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Spatial and vertical distributions of deep-seated carbon in groundwater at the eastern area of Aomori Prefecture

Hiroshi Takahashi^{1*}, Masaaki Takahashi¹, Michiko Ohwada¹, Kohei Kazahaya¹,
Yoichi Oyama¹, Noritoshi Morikawa¹, Akihiko Shibahara¹, Hiroko Handa¹, Atsuko Nakama¹

¹GSJ, AIST

Groundwater in the eastern area of Aomori Prefecture is considered to be mixed with shallow groundwater and present seawater (or seawater trapped in sediment). With regard to carbon species, we found that the dissolved inorganic carbon of groundwater in the present study area needed other mixing end-members of deep-seated carbon inferred from carbon isotopic analysis. The spatial and vertical distributions of deep-seated carbon concentration showed higher in the basement rock than that in the overlying sediment layer. This suggested that the carbon is ascent from the deeper than the sampling depth of each groundwater

Keywords: groundwater, deep-seated carbon, carbon isotope, helium isotope, Aomori