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[\[PDF \(2186K\)\]](#) [\[References\]](#)**Environmental characteristics of water quality in wetlands of the upper Takkobu River**[Hidetoshi MIKAMI](#)¹⁾, [Yasushi ISHIKAWA](#)¹⁾ and [Youichi UENO](#)¹⁾

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Abstract

To gather information about nutrient loadings in wetlands in the basin of eutrophied Lake Takkobu, we investigated water quality in the wetlands of the upper Takkobu River which suffers little or no human impact, and discussed the environmental characteristics found there. The wetland water investigated contained a high concentration of dissolved inorganic phosphorus (DIP, 0.14-0.38 mg L⁻¹) in relation without dissolved organic carbon (DOC) comprised of humic substances etc., and the water was strong source of P entering the river. This was caused by abundant loading from reduced groundwater charging the wetland, and by close connection with environmental characteristics in wetland such as the reduction and dissolution of Fe, etc. A major part of the dissolved N in the wetland water was of the organic type, and there was a positive correlation between DOC concentration and dissolved organic nitrogen (DON) concentration. The N/P ratio of the loadings of dissolved inorganic N and P from the wetland showed a low value of less than 0.4, which was one of the reasons why the DIP of Lake Takkobu was sufficiency through out the year. Moreover, the loadings of particulate N and P from the wetlands were significant. The reasons for that appeared to be that wetland soil included abundant organic matter, N and P, and that the soil was easily transported by the feeble flow of the wetland water, which thus supplied the river with nutrients.

Key Words: [wetland water](#), [water quality](#), [phosphorus](#), [Lake Takkobu](#), [Kushiro Marsh](#)



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