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## **Effects of interactions between macroalgae and seagrass on the distribution of macrobenthic invertebrate communities at the Yellow River Estuary, China**

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Algae-dominance in seagrass beds has been well recognized, however, the competitive relationship between seagrass and macroalgae along land-sea gradients and their ecological effects has received little attention. In this study, a field survey was conducted at the Yellow River Estuary to investigate the effects of macroalgal proliferation on seagrass and macrobenthic invertebrate communities. Our results suggested that strong competitive interaction existed between the two primary producers, and the positive or negative effects of macroalgae on seagrass growth varied along land-sea gradient. Furthermore, the dominant controlling factors on the biomass, density and diversity of macrobenthic invertebrate communities were found to vary accordingly, i.e., from features of the primary producers in the nearshore where macroalgae suppressed seagrass growth to hydrodynamic disturbance in the offshore where macroalgae facilitated seagrass growth. Our study emphasizes the importance to integrate interspecific competition into ecosystem-based management of seagrass ecosystem, and provides references for additional ecological indicators.