Dispersal process of water particles along Sanriku ria coast in Japan

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Along Sanriku ria coast in northeast of Japan, a number of small bays distribute, which have several or a few tens kilometers. Sanriku coastal region is an important area for Japanese fisheries, and many kinds of seaweeds and shellfishes are caught and farmed. Bays along Sanriku coastal region face to the Northwest Pacific and exchange their water for open ocean water advected by Tsugaru warm current, Oyashio, Kuroshio, and eddies. Understanding the water exchange between the bays and the open ocean and among the bays in Sanriku coastal region is important not only for fisheries but also understanding of material circulation. In the present study, dispersal processes of water particles in the bays along Sanriku coastal region is investigated by particle tracking using an ocean model. In the presentation, results for the bays in the middle of Sanriku ria coast, such as in Otsuchi bay, is mainly introduced.