

Observations on the behavior of suspended particulate matter off the estuary of the Tone River

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Freshwater, suspended sediment matter, and nutrients from river into the ocean have large impacts on marine ecosystems in coastal seas, including those of demersal fishes. In this study, we conducted field observations in May and December 2021, to investigate the behavior of suspended particulate matter in the coastal region off the estuary of the Tone River. The vertical profiles of the volumetric concentration of particles and particle size distribution were obtained using Laser In-Situ Scattering and Transmissometry (LISST)-100X. The observation showed that the high volumetric concentration area of particles frequently formed near the seabed in low-salinity region. It is suggested that the typical particle size in the high turbidity layer tended to exceed 100 μm .

Keywords: Particulate matter dynamics, Bottom boundary layer (BBL), Particle size distribution, Tone River