Updated Indices of Abundance: Gulf of Mexico Red Grouper

SEFSC

SEFSC and FWRI Personnel

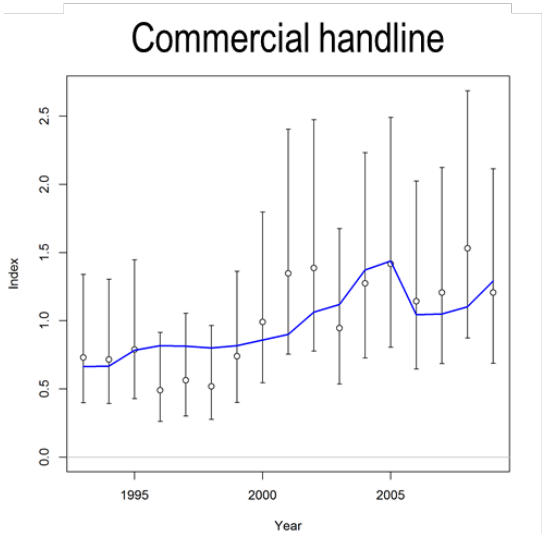
Gulf Council SSC Meeting January 9-11, 2018

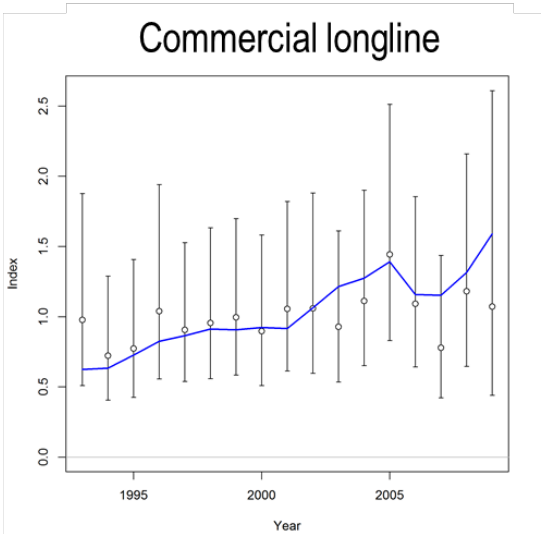
Purpose:

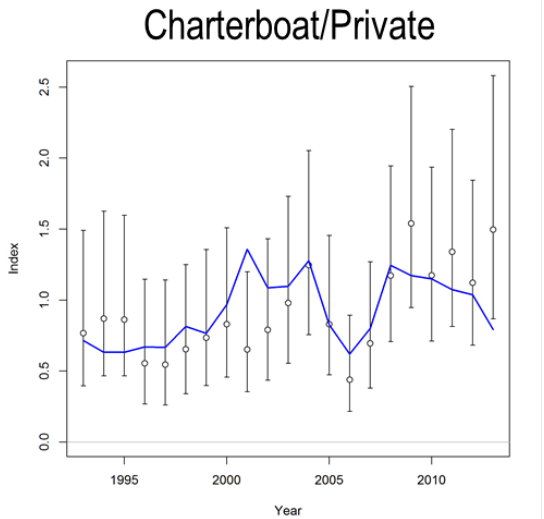
- During Public Testimony at the October 2017 GMFMC Meeting, a number of individuals expressed concern about Gulf of Mexico Red Grouper.
    - CPUE “way down” across fleet
    - Slow progress toward ACLs
- GMFMC requested information on recent red grouper trends, to see if an emergency action was warranted.
- SEFSC agreed to update indices of abundance

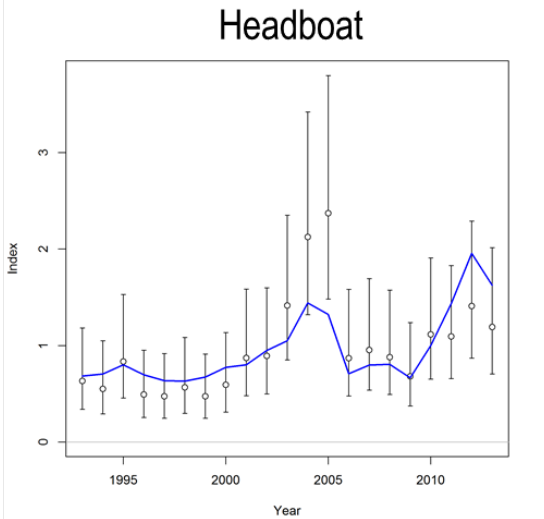
SEDAR 42 Indices – Terminal Year 2013

- Fishery-dependent









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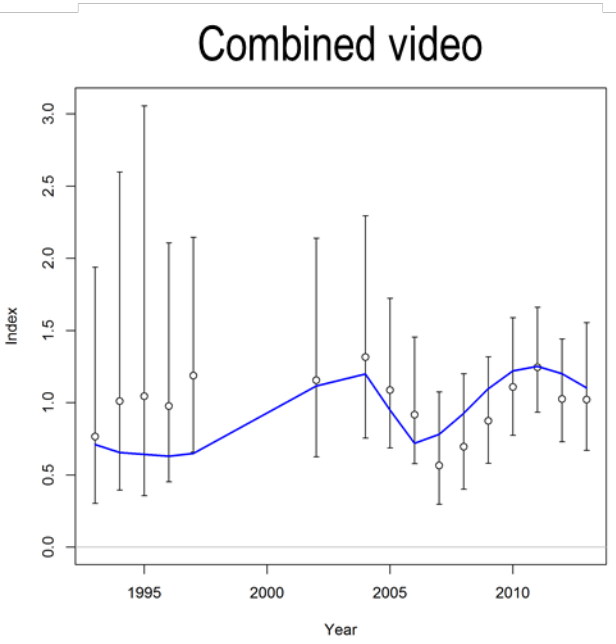
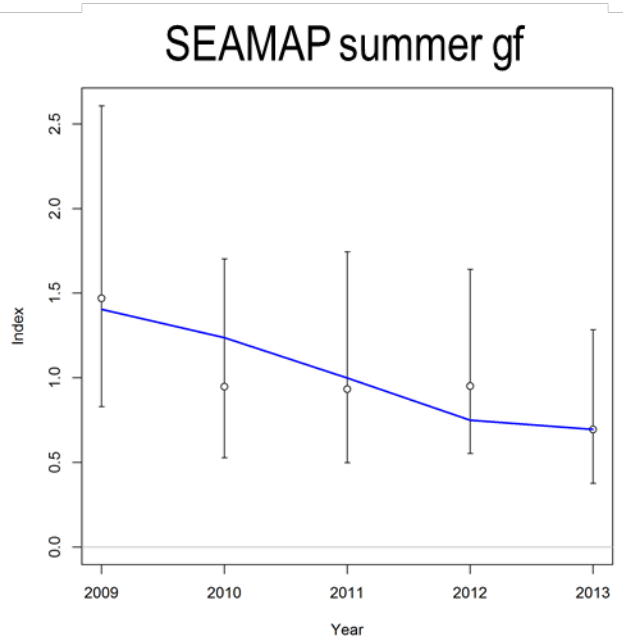
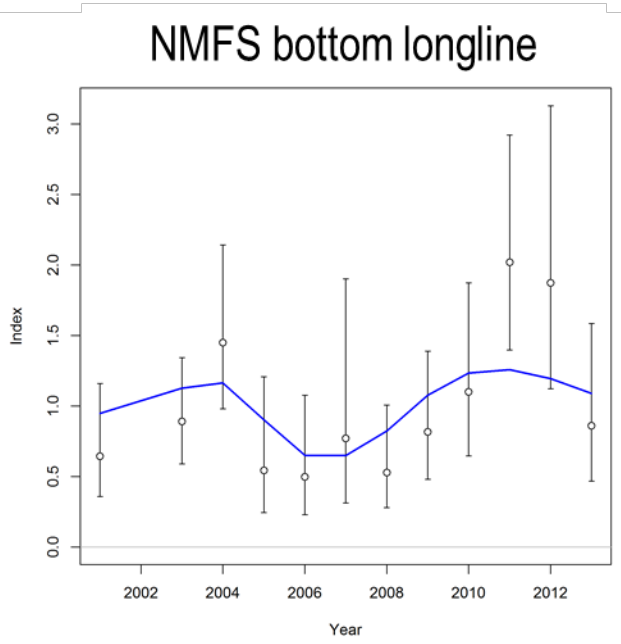
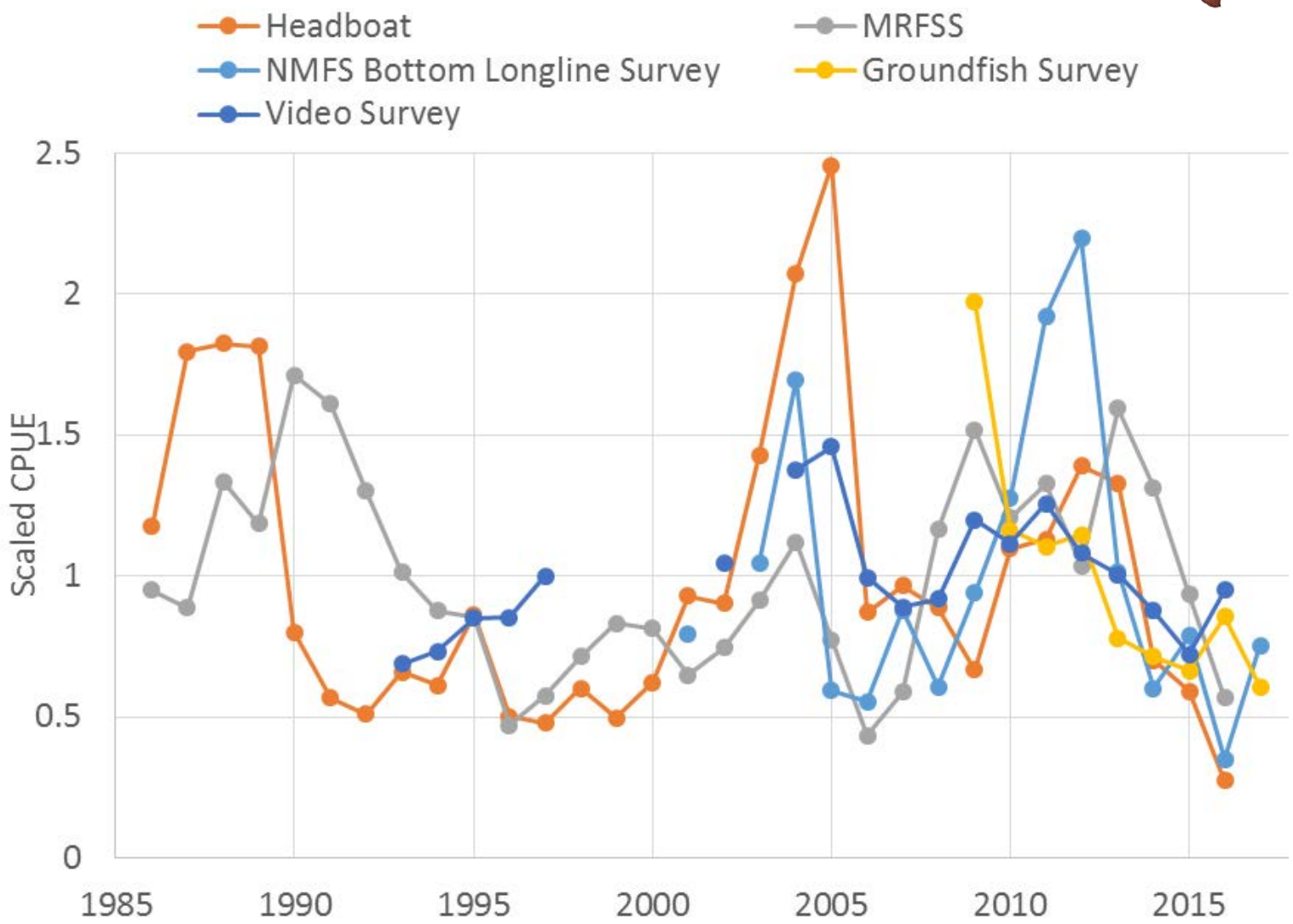






Updated Red Grouper Indices



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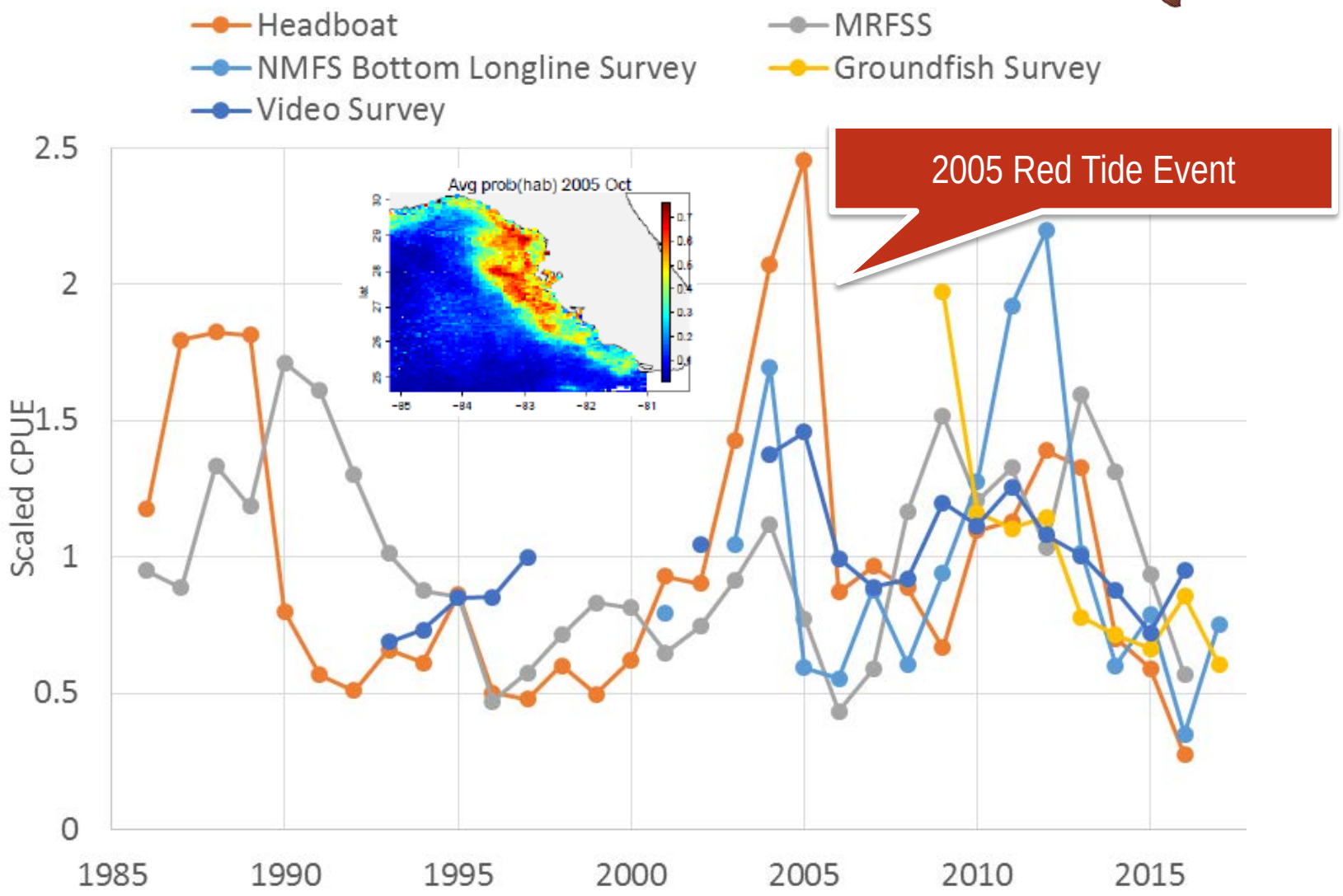

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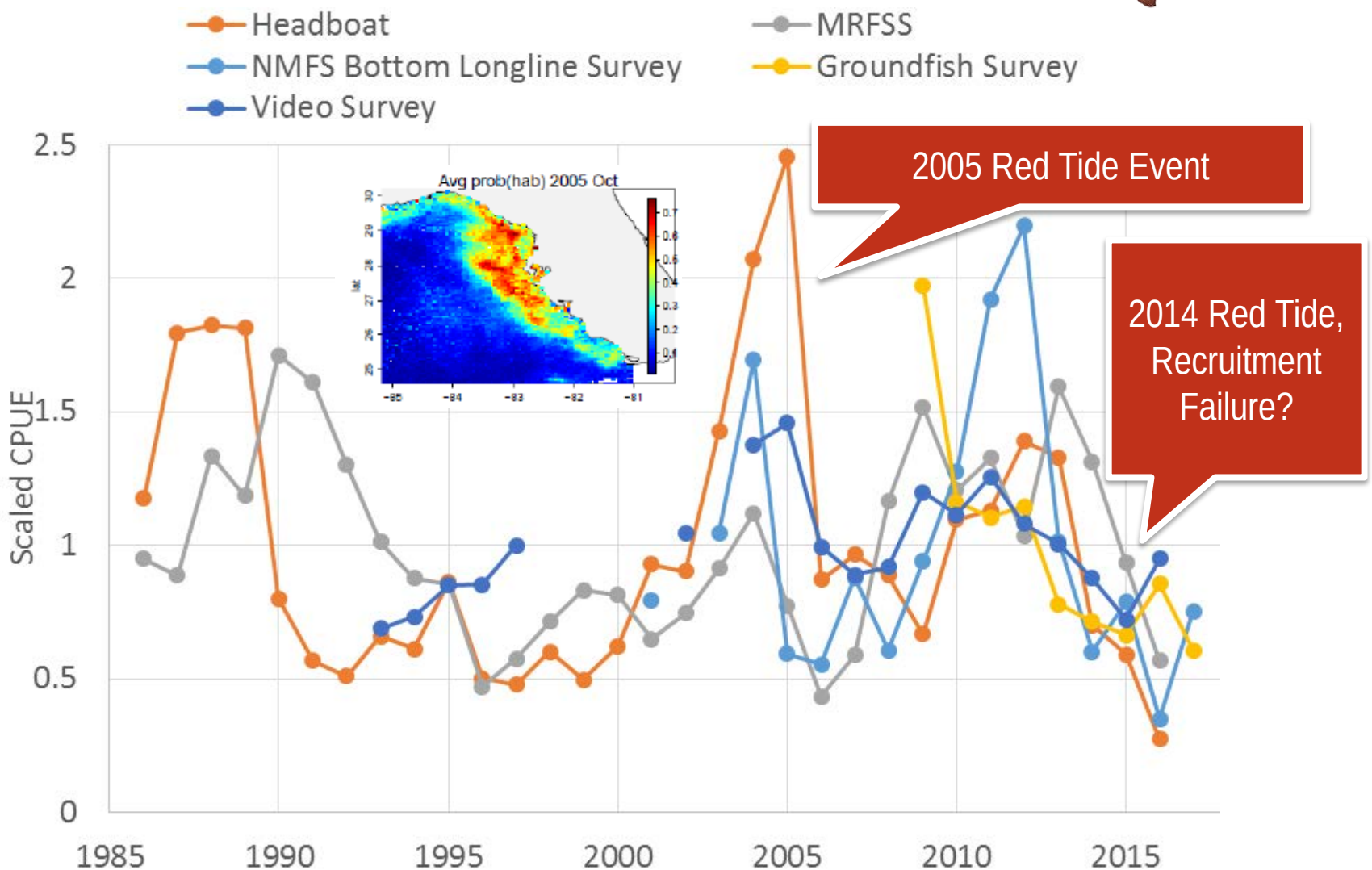
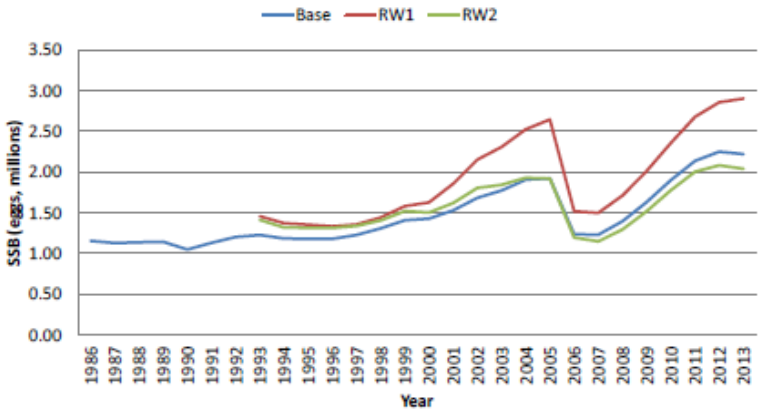
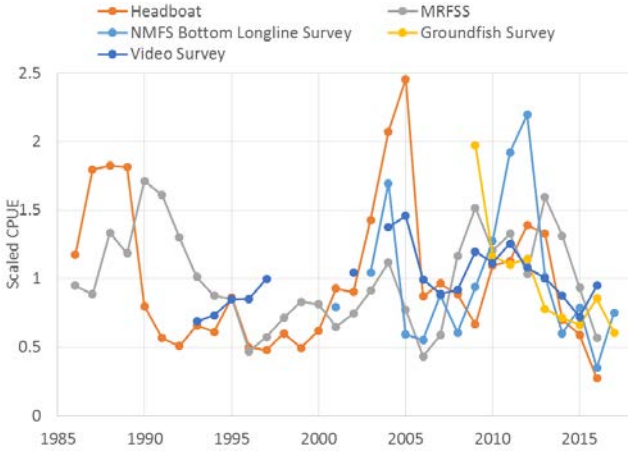


Conclusions:

- The SEDAR 42 stock assessment indicated increasing SSB during 2006-2011, with near constant SSB 2011-2013
- Updated indices suggest the population declined after 2013
- Red grouper will be assessed in 2018
- Cause of decline and implications will be explored





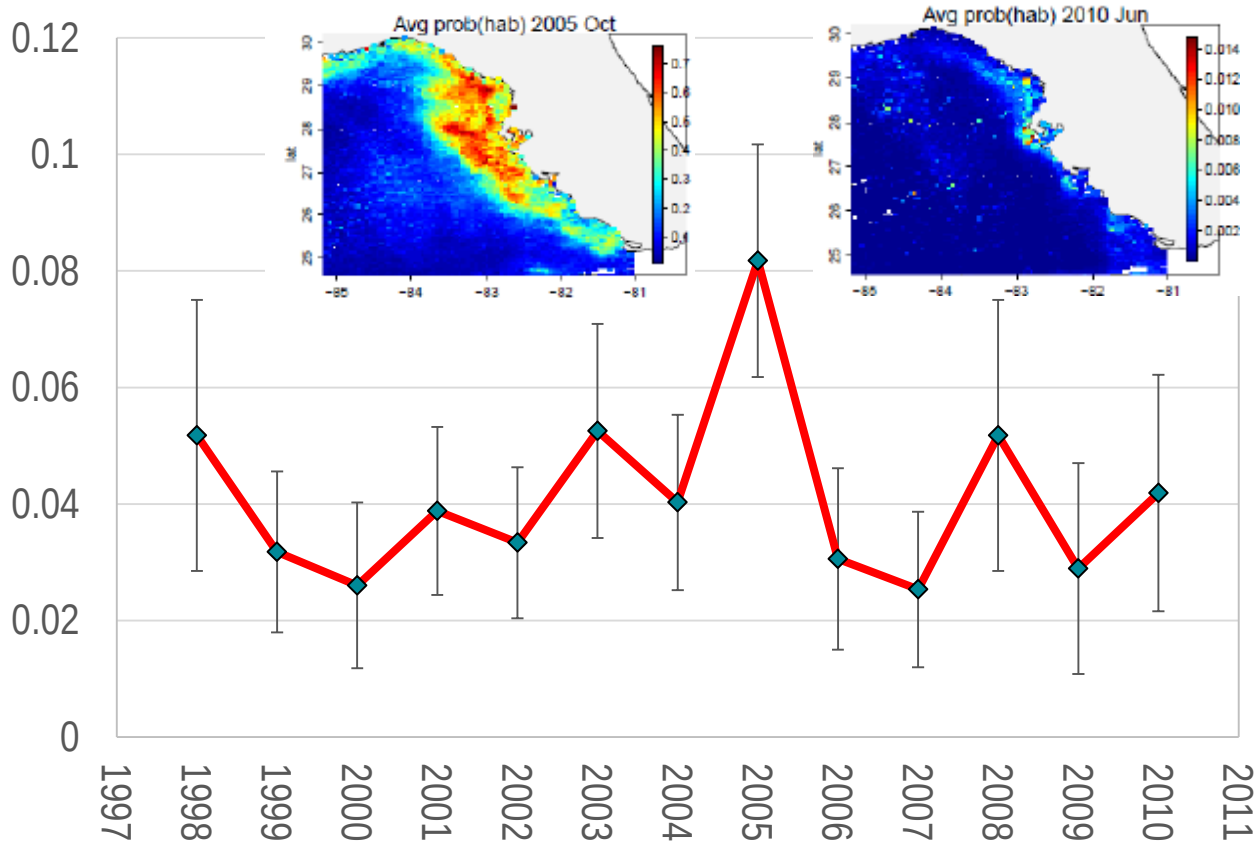
Acknowledgements

- Thanks to all the analysts who provided updated indices, or supported the effort:
- Skyler Sagarese (SEFSC Miami)
- Adyan Rios (SEFSC Miami)
- Kevin Thompson (FWRI)
- Adam Pollack (NOAA Pascagoula)

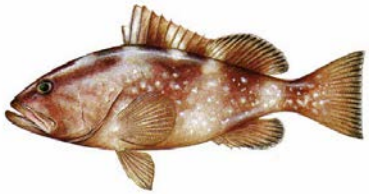
Extra Slides (Red Tide)

Gulf of Mexico red tide effects on fisheries

- Red tide index derived from SeaWiFS satellite oceanography



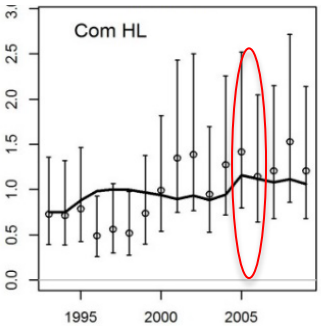
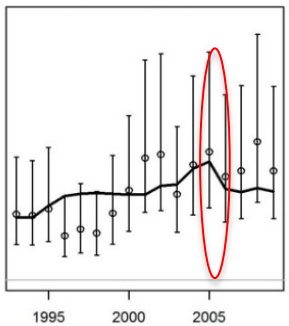
- Estimates probability of a red tide bloom
  - Severe event in 2005
- Used in red and gag grouper and ecosystem assessments
- Explained declines of **~8 million grouper** (gag and red combined) in 2005



Benefits of incorporating red tide

- Incorporation of historical and current extent of red tide mortality in stock and ecosystem assessments
- 2005 – improved fits to indices of abundance
- 2014 – field reports suggest large impact
- To be explored in 2018 SEDAR 61 Assessment

no red tide



red tide