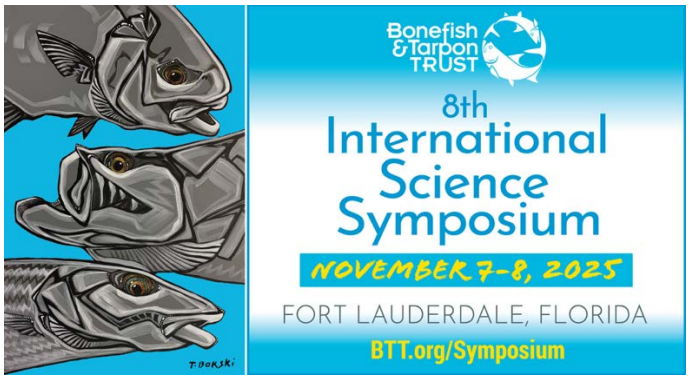


When fishers ask for more protection: Co-produced spatial management recommendations to protect seagrass meadows from leisure boating

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Leisure boating is becoming more popular in developed societies, stressing seagrass systems. Spatial management and marine zoning, along with education, enforcement, and appropriate signage can reduce this stress. Yet, achieving conservation goals with marine zoning depends on social and organizational factors. Coproduction models that work collaboratively with stakeholders in marine zone or protected area (MPA) planning can improve conservation outcomes. The Florida Keys National Marine Sanctuary (FKNMS; U.S.) encompasses one of the largest seagrass meadows in the world, with the mission to balance marine use with conservation of natural resources. Over the last twelve years, FKNMS has experienced exponential increases in leisure boating, which is having important consequences to the functioning of its managed coastal ecosystems. Following a decade-long planning process, in 2022 FKNMS released a revised draft management plan that uses marine zoning to increase the resilience of FKNMS natural resources by reducing local stresses on the system. In the decade leading to the release of this management plan, for-hire coastal fishers worked with scientists to coproduce comprehensive marine zoning recommendations to reduce leisure boating stresses to seagrass habitats that support important fisheries. Coproduced zoning recommendations would protect 100% and 60% more seagrass and living bottom compared to the FKNMS plan. These recommendations would create an MPA network protecting two seagrass meadows that are centers of activity for important fishery species that form spawning aggregations within a seasonal no fishing MPA. This example highlights how long-term investment in coproduction can result in more comprehensive management plans supported by stakeholders.

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