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The influence of groundwater discharge on primary production in a shallow coastal sea, Obama bay,Japan

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Submarine groundwater discharge (SGD) often influences on biogeochemical properties in coastal seas. We observed spatial and temporal variations in SGD using ^{222}Rn and seepage meter along the shoreline of Obama bay, Japan. The results showed SGD exists even in the shallow sea adjacent to the small water catchment area (~1 km^2), where the range of the tide is relatively small (10 ~30 cm). The spatial and temporal variations in chlorophyll observed at the same time suggest that the SGD influences on primary production.

Keywords: land-ocean interaction, submarine groundwater discharge, costal ecosystem, primary production