

# Using Local Ecological Knowledge to determine fish distribution in coastal rivers of the Gulf of Mexico



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## Goal

Use local ecological knowledge to help determine whether sea level rise has impacted fish distribution along low-lying coastal rivers.

## Hypothesis

Sea level rise has expanded the available environment for saltwater tolerant species along the lower reaches of coastal rivers

## Predictor Variables

1	Participant demographics
2	Experience (Age) of angler
3	Preferred salinity of coastal fish species
4	Fishing method (commercial or recreational)
5	Changes in species distribution

## Objectives

1) Perform interviews at boat ramps to gain local ecological knowledge of fish distribution.

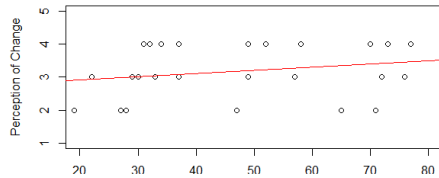
2) Confirm our predictor variables.

3) Determine if saltwater intrusion has affected fish distribution.

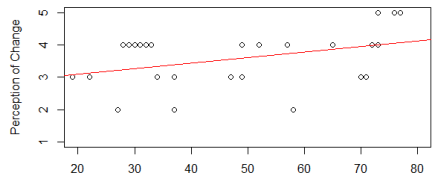
## Experience

Shows a trend in both saltwater and freshwater dependent fishes that anglers with more experience were more like to notice change.

Perception of Change in FW Fish in Correlation to Age

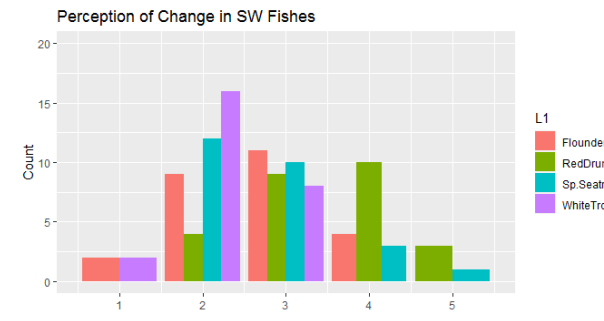
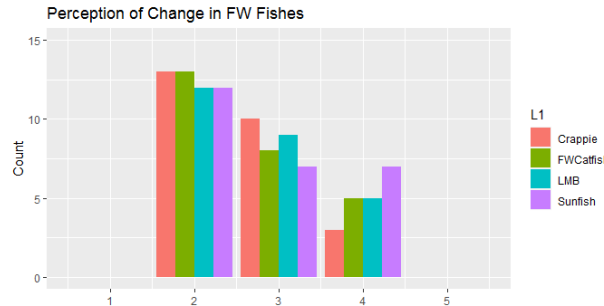


Perception of Change in SW Fish in Correlation to Age



Angler's Age (years)

## Perceptions of Change

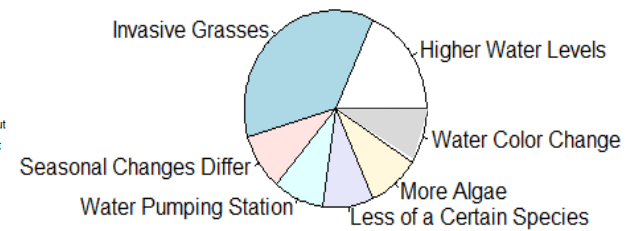


Perceptions of Change  
 No change → Change

## Results:

- FW fishes have uniform responses
- FW fishes appear to have shown little movement
- SW fishes have varied responses
- Certain species are more likely to intrude upon freshwater environments

## Other Concerns



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