# Properties of water quality and groundwater flow in Okayama plain

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Coastal alluvial plains have typical properties of formation, sedimentation, hydrogeology, and water use etc. For example, groundwater recharge from a main river mainly occurs at the upstream area of the plain. But seawater intrusion occurs at the coastal area in case of over groundwater abstraction with less management. For coastal groundwater managements and sustainability, it is important to understand the vulnerability of them and confirm the risk stage, using tracer methods. Our objective is to confirm the groundwater flow and water quality characteristics of Okayama plain. We analyzed chemical composition and oxygen and hydrogen isotopic ratios of water collected at the observation sites.
Inorganic ion components of the groundwater indicated the transition from a river type to a marine type from the upstream area of the plain to the coastal line. The detail types are from Ca-$HCO_3$ type, Na-$HCO_3$ type, to Na-Cl type. In addition, hydrogen and oxygen isotope at the mid-stream site of the plain show different values from a river and sea water. This means different groundwater flow system with different recharge area.

 