# Fisheries fluctuations detection through multiple data sources

NERR Collaborative Grant Proposal

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# BACKGROUND

- Recreational & Guide fishing has become increasingly important to this region
- Perception with Apalachicola Bay hat there have been declines in certain fishery species outside of oysters
  - Reports vary on species and timing
  - Data has been collected, but not cross-checked with experiences to understand extent of declines
- ANERR has expressed interest in understanding how fishery populations have fluctuated

# DRIVING QUESTIONS

Do current fisheries monitoring methods capture data that is reflective of the experience of recreational and guide/charter fishers?

If not, can we detect fisheries declines with alternative sources of catch information from historical documentation?

## METHODS

1. Perception/ experience surveys with guide fishers on fisheries declines
2. Conduct stock assessments with both fisheries dependent and independent data to determine if we can detect declines experienced by fishers
3. Utilize historical fishing photos to reconstruct an additional data source and determine if additional information on declines are detectable
4. Develop a localized new data source for reporting catch for monitoring, community involvement, and adaptation

# PREVIOUS APPROACHES

*Conservation Biology*

*Contributed Paper*

## Documenting Loss of Large Trophy Fish from the Florida Keys with Historical Photographs

LOREN McCLENACHAN

Scripps Institution of Oceanography, 9500 Gilman Drive, La Jolla, CA 92093-0208, U.S.A., email lmcclenachan@ucsd.edu

- Detected decline in mean fish size
- Major species composition shift detected

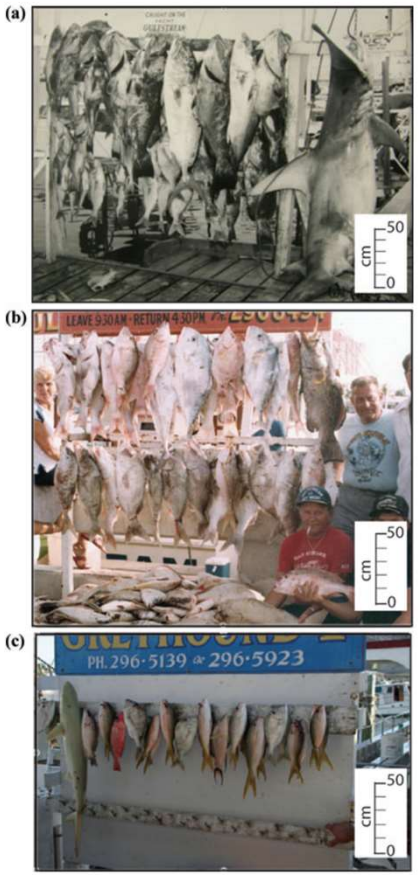


*Figure 1. Trophy fish caught on Key West charter boats: (a) 1957, (b) early 1980s, and (c) 2007.*

# CITIZEN SCIENCE

- Build standardized catch racks and place at all public boat ramps and launches throughout the Bay
- Include a QR code on back to scan and submit photos of catch with basic information
- Opportunity for guide & Rec fishers to be involved in population monitoring and reporting
- More fine-scale data for population assessments at a local level, increase community involvement, allow for timely adaptation or response to changes


# QUESTIONS?

# COMMENTS?

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