

Reconstruction of last glacial maximum-last deglaciation local marine reservoir values around the Japanese islands

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Local reservoir value is essential information to calibrate radiocarbon age of marine sample to calendar age. The value has changed according to carbon cycle. As the result, the value is small in the Kuroshio region, and large in the north Pacific subarctic region where the deep water with old carbon becomes upwelling. However, temporal change of the value is not clarified yet. Based on comparisons of radiocarbon ages of tephra of on-land and marine environments, large local reservoir value (600-700 years) was estimated in the glacial to deglacial off Tokai region. This is almost the same as that in the deglacial off Sanriku region (860 years). This suggests that the glacial subarctic north Pacific surface water expanded southward.