

Nattakarn Suthivichitpakdee 2006: Study of Factors Affecting the Change of BOD and DO of Water in Bung Nong Han, Sakon Nakhon Province. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Assistant Professor Prapassara Nilagupta, Ph.D. 95 pages.
ISBN 974-16-2290-2

The purposes of this research were to study of factors affecting the changes of BOD and DO and to formulate equation to BOD and DO of Water in Bung Nong Han, Sakon Nakhon Province . These factors consisted of depth, water, temperature, pH, turbidity, salinity, rain fall and population.

Four linear regression methods namely Enter, Forward, Backward and Stepwise were used in the analysis. The research findings showed that the factors affected the changes of BOD and DO within Bung Nong Han at 0.01 and 0.5 singificat level were salinity and pH, and turbidity. Accordingly. However, the effect of salinity on BOD and pH on DO was relatively low. Stepwise was the most appropriate method to forecast BOD and DO. Other factors namely depth, temperature, pH, turbidity, rainfall and population were indirectly affected BOD and DO. Factors such as land use around Bung Nong Han drives changes of these factors which will intum affect BOD and DO.

Student's signature

Thesis Advisor's signature