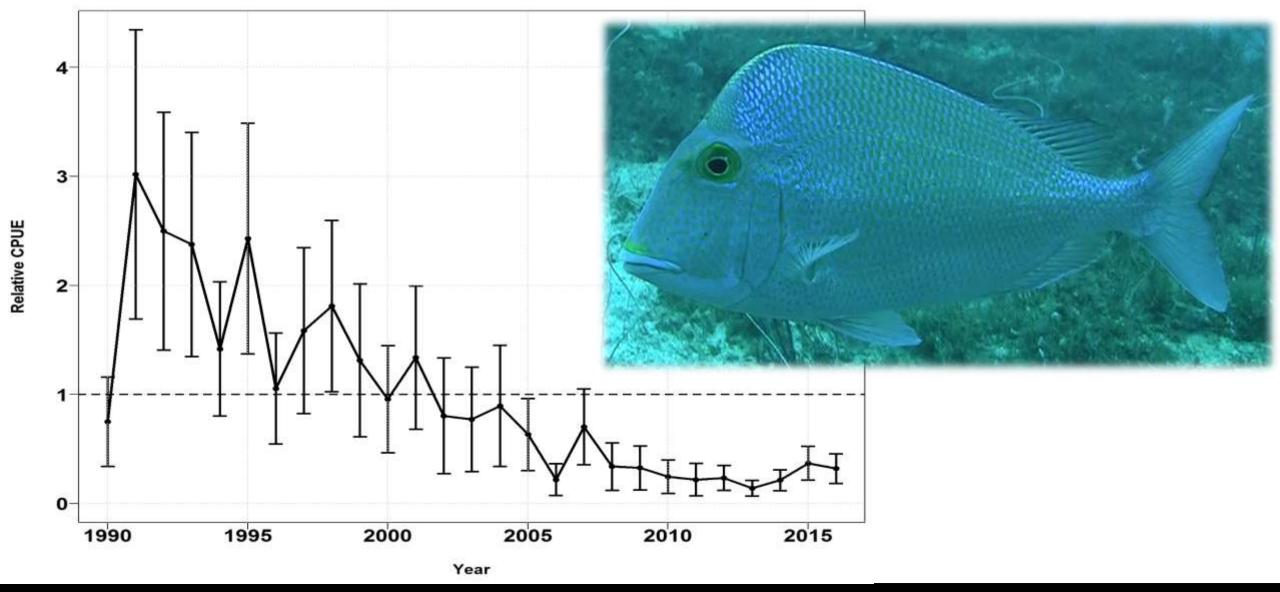




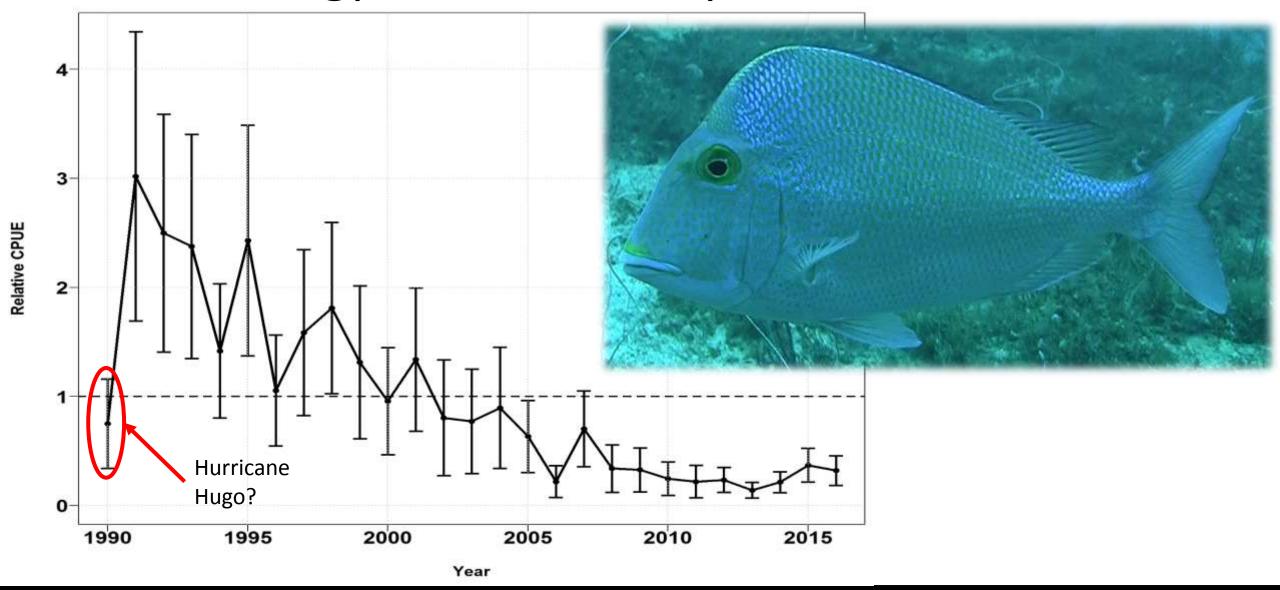
Snowy Grouper – Short Bottom Longline

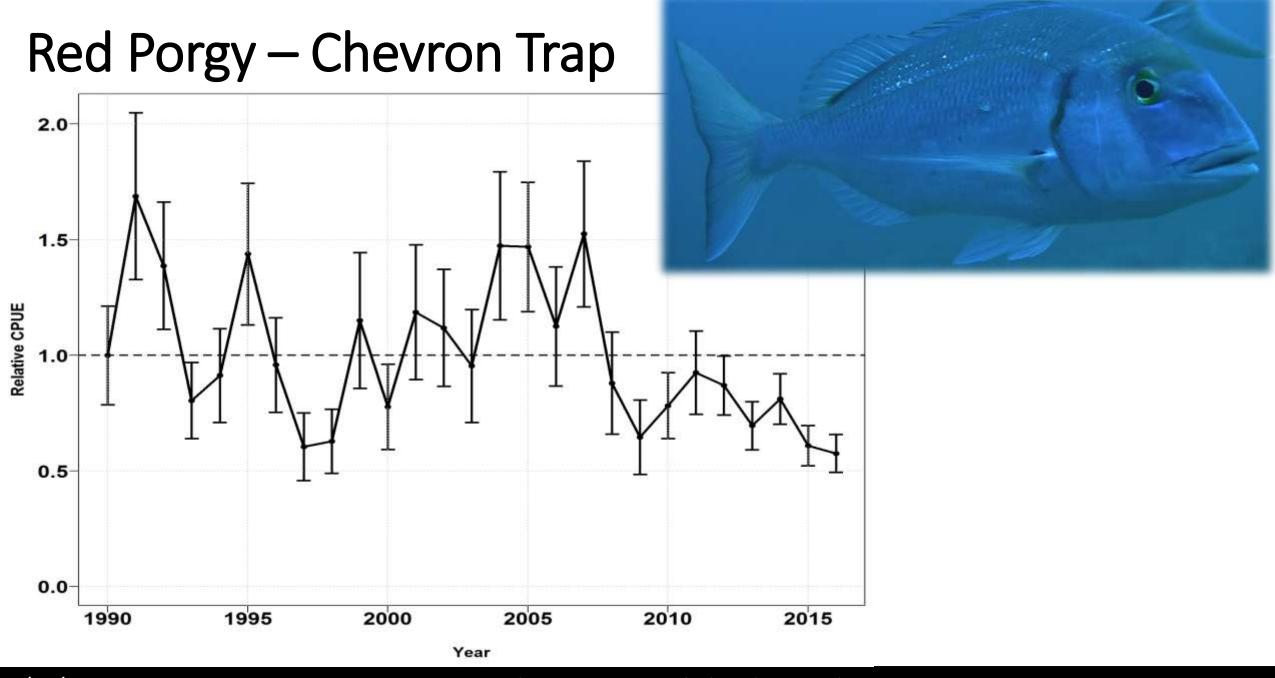


Knobbed Porgy – Chevron Trap



Knobbed Porgy – Chevron Trap





Stenotomus sp. – Chevron Trap 3.0 2.5 2.0-Relative CPUE 1.5-1.0 0.5 0.0 1995 2005 2010 2015 1990 2000 Year









Acknowledgements:
Wally Bubley, Tracey Smart

MARMAP/SEAMAP-SA/SEFIS
Staff & Students

Research Vessel Crews





Questions???