

<b>Title</b>	Benthic Diversity in Kaeng Loeng Chan Reservoir, Kaeng Loeng Chan Sub-district, Muang District, Maha Sarakham Province
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### **Abstract**

The objectives of this study were to investigate water quality, benthic diversity and the relationship between water quality and benthic diversity in Kaeng Loeng Chan reservoir, Loeng Chan Sub-district, Muang District, Maha Sarakham Province. They were collected from 7 points which each points was collected once every other week during November – December 2015. The water sample was collected by grab sampling. Diversity index was analyzed by Shannon-Weiner diversity index. Evenness index was analyzed by Pielou's evenness index and richness index was analyzed by Margalef's richness index. Pearson correlation coefficient was statistical value that used for analyzed of the relationship between water quality and benthic diversity index.

The results of the research study were as the following:

1) Water quality results were as following: temperature 25.05 – 30.50 °C, pH 6.50 – 8.40 , turbidity 2.16 – 12.55 NTU, Dissolved Oxygen 7.31 – 9.30 mg/L, Biochemical Oxygen Demand 2.15 – 4.95 mg/L,

2) The benthic diversity result found that there were 4 phylums, 17 orders, and 18 families. Moreover, the diversity index was 0.80 - 1.87. The Evenness index benthic was 0.56 - 0.96, and richness index was 0.68 - 2.47.

3) The relationship between water quality and benthic diversity result found that the pH, turbidity, Dissolved Oxygen, Biochemical Oxygen Demand did not relate to the benthic diversity index. However, temperature had great significant of negative relationship to the benthic diversity index (.05). The correlation was  $-0.482$  ( $p=.027$ )