

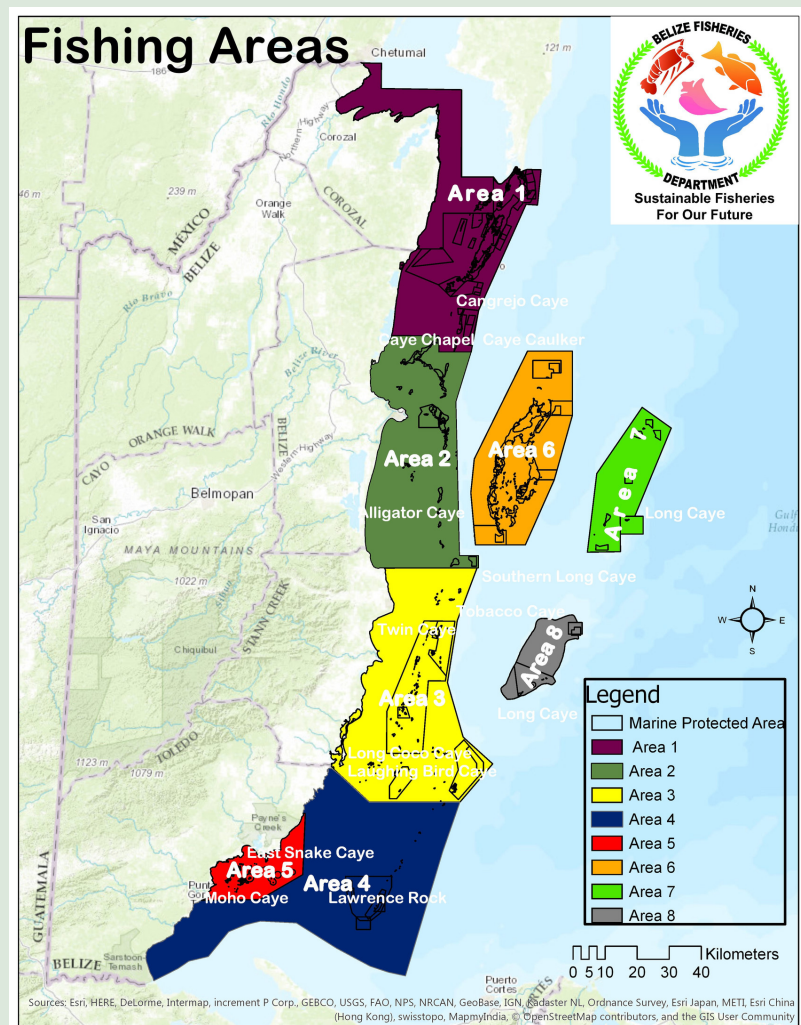
ASSESSING FISHER PERCEPTIONS OF THE TERRITORIAL USER RIGHTS FOR FISHING (TURF) PROGRAM: A BELIZEAN CASE STUDY

Catherine L. Alves and John F. Bruno
University of North Carolina at Chapel Hill



COLLEGE OF ARTS AND SCIENCES
Environment, Ecology and Energy Program

BACKGROUND



Belize's TURF program (known as Managed Access) grants fishers licenses to fish in 1-2 areas and requires them to report their catch.

2011: PILOT SITES ESTABLISHED
2014: BASELINE SURVEY
2017: NATIONWIDE PROGRAM
2019: THIS STUDY

RESEARCH QUESTION

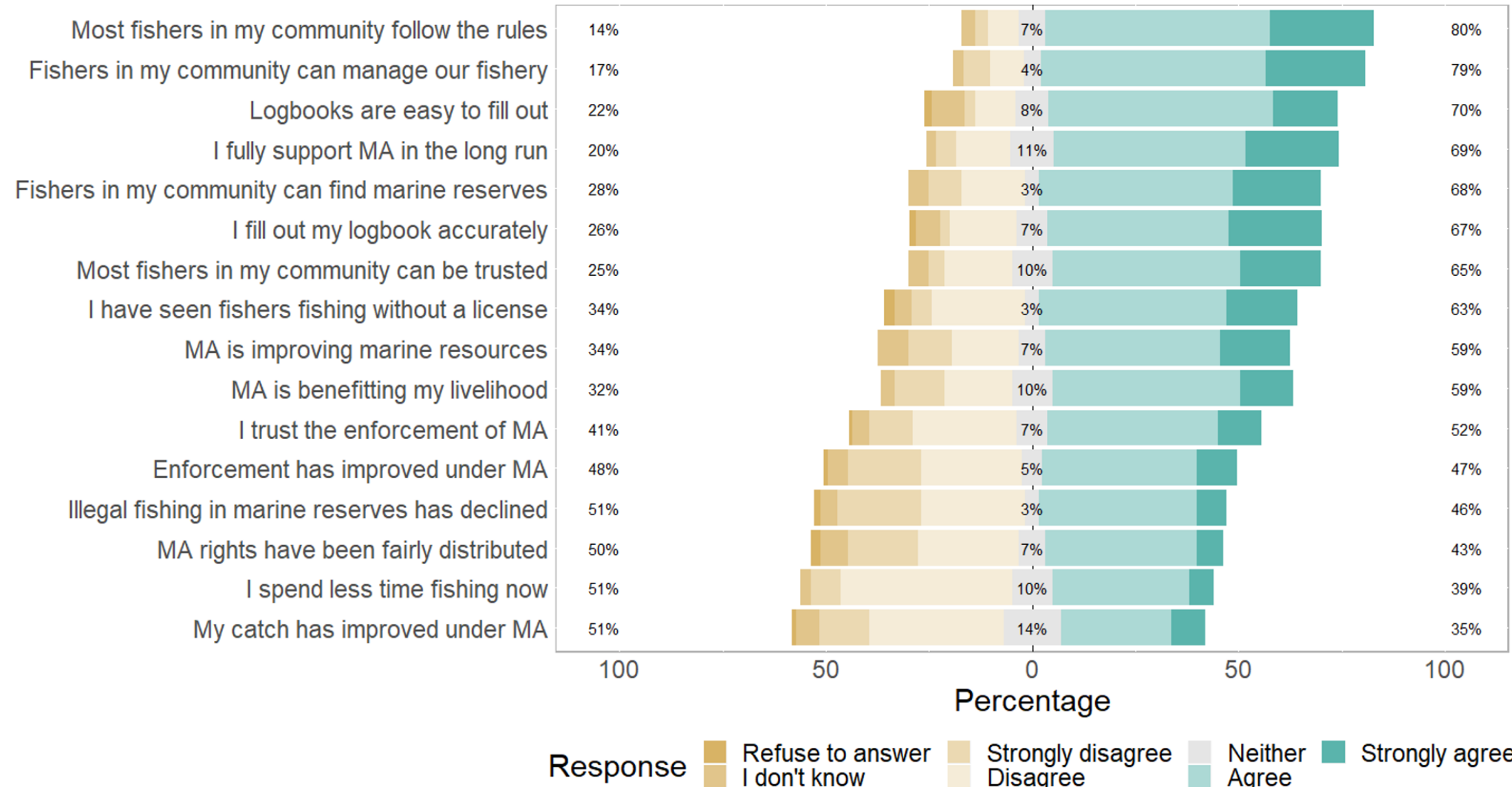
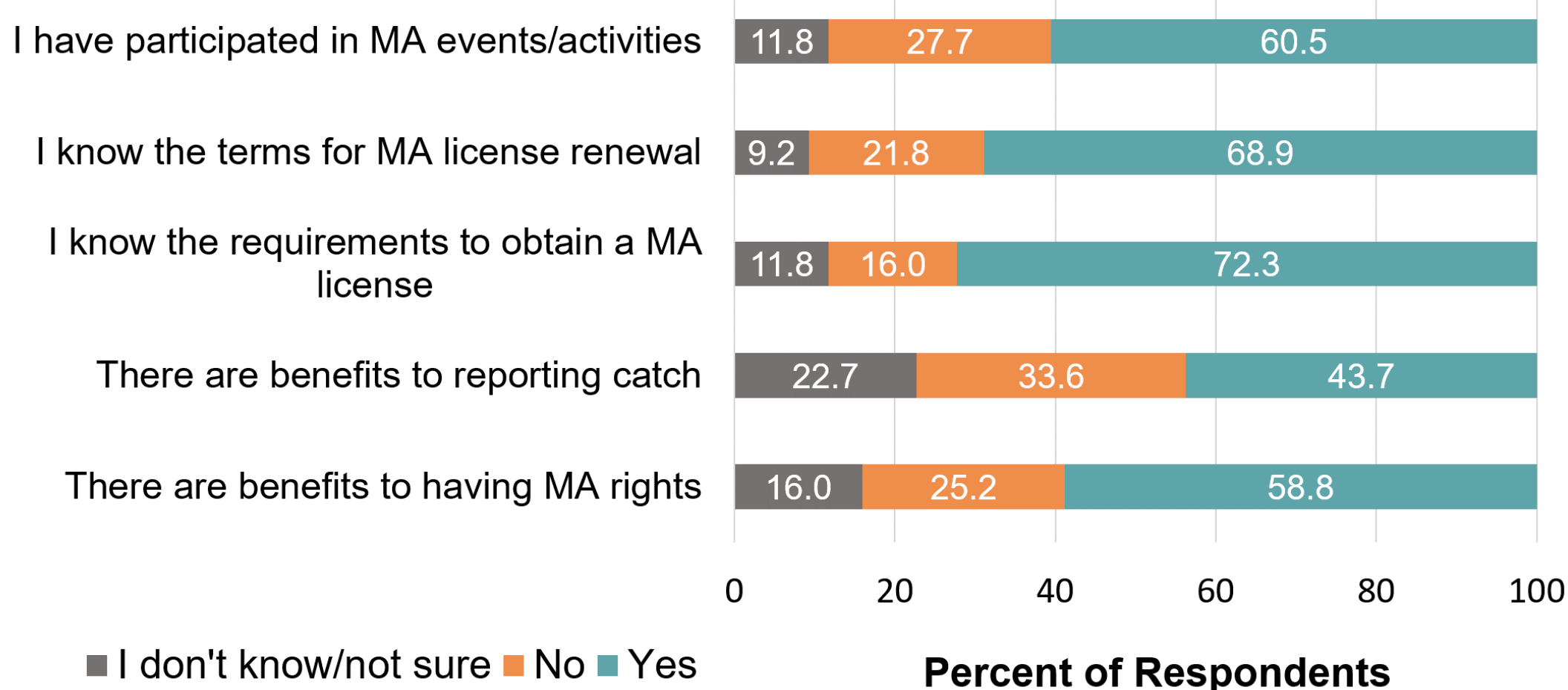
How have the **livelihoods** and **perceptions** of fishers in Belize's Managed Access program changed from the program's inception in 2011 to present?



94% MALE
6% FEMALE

RESULTS: 119 FISHERS SURVEYED

59% HAVE >1 JOB



DISCUSSION

MAIN TAKEAWAYS:

- Most fishers know rules to get and renew licenses
- Many support Managed Access in long run but perceive enforcement as big obstacle to success

NEXT STEPS:

- Continued analyses: fishing behavior, marine product sold, compare responses between fishing areas
- Encourage improved empowerment of fisher communities

METHODOLOGY

- Used stratified random sampling methodology to select fishers from 10 communities in Southern Belize
- Administered 50-question socio-economic and perceptions survey to participating fishers
- Compared responses from 2019 with those from 2014 pre-implementation survey

ACKNOWLEDGEMENTS AND REFERENCES

Acknowledgements: Special thanks to our collaborators at the Toledo Institute for Development and Environment (TIDE), the Southern Environmental Association (SEA) and the Belize Fisheries Department. This work was not deemed human subjects research by the UNC Institutional Review Board (# 18-0413). We received research permits from the Belize Fisheries Department (# 000032-19) and the National Institute of Culture and History (# ISCR/H/2/81).

References: Barner A, et al. 2015. Solutions for recovering and sustaining the bounty of the ocean: Combining fishery reforms, rights-based fisheries management, and marine reserves. *Oceanography* 28(2): 252-263. Catzim N & Z Walker. 2013. Assessment of the effectiveness of Managed Access implementation in Glovers Reef Marine Reserve and Port Honduras Marine Reserve, *Report for TIDE, WCS, EDF and the BFD*. Foley J. 2012. Managed access: Moving towards collaborative fisheries sustainability in Belize. *Proceedings of the 12th ICERS*. Wade E, et al. 2019. Integrating property rights into fisheries management: The case of Belize's journey to managed access. *Marine Policy* 108(103631) <https://doi.org/10.1016/j.marpol.2019.103631>.