

Evaluation of nitrogen dynamics in the Yodo River estuary using stable isotopes

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The increase in human population in coastal watersheds has increased the delivery of nitrogen from the land to coastal environments. Accelerated nitrogen cycles in coastal environments have led to an increase in hypoxic waters and instances of harmful algal blooms. Physical and biogeochemical processes within estuaries generally regulate nitrogen fluxes from land to sea. The estuaries of major rivers on the continents are thought to be sites of massive nitrogen losses. However, function of estuaries to nitrogen transfer must vary according to each estuarine hydrology and biogeochemistry. A large amount of terrestrial nitrogen empties into Osaka Bay head from the Yodo River. Although the estuary would have a crucial role in modifying nitrogen fluxes, its function to nitrogen transfer is still unclear. In this presentation, we will report the seasonal difference of nitrogen dynamics along the longitudinal section from the estuary to the head of Osaka Bay.

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