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# Study on the influence on water ecosystem by a lake inflow filtration system

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Lakes play important roles in the economic-social sustainable development. However, due to unreasonable development and urbanization in recent years, lake water pollution and ecological degradation have occurred in China. The contaminants are mainly flowing into the lakes through the inflow rivers. Therefore, the improvement of the lake inflow water quality is very important. A filtration system includes Gravel filtering system, Aquatic plant area and Ecological bag area was constructed in a inflow river in Chang Dang Lake, China. In this study, the zooplankton and phytoplankton in the inflow river were observed in order to analyze the general process. The Pantle-Buck method was used to evaluate the water quality and the B/T index was used to evaluate the nutrition situation. The B/T values were reduced by 20% and the SI pollution index was reduced by 11.8% within 3 months. Therefore, a positive effect on the water's ecological restoration was achieved by the filtration system .