Quantification of Blue Carbon Burial in Seagrass Ecosystems
Richard C. Zimmerman, Old Dominion University

Purpose: Global ocean monitoring

Study Objective: Evaluate the utility of commercial imagery for quantifying the abundance and distribution of submerged aquatic vegetation (SAV) in nearshore coastal waters, and sea ice conditions in the Chukchi-Beaufort Sea region of the Arctic Ocean.

Imagery: WorldView-2, WorldView-3, GeoEye, PlanetScope

Findings: The higher spatial resolution imagery from WorldView-2 and 3 proved adequate for mapping the percent cover of SAV by expert analysts without the need for radiometric calibration or atmospheric correction. The relatively coarser spatial resolution and sun glint contamination made GeoEye and PlanetScope imagery less useful. While there is considerable potential utility for high resolution commercial imagery, more work needs to be done to standardize and automate procedures for orthorectification, radiometric calibration and atmospheric correction that will enable scientists to advance their research.