



Long-term Change of the Groundwater Quality of Sarobetsu Mire in Northern Japan

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Sarobetsu mire, which is located in the northern part of Hokkaido, Japan, is one of the biggest high moors in Japan and is important as wild habitats and carbon storage. However, because of aridification of the mire, the vegetation has been gradually changing such as invasion of *Sasa palmata* in the original high moor vegetation. *Sasa palmata* is one of the indicator plants of aridification of high moor. The objective of this study is to clarify the long-term change of the groundwater quality in the high moor vegetation area, the *Sasa palmata* area and the transition area. The field survey was conducted from 2009 to 2018 in the conservation area in Sarobetsu mire, where the eastern part still has the original high moor vegetation and the western part is covered with *Sasa palmata*. The results show that concentrations of dissolved organic carbon (DOC) and ammonium-nitrogen, which are the indicators of the peat decomposition, are higher in the *Sasa palmata* area than in the high moor vegetation area, and have been increasing yearly since 2009. Furthermore, the comparison of the groundwater quality in 1993-2002 and in 2009-2018 shows the clear increase in concentrations of these compounds. This result could be explained by the acceleration of peat decomposition.