

## **Relationship between the distribution of anoxic water mass and intertidal creatures in Omaehama, Hyogo Prefecture.**

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Recently, the nitrogen saturation of the forest soil due to the influence of the acid deposition was very important problem in the catchment area. Therefore, the water quality formation and the mass balance of the river due to interflow and groundwater runoff have attracted bio-geochemically attentions. It is thought that the substance load by groundwater has affected the coastal ecosystem and that the environmental preservation of coastal regions needs to consider evaluation of not only the river inflow load but the groundwater inflow load. Submarine groundwater discharge is recently recognized as a potentially significant water and material pathway from the land to the ocean. However, quantitative evaluations have not been done because the measurement is difficult. Therefore, a lot of uncertain points exist about SGD processes (Taniguchi et al., 2004, Ishitobi, 2005).

In this study, in order to clarify the effects on coastal ecosystem by submarine groundwater in relation to water balance, biological productivity and substance cycle in Seto Inland Sea, we carried out field observation of distribution of anoxic water mass and intertidal creatures. Consequently, although anoxic water mass at the bottom layer was canceled because of the vertical mixing by the tidal effects, the stable anoxic water mass was stagnated in front area of Omaehama. From these results of an investigation, the clear relation between groundwater discharge area and intertidal creatures was not understood.