

**Study on Groundwater Flow System in a Sedimentary Rock Area(Case study for Boso Peninsula)**

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Japan Atomic Energy Agency has investigated a sedimentary rock area in the Yoro river basin, in Chiba Prefecture by the hydrological and geo-chemical approach necessary for the verification of mathematical ground water flow model. In Yoro river area the data from river and well water are so available that hydro-chemical conditions of the regional groundwater were discussed based on chemical compositions, isotopic ratios and the radio-isotopic age for water and flow rate of surrounding river water. It was found that the groundwater system in this basin consists mainly of types of water: Ca-HCO<sub>3</sub> type water, Na-HCO<sub>3</sub> type water. The Ca-HCO<sub>3</sub> type water is cultivated several thousand years or after, the Na-HCO<sub>3</sub> type water deeper than GL-200-300m situated is cultivated several to twenty thousand years ago. It was also found that the Ca-HCO<sub>3</sub> type water cultivated at the high permeable sandstone layer preferentially flows toward its strike direction through the shallower than GL-100m area.