

2006 TAIWAN INTERNATIONAL SCIENCE FAIR

CATEGORY : Environmental Science

PROJECT : Using clay and paper fibre to treat waste

water in the Bay Mau Lake in the Thong Nhat

Park, Hanoi, VIETNAM

AWARDS : Environmental First Award

FINALISTS : Nguyen Thi Thu Trang

COUNTRY : Vietnam

ABSTRACT OF EXHIBIT

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TITLE: Using clay and paper fibre to treat waste water in the Bay Mau Lake in the Thong Nhat Park, Hanoi, Vietnam.

NAME: Nguyen Thi Thu Trang

COUNTRY: Vietnam

Contents of Abstract: (maximum 500 words) include

The Bay Mau Lake inside the Thong Nhat Park in Hanoi is the second largest lake in Hanoi. The lake serves not just as an equitable tank for the rainwater, as a reservoir for intake of wastewater, as a wastewater treatment pond, but also as a recreation area for Hanoi people and visitors from other provinces. The Bay Mau Lake is polluted at alarming level.

The author has carried out a study on the water pollution level and the sources of pollution. The study revealed that the lake polluted mainly by domestic wastewater discharging from living quarters with total about 800,000 inhabitants. The author demonstrated different measures to reduce the pollution level in the lake such as raising environmental awareness for the public, a simple, reasonable cheap measure, which can be both realistic and effective. Besides, the author proposed to use bio-treatment of the water discharging into the Bay Mau Lake, building of a pumping station, fish farming... The clay-paper fibre mixture is used for the biological treatment of wastewater at the inlets. The advantage of this method is that it is a simple, cheap and realistic solution. Treatment of the water using clay and paper fibre mixture for filtration and plantation of aquatic plants as lotus and water lily together will provide oxygen for the aquatic environment of the lake. As results of the study, it is recommended to use both methods, namely raising environmental awareness for the public and biotreatment method using clay and paper fibre, to improve water quality of the lake.

評語

利用黏土與紙纖維製成泥球，用以處理湖水，黏土有吸附作用，也可作為微生物生長之接觸材，對有機物之去除有其效果，簡單實用，價格低廉，吸附後之泥球可作堆肥。