

Sedimentary process of sand bar formation near Sakaiminato city, western Tottori prefecture based on sediment composition

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In order to clarify sedimentary history of alluvial plain, sampling by 'Geoslicer' was carried out at the coast near Sakaiminato city. Sakaiminato city is located in the western Tottori Prefecture. In this area, coastline is continuously growing offshore. Two samples were obtained on land, and three samples were obtained in the coastal zone. Grain size analysis and sand fraction analysis were carried out on these samples. Radiometric age and sedimentation rate were measured by C-14 method and Pb-210 method. Based on the results, sedimentary history in Sakaiminato area is discussed in this paper.

Based on sediment facies, environmental history in the area can be divided into five stages since 3000 years ago. At stage 1, the sediment showed upward grading in the area located offshore. At stage 2, deposition of fine sand occurred in the area. At this stage the coast line was in the far west to the present area and the sedimentation was lower than the present days. Stage 3 was at the beginning of Edo era. Environmental change in upstream area of Hino is recognized as change of clastic materials supplied to sea area. At stage 4, coast line progradation could be recognized. Sediment showed upward inverse grading. Influence of clastic materials from the coast increased. Sedimentary facies changed drastically. At stage 5, coastal environment attained the present state of appearance. Higher percentage of coarser particles occupied the area and the clastic materials forming the present 'sand body' of the area were deposited during this stage.