

Long-Term Temporal Variation in Lake Inawashiro Water Quality

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In Lake Inawashiro, the largest acidtrophic lake in Japan, deterioration of water quality based on increased chemical oxygen demand (COD) and detection of coliform bacteria, has accompanied the rapid pH neutralization, which started from the mid-1990s. To elucidate the cause of the deterioration, we investigated long-term temporal variation in water quality data collected continuously by Water and Air Environment Division, Social Affairs and Environment Department, Fukushima Prefectural Government. In particular, we focused on parameters that are highly relevant to internal primary production in the surface water layer at the center of the lake. Our results showed that the surface water of Lake Inawashiro showed a dramatic increase in primary production because the cell density of both phytoplankton and zooplankton increased exponentially since the start of neutralization.