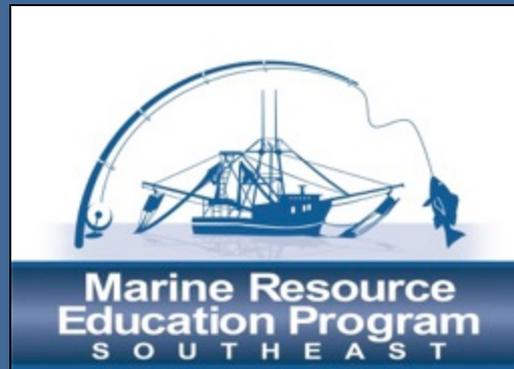


# Marine Resource Education Program (MREP):

*Bridging the gap between fishermen, scientists,  
and managers since 2002*



Alexa M. Dayton

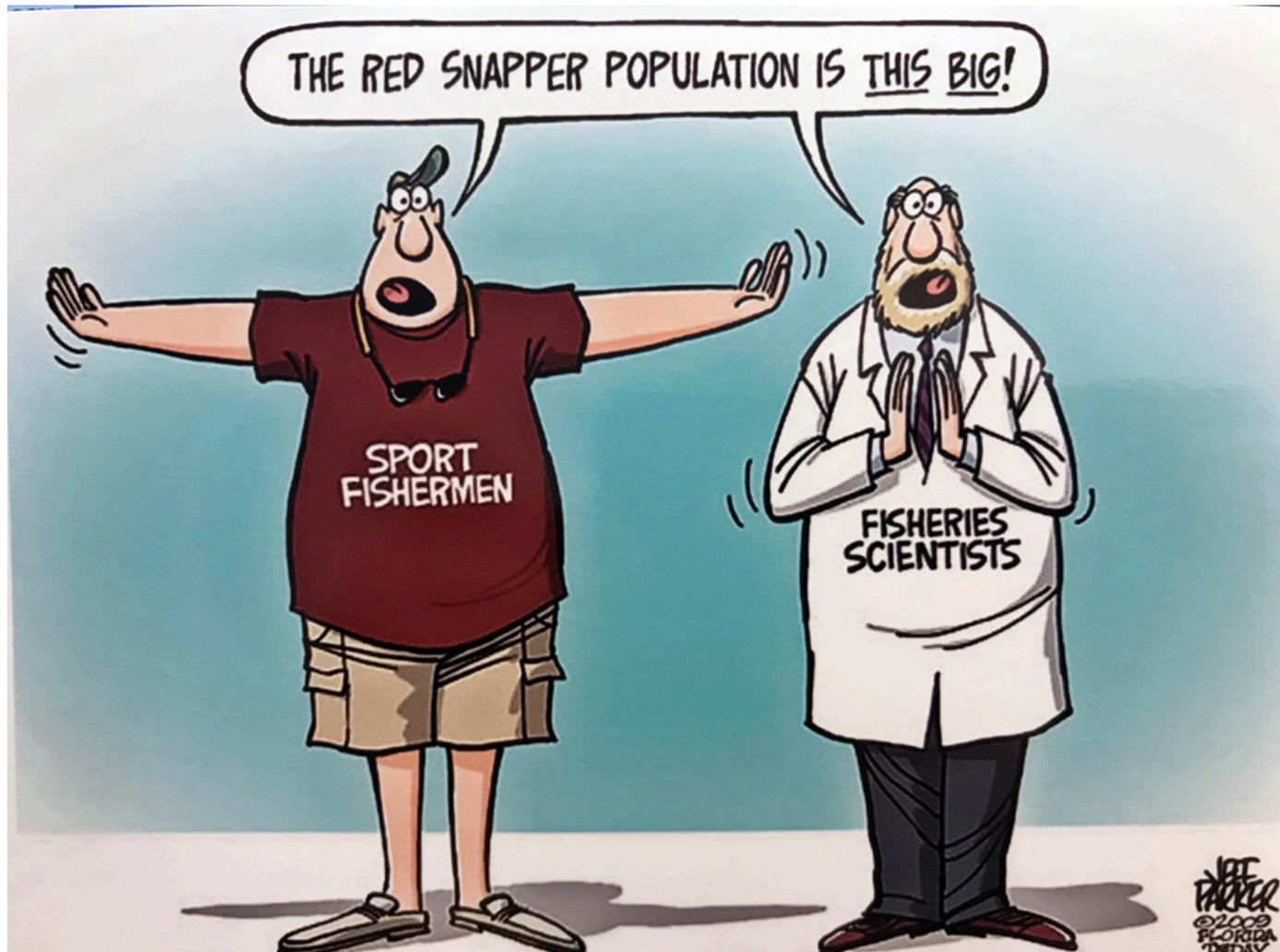
Sr. Program Manager

Gulf of Maine Research Institute

SAFMC Meeting - March 8, 2019



Far too often...









# Marine Resource Education Program

*“A program by fishermen for fishermen”*

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- **Bring fishermen, scientists and managers together** in a neutral setting outside of the regulatory process.
- **Increase the number of people** at work in the region’s fisheries who are **comfortable working with the fishery data and management systems**.
- Help **policy makers and scientists** become more familiar with the inner working of the **fishing community**.
- Increase the **number of fishermen** involved in **collaborative research** and pursuit of best available **science**.
- **Develop leadership and promote trust.**

# Over 2400 alumni in 6 council regions



*MREP is guided by a steering committee in each region, led by fishermen - and in deep collaboration with NOAA and council staff.*

# MREP Steering Committees

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- **Fishermen**
- **Scientists**
- **Managers**
- Annual Program Review
- Curriculum Review
- Recommendations
- Mentoring and Communications



# MREP Workshops

## Fishery Science 100

Science concepts and process essential to fishery management (3 days)

## Fishery Management 100

The process and how to be an effective participant  
(3 days)



## Fishery Science 200

Data collection and stock assessments survey methods and Bigelow tour.  
(2 days)

## MREP For Recreational

Condensed science and management modules for targeted “underserved” communities (2-4 days)

## MREP for EBFM

Advancing ecosystem based fisheries management (2 days)

# Insights into the stock assessment

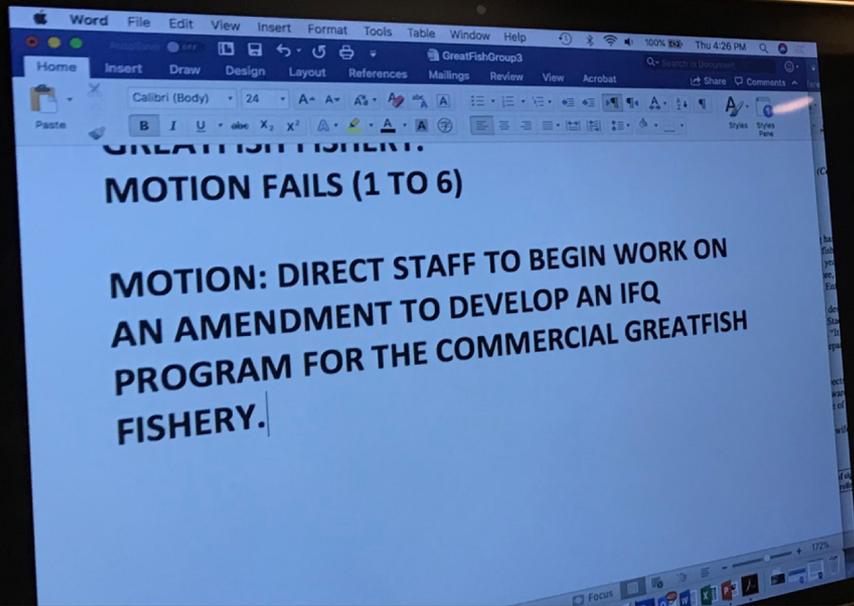
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An opportunity for questions and discussion outside of the formal council process



Negotiation activities offer direct application of knowledge



GREATFISH FISHERY.  
MOTION FAILS (1 TO 6)  
MOTION: DIRECT STAFF TO BEGIN WORK ON  
AN AMENDMENT TO DEVELOP AN IFQ  
PROGRAM FOR THE COMMERCIAL GREATFISH  
FISHERY.

MREP fisheries case studies now include *Boss Fish*, *Super Fish*, *Great Fish*, *Rasta Fish*, and *Trophy Fish*.

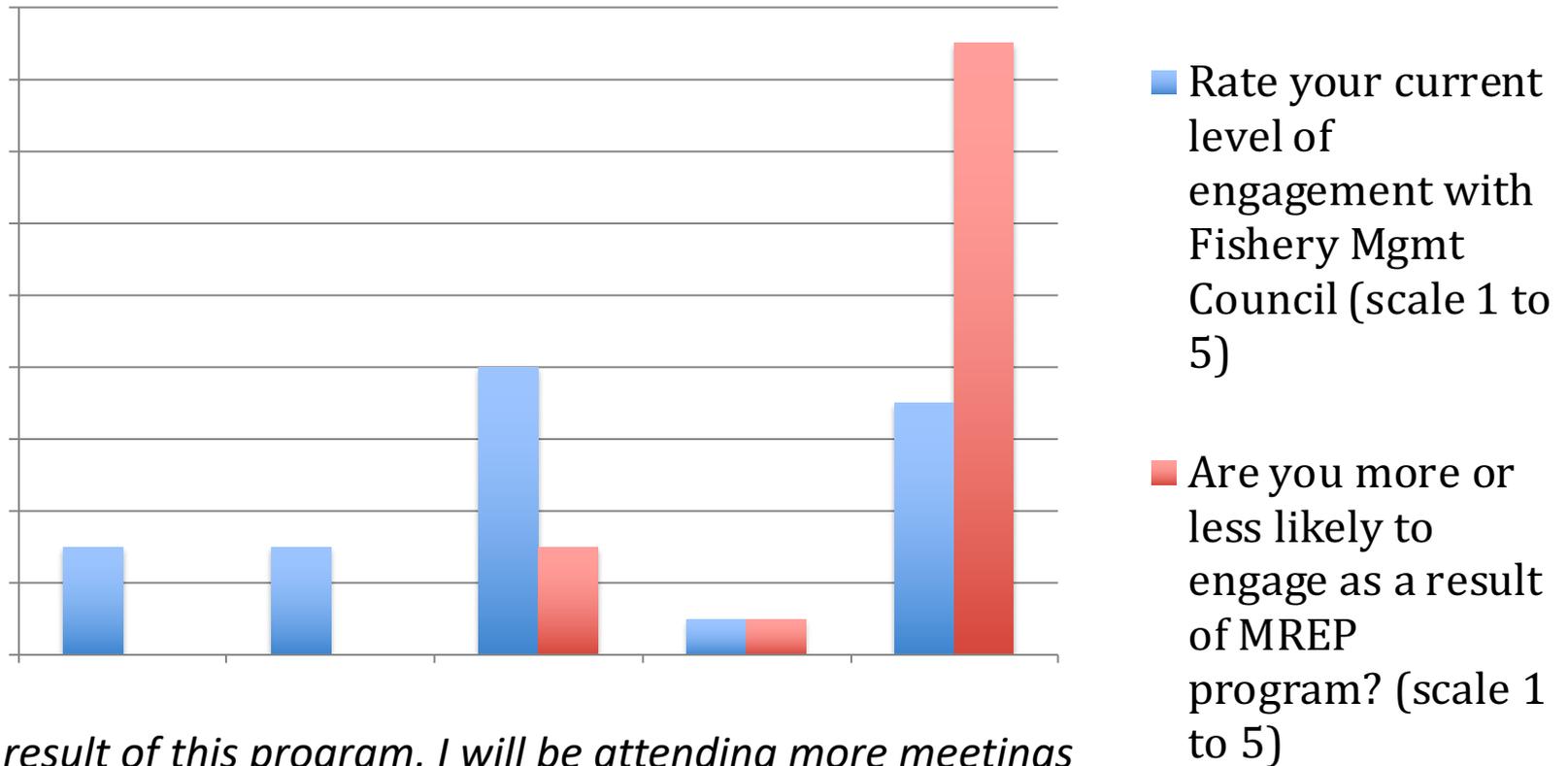
# Feedback after MREP

*“I plan on **becoming more involved** with the council meetings... and encouraging others to be more active.”*

*“I came to the workshops with opinions and no facts about stock assessments. I left with a lot more information and a much **more positive attitude toward the assessment process.**”*

# Participant engagement after MREP

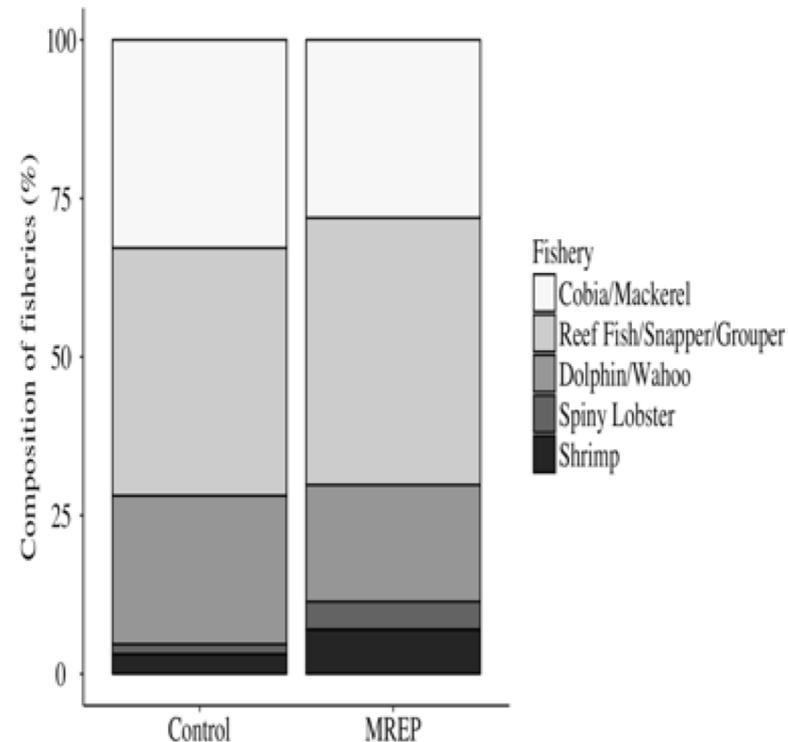
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*"As a result of this program, I will be attending more meetings to get a better grasp on the issues, then consider applying for an advisory panel position"*

# *But is MREP really working ?*

- Research survey implemented after 5 years in Southeast
- Design: MREP graduates and a control group
- 16 statements: identical for both groups
- Likert scale (4-point)
  - Strongly Disagree to Strongly Agree
- Survey monkey implementation

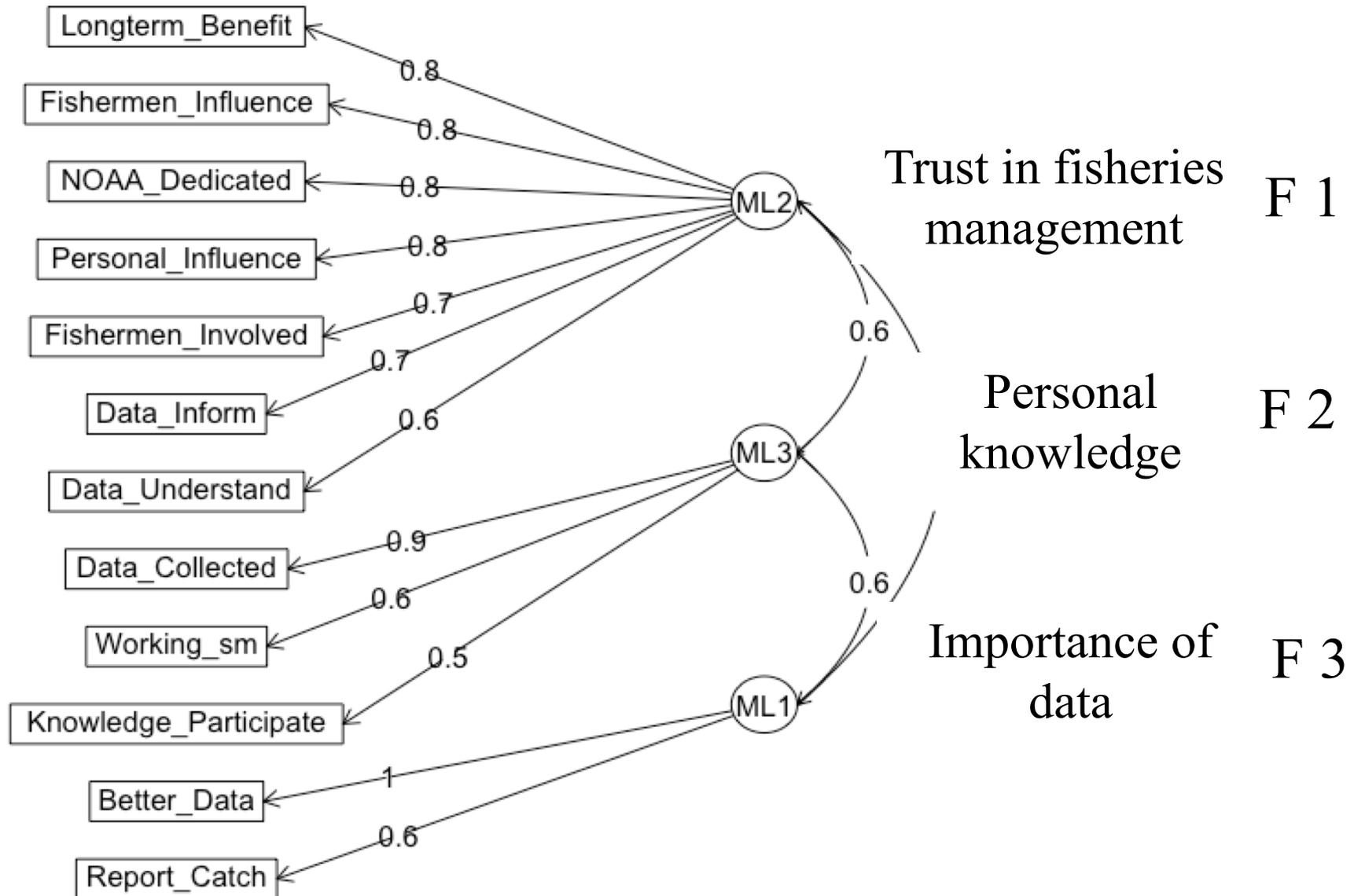


# Data analysis

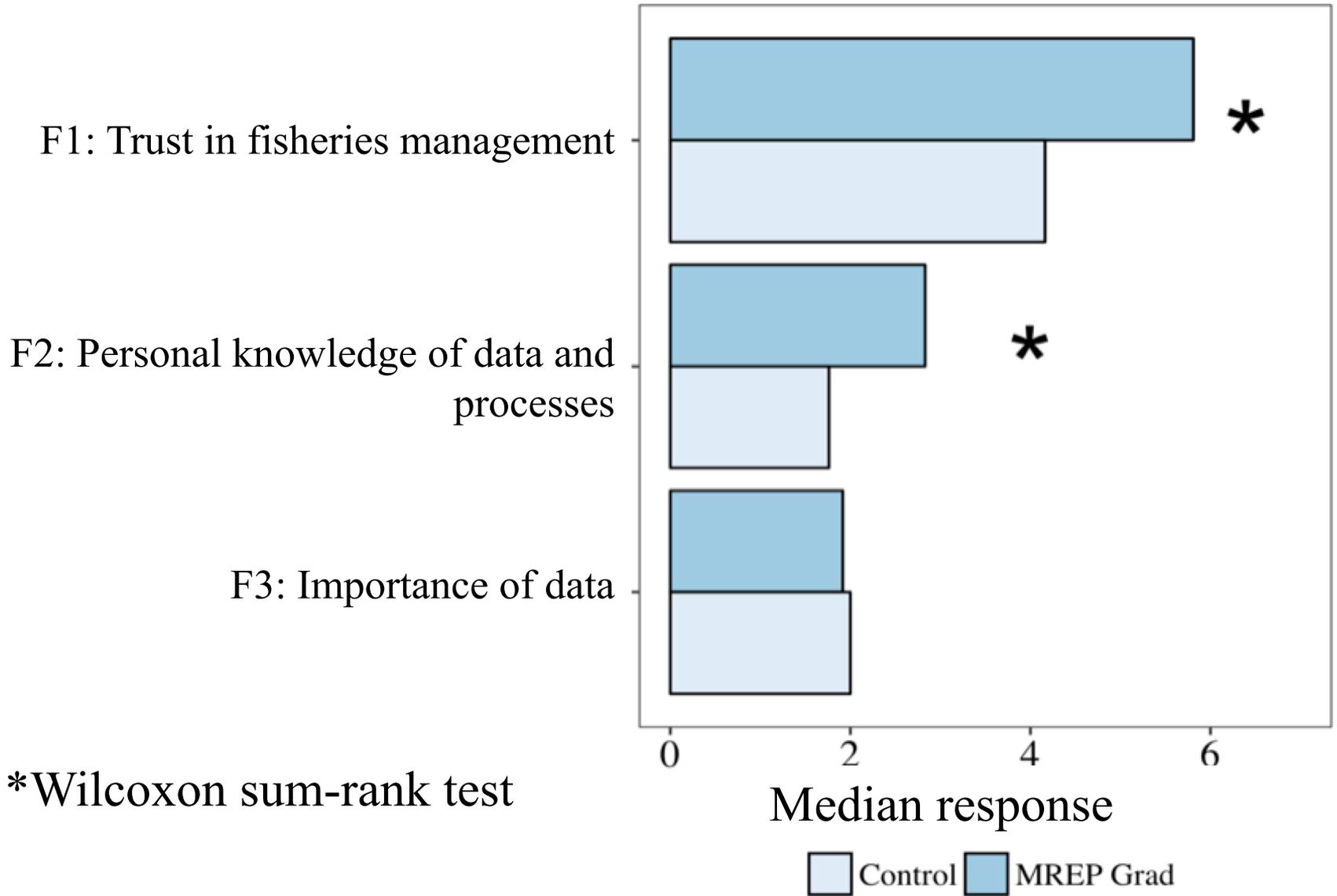
- **Response rates**
  - MREP Graduates:  $n = 57$  (64 partial) (47%)
  - Control group:  $n = 39$  completed (56 partial)
- **Data collapsed** into “Agree” or “Disagree”
- **Factor Analysis**
  - Identify ‘latent’ constructs in the data
  - Based on shared variance between variables
  - Tetrachloric rotation (binomial)
  - Wilcoxon-sign rank (across groups)
  - Chi-squared, or fisher’s exact test, for individual items



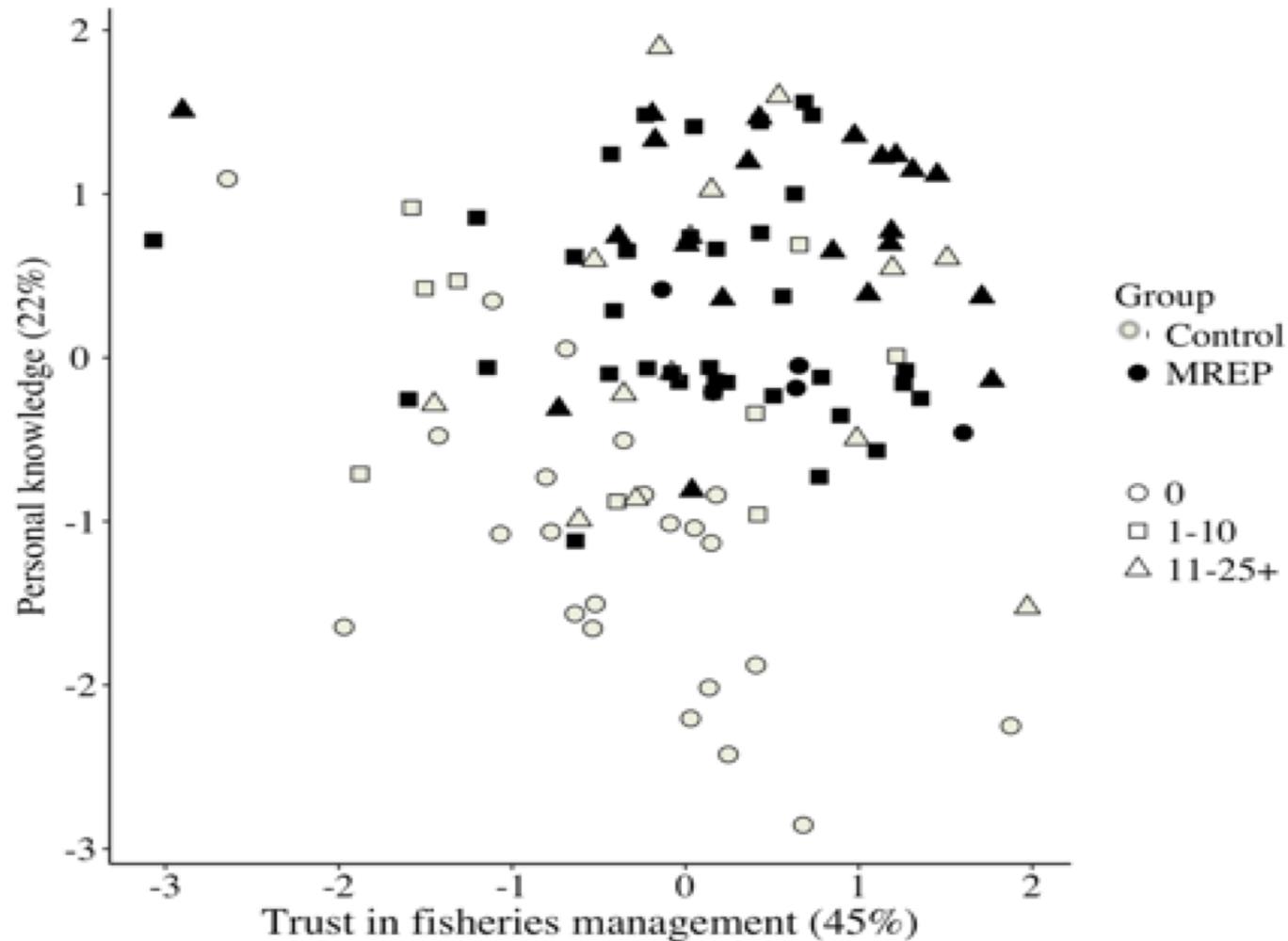
# Principal component analysis, three factors:



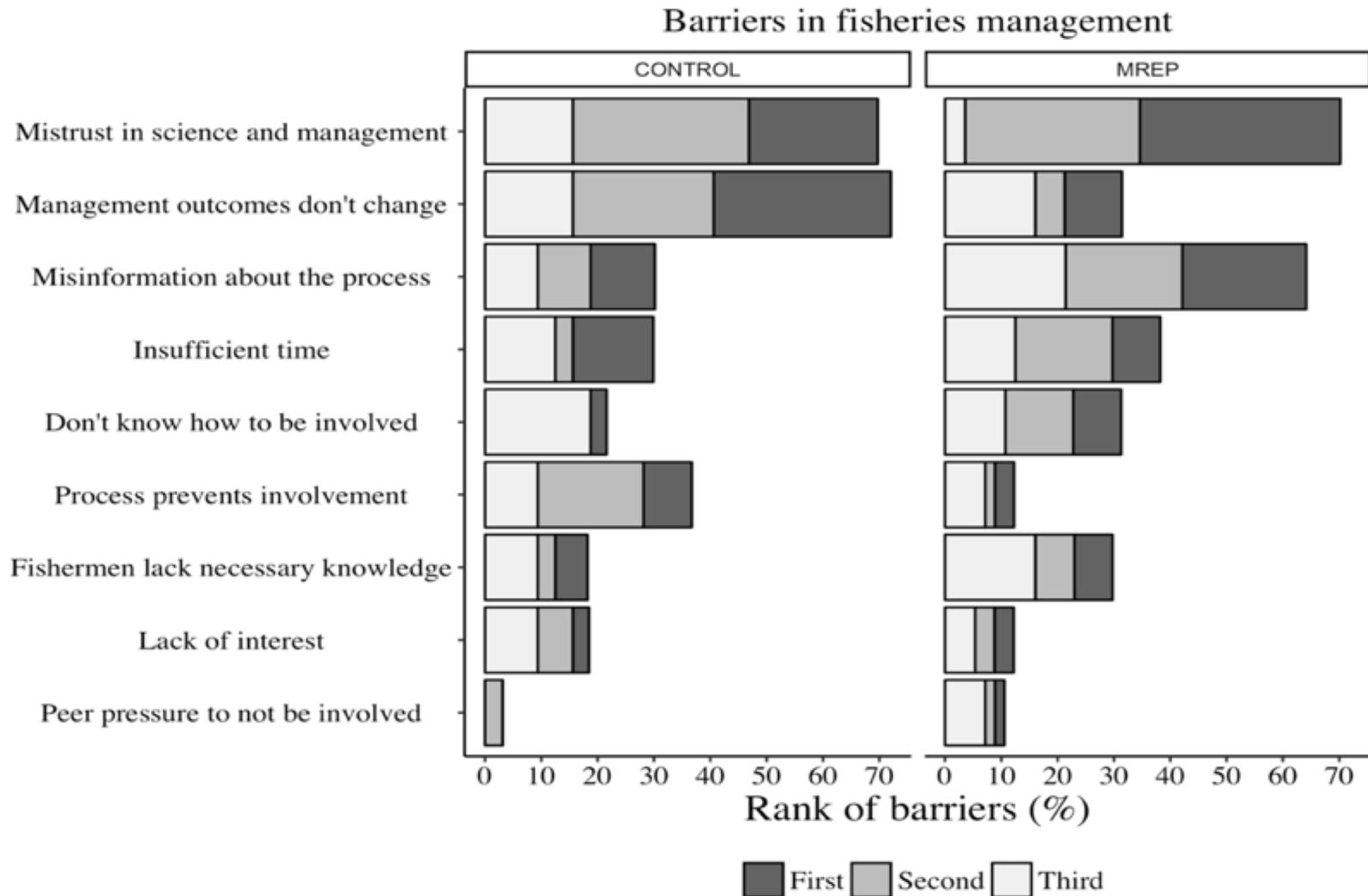
# Variation observed



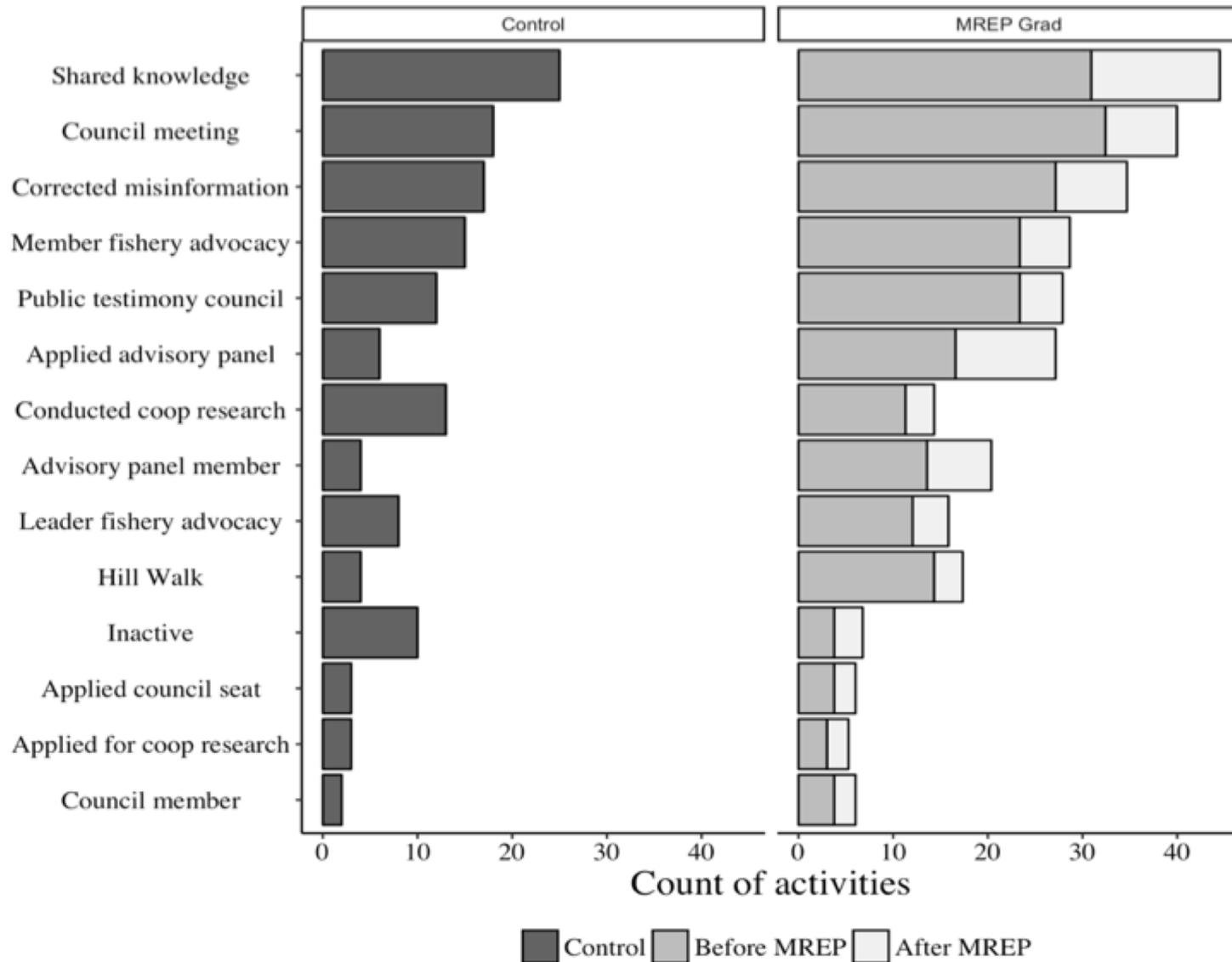
# MREP accelerates trust and knowledge by 10+ years



# Rank top 3 barriers to engagement

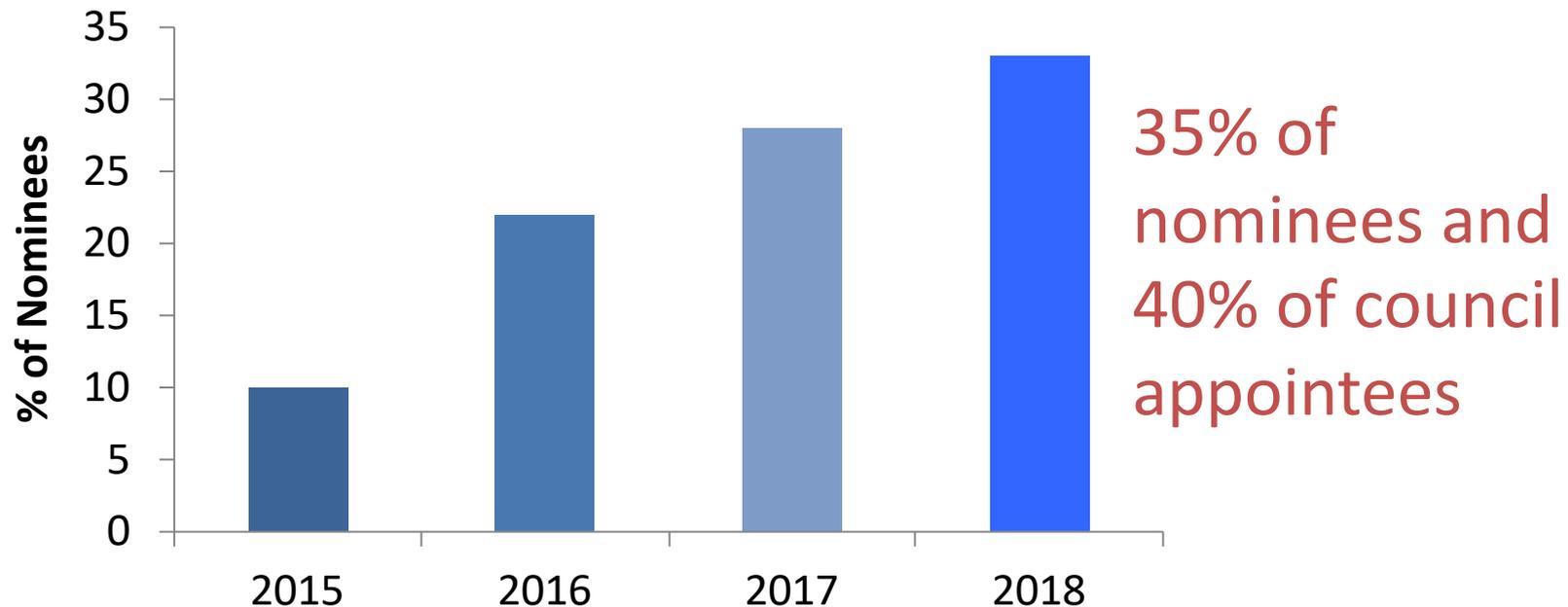


# Fisheries management activities



# Percent council nominees who are MREP alumni

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Advisory Panel Membership also bolstered by MREP Alumni.  
Council discussions benefit from relationships forged at MREP.

# Summary

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- MREP graduates show **higher trust** in the fishery management process;
- MREP graduates are **more informed**, and **engage effectively** with the council process;
- MREP graduates are **willing to correct misinformation**



# Further Research

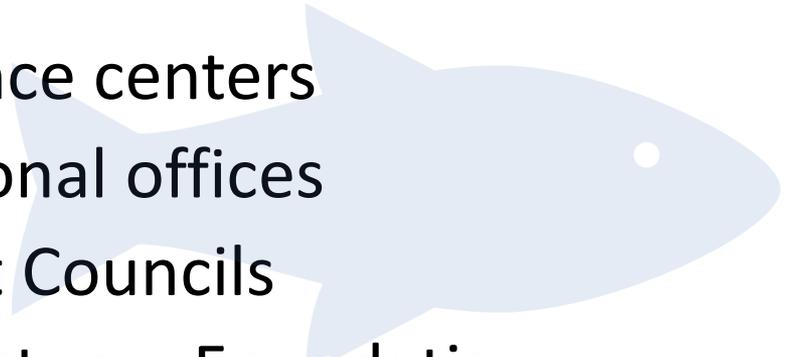
## **Looking Ahead:**

- Survey the presenters to assess co-learning and progression of scientist/manager communications.
- Continue to enable new leadership and offset graying of the fleets and councils.

# Acknowledgements & Funders



- NOAA Fisheries Science centers
- NOAA Fisheries Regional offices
- Fishery Management Councils
- National Marine Sanctuary Foundation
- Packard Foundation
- Moore Foundation
- National Fish & Wildlife Foundation
- Sportfish Restoration Fund



MREP  
Southeast  
2019  
Workshops

- **Science Workshop**  
May 7-9  
St. Petersburg, FL
- **Management Workshop**  
November 19-20  
Tampa, FL



*Thank you!*

*adayton@gmri.org*

**[www.gmri.org/mrep](http://www.gmri.org/mrep)**