# Young Professional Spotlight

Young Professional members of AIFRB represent the next generation of leaders in fisheries science and management. Through *Briefs* and our social media platforms we will be highlighting our Young Professionals as a way to introduce them to the full membership and create opportunities for collaborations. AIFRB's Young Professional Representative, Connor Capizzano (connor.capizzano001@umb.edu), will be showcasing new Young Professionals throughout the year using a series of biographical interviews. This month's Young Professional Spotlight features **Erica Mason**, **Southern California District** and **PhD student** at **Scripps Institution of Oceanography** in **San Diego, CA**.

---

## *Erica Mason – Southern California District*

***What is your current position, with what company/organization, and what is the focus of your research/work?***
I am a third-year graduate student in the Marine Biology PhD program at Scripps Institution of Oceanography, and I study under Dr. Brice X. Semmens. My work focuses on improving our understanding of the long-term population dynamics of sea basses in southern California relative to natural oceanographic and anthropogenic influences. I am also a lead for the California Collaborative Fisheries Research Program (CCFRP) in San Diego. For info on CCFRP, please visit https://www.mlml.calstate.edu/ccfrp/about/.

***Where did you receive your education, and what helped pave your way to your current position?***
I received my B.S. in Marine Biology and my M.S. in Biology from California State University (CSU), Long Beach. Early on, the most influential drivers in my career path were 1) a CSU marine biology semester at the USC Wrigley Institute of Environmental Studies on Catalina Island, CA, and 2) mentors who fostered a stronger sense of self-efficacy. Later, I was an Environmental Scientist with California Department of Fish and Wildlife's Marine Region for 7 years, and I had the opportunity to lead fishery research on important sport-caught fishes as well as participate in a contentious regulatory process for the basses. These experiences, as well as life changes (e.g., marriage, family) provided new perspectives, and inspired me to further my training in pursuit of making a difference in fishery science and conservation.

***How does your work apply to, or influence, fishery management (e.g., stock assessments, sportfishing, commercial regulations, habitat protection, etc.)?***
Reconstructing the population dynamics of the saltwater basses in California will improve estimates of current and future fishery status under changing natural and anthropogenic influences and will enable investigation of reliable species-specific environmental indicators. These additional tools should improve monitoring and assessment and form the basis for a framework that incorporates changing ocean conditions into management action -- both of which are critical components of the State's fishery management strategy.

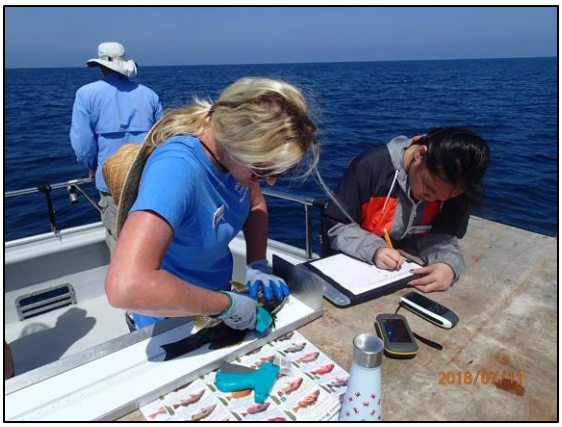
***What is your professional outlook for fisheries management? In other words, what will the future of fisheries management look like 10-20 years from now. What are we doing correctly, what needs to be improved (e.g., in research, policy, education)?***

The outlook for fisheries management is bright. From a California perspective, we have taken huge strides in how we assess and manage our stocks, evaluate management effectiveness, engage stakeholders in the regulatory process, and in directing significant resources to public education and outreach. California was the first state in the nation to implement a state-wide network of Marine Protected Areas (MPAs). Though these MPAs were not intended as a fisheries management tool, they work to compliment current and future fishery management strategies. MPAs in California have served to increase our understanding of ecosystem dynamics and fishing impacts through comparisons of fished and unfished areas. Finally, technological advances, such as electronic monitoring of commercial vessels, are being tested and implemented in California and several other states. The future of fisheries management is likely to rely more on automated, near real-time landings data, machine learning tools to assist in monitoring of bycatch and length composition of catches at sea, and collaborations with fishery constituents to fill data gaps.

Even with these strengths and advances, we as a state, nation, and globe can do better. Climate change is the most important issue facing fisheries management, and although the ideals for incorporating climate change in fisheries management exist, they are difficult to implement because we don't always have the necessary data to provide historical perspective, and because we lack a complete understanding of how oceanographic variability influences many of our fish populations. Long-term monitoring and the resources to fund it will be at the crux of our ability to accurately interpret and predict fish population responses to environmental change. Even more pressing will be the formulation of a framework to guide managers and fishermen in preparing and adapting to shifts in species distributions. Anticipating the potential loss of some fisheries and the emergence of new ones will require flexibility in fishery management plans and added caution when dealing with data-poor fisheries.

We can also do more to bridge the gap between research and policy. Having strong research components in government fishery agencies typically hinges on capacity. And although there are numerous scientific studies from academic institutions geared toward informing fisheries management, the utility of these studies to managers is limited primarily due to a lack of early consultation with resource managers (e.g., limited knowledge of what managers actually need, and a disconnect between proposed management measures and what can be feasibly instituted).

***What is the importance of young fishery professionals today and for the future of fishery management?***
Young fishery professionals today hold the key to incorporating climate change in fisheries management and influencing national and global perspectives on prioritizing fisheries sustainability. They bring a whole new suite of analytical and quantitative skills that can increase efficiency and capacity in data analysis and decision making. Through advances in interactive media, young fishery professionals are also well equipped to reach broader audiences, thereby enhancing outreach and education efforts.



***What drew you to AIFRB, and what does AIFRB do for you and what can it do for other young professionals in this field?***
Shortly after receiving my bachelor's degree, my supervisor at the Southern California Coastal Water Research Project, Dr. M. James Allen, invited me to attend my first meeting of the AIFRB Southern California and Baja California, Mexico District. He had been a former Director and I was inspired by his dedication and passion, and I wanted to be a part of AIFRB too. AIFRB also provided me the opportunity to meet colleagues from a variety of professions and institutions – academia, state and federal government agencies, sanitation districts, and consulting agencies – with various travel awards and networking

opportunities. For all these reasons, I highly encourage young professionals in fishery science to seek out (or start up) a local District and become a member!

**Please contact Erica (**etmason@ucsd.edu**) to continue the conversation!**