Intensification of current in coastal waters around Cape Echizen in summer.

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In the coastal areas of Wakasa Bay, the Japan Sea, —an observation network for fisheries and a simulation system of coastal currents with a high-resolution numerical model—revealed intensification of current in summer around Cape Echizen. The 2012―2014 current data collected by mooring observations off Takasu, near Cape Echizen showed that the current's speed exceeded 40 cm s^{-1} for more than five days, around July and August each year. In addition, the 2014 current data collected by a research vessel indicated that the first branch of the Tsushima Warm Current (FBTWC) flowed near the coast when the strong current with increase of water temperature occurred in upper layer of coastal waters off Takasu. Similarly, the simulation results revealed that the FBTWC variability caused intensification of the current in coastal waters near Cape Echizen. In addition, they showed that when the strong current was generated in coastal waters off Takasu, cold water accompanied by strong current expanded to coastal seas around Cape Echizen in subsurface layer. From these results of the observations and the simulation, it was considered that the strong current in the coastal waters off Takasu in summer was attributed to the acceleration of FBTC, which is accompanied by cold water expansion in subsurface layer to the vicinity of the coast and contact of FBTWC along the cold water edge with the coast.

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