July 25, 2016

Wayne S. Gardner

Charles A. “Si” Simenstad

Co-Editors-In-Chief

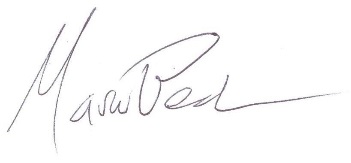
Estuaries and Coasts

I am pleased to submit our manuscript, “Quantifying seagrass light requirements using an algorithm to spatially resolve depth of colonization,” for publication as an original research article in Estuaries and Coasts.

Seagrass depth limits have been used for decades to characterize light regimes and water quality requirements that maintain critical habitat in coastal waters. Several methods have been developed and applied in different contexts that complicate meaningful comparisons between systems, including methods that link depth limits and water clarity to estimate light requirements. In this manuscript, we present a novel method to estimate seagrass depth of colonization and light requirements that incorporates seagrass coverage maps and estimates of water clarity from remote sensing products. Our method is novel and useful because it documents spatial variation in a way that has not been achieved previously, thereby improving our understanding of relationships between water quality and seagrass. We are also able to separate “uncertainty” and “variability” to an extent not previously attempted, which is invaluable in both scientific and management applications. Our spatially resolved estimates provide a viable alternative to broad application of a single rule of thumb for light requirements. Both the questions that we address and our methods should be of broad interest in seagrass ecology and to those interested in managing coastal ecosystems.

Please feel free to contact me with any questions or concerns about our submission. I can be reached at (850) 934-2480 and [beck.marcus@epa.gov](mailto:beck.marcus@epa.gov). We appreciate the opportunity to publish our work with Estuaries and Coasts.

Sincerely,



Marcus W. Beck, PhD