**Background**

Despite efforts to reduce damage to seagrass, scarring from boater activity remains an active threat. In 2016, The Ocean Foundation developed a toolkit describing how to use best practices in behavior change theory to design and implement effective social marketing strategies to inspire boaters to operate their boats more carefully around underwater grasses, thereby preserving this critical carbon sink and ecosystem. The toolkit provides effective, low-cost tools that can be used by local resource managers. Our toolkit, once fully tested and proven to enable a conservation impact, could potentially be used in the VM007 REDD+ Methodology Framework (REDD+MF), v.1.6 currently under review by Verra’s Verified Carbon Standard (VCS) program as a means to regenerate carbon credits through conservation.

TOF partnered with ShoreRivers to test the applicability and usability of the toolkit by designing a behavior change campaign focused on protecting submerged aquatic vegetation (SAV) in the Chesapeake Bay.

**Identify the Behavior Change**

The Ocean Foundation and ShoreRivers assessed which factors influence poor boating practices in the presence of SAV and which specific boater sub-group should be targeted in our social marketing campaign. This was accomplished through:

1. Interviews with local resource managers
2. A Google Survey of Maryland residents who boat on the Chesapeake Bay at least once per year. The Google Survey, a low-cost tool that can efficiently gather data from a wide audience in a short amount of time, generated 105 responses and focused on answering the following questions:
   a. What is preventing Maryland boaters from trimming their motors over SAV beds? Is it a “skill” or a “will” issue?
   b. Which subgroup of boaters is causing the most damage to SAV beds (has the highest percentage of poor, SAV-related boating practices)?
   c. Is there any relationship between how people feel about SAV and how they act around it? Can we use this relationship to inform our campaign message?
   d. What is the best medium to use to reach out to our target audience? Will our designs need to be suitable for aluminum signs, newspaper ads, etc?

**Knowledge and Attitude**

Our initial behavior survey indicated that a lack of knowledge of SAV’s role in the Bay is not a barrier for better behavior. However, attitude toward SAV is strongly correlated with boater behavior. The survey identified that boaters who associate the word “healthy” with SAV are least likely to have run aground on it (Figure 1) or rev their motors to break free (Figure 2). Those who associated SAV with the words “dirty” and “hazardous” were much more likely to have run aground on SAV and revved their motors to break free.

**Boating Activity**

We analyzed survey responses of the sub-groups of commercial fishing (fish), commercial fishing (crab/mollusk), recreational fishing (fish), recreational fishing (crab/mollusk), and non-fishing recreational. The recreational boating community was such a large portion of our survey respondents (71 percent) that we decided to target this group to allow the campaign to have the most influence.

**Location**

Boaters who reported boating most often in Talbot and Dorchester Counties were the most likely to report that they have run aground on SAV (43 percent of boaters in this region). Additionally, boaters noted that they are most likely to notice SAV while docking into a public or private dock or slip rather than while “purposefully moving through shallow waters” or “moving through less familiar waterways.” These boaters were also most likely to think SAV is “dirty” or “hazardous.”

**Key Takeaways**

- More than 1/3 of boaters surveyed self-reported having run aground on SAV in the past.
- A number of boaters reported “revving their motor to break free”—the behavior we want to prevent.
- Knowledge was not a predictor of behavior.
- Attitude correlated with behavior. Boaters who consider SAV to be “healthy” have the best behavior and those who consider SAV to be “dirty” or “hazardous” have the worst behavior.
- Boaters who boat most often in Talbot and Dorchester Counties were most likely to have run aground on SAV.
- Boaters are most likely to see SAV most often while docking, and if they do, are most likely to think it is “dirty” or “hazardous.”

**Implement Campaign**

During the summer of 2019, project partners will implement a full-scale campaign at up to two major marinas in Maryland paired with control sites. The campaign will consist of the following parts:

**Prompt Materials**

Up to twenty signs will be posted at each marina and project partners will hand out “prompt” materials like stickers, koozies, and sunglasses.

**Monitoring**

Project partners will compare aerial photos of SAV scarring taken throughout the campaign on a biweekly basis and against aerial photos taken during 2018. Behavior change will be monitored with boater intercept surveys and observation studies conducted at the marinas.

**Next Steps**

Once we have fully tested our toolkit, it will become a valuable cross-cutting resource for organizations conducting behavior change outreach. We hope to use the 2019 Maryland implementation as a case study to apply to other watershed regions in the United States. Our next steps involve a large-scale implementation effort throughout the State of Maryland or even the entire Chesapeake Bay and to continue providing our toolkit to resource managers across the country to influence positive boating behavior around SAV, and therefore, better protected SAV beds.

We are open to partnership opportunities. Contact Alyssa Hildt at ahildt@oceanfdn.org.