

## Seafloor environment based on grain and concentrations of carbon, nitrogen and sulfur of surface sediment in Ise and Mikawa bays

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This study reconstructed seafloor environment based on the spatial distribution of grain size and concentrations of total organic carbon (TOC), total nitrogen (TN) and total sulfur (TS) in the surface sediments collected at 44 sites of Ise and Mikawa bays. Silt sediments with 6-8  $\phi$  deposit in the interior and central parts of these bays and values of grain size decrease to sand sediment with 1-4  $\phi$  toward the bay mouth from the central part. Concentrations of TOC, TN and TS show relatively higher values at the interior and central parts and decrease at the bay mouth. Ratios of TOC and TN (C/N) are 8-9 at the most parts of the bays and increase to over 10 in the offshore part of Kiso river mouth at Ise Bay. The distribution pattern of grain size indicates that tidal current velocity decrease from the bay mouth to the central part of the bay and hydrodynamic condition is a stagnant in the interior and central parts. The patterns of TOC, TN and TS concentrations means that organic matter likely deposit and become a reductive condition in the interior and central part of the bays. Values of C/N indicate organic matter originated from marine plankton mainly deposit, however the amount of terrestrial organic matter in sediments increases the offshore of Kiso river mouth.

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