

# 風災對石門水庫集水區魚類豐富度之影響

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## 摘要

Habitats and fish populations of a Shihmen Reservoir watershed (N: 24°40', E: 121°17') stream in Taiwan were surveyed before and after the hit of multi super-typhoon in between 2004 to 2008. Sampling was conducted seasonally from February 2003 to October 2009. There are eight study sites (S1 - S8) for the field survey. Samples for biotic data and abiotic variables analyses were collected at the same time. Based on the data collected, the Index of Biotic Integrity (IBI) which takes fish species as the major target, the Morisita's index ( $I_m$ ) and the Qualitative Habitat Evaluation Index (QHEI) were thus analyzed to quantify Shihmen Reservoir stream's fish population. The results of this study suggested that the analysis of variance (ANOVA) revealed that there were group differences. The Fisher's protected LSD test showed that the significant difference was between seasons on the one hand and sites on the other. In addition, in subtropical mountain land-lock stream, severe typhoon may significantly alter the habitats, and the impact on fish populations could be extreme degradation. Although the water quality has been restored, but if the habitat quality continued to be affected, especially if typhoons become more frequent and possibly of greater intensity, their effects on fish of mountain streams are likely to become more impact.

**關鍵字：**Index of Biotic Integrity (IBI), Qualitative Habitat Evaluation Index (QHEI), Shihmen Reservoir