EFFICIENCY OF COMMON CATTAIL *(Typha latifolia)* AS A CONSTRUCTED WETLAND ON THE TREATMENT OF DIFFERENT INDUSTRIAL WASTE WATER

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Industrial waste is one of the causes of stream pollution. It is roughly comparable, in its nation wide pollution effect, with municipal sewage and other sanitary and domestic wastes. The improper disposal of industrial waste water, especially the effluents from textile industries, paper mills and rice mills, creates several problems in the Batticaloa district and makes pollution in groundwater, lagoon and the environment.

In this study, a bench – scale natural waste water treatment systems using the common cattail (*Typha latifolia*) have been used to treat the waste water from rice mill, paper mill and textile mill for 4 months. It was already evident that, this particular plant has been used to treat the variety of waste water around the world.

To initiate the study, the waste water from these mills was selected purposely as these are the major pollutants for lagoon, surface watercourses and ground water. Waste water was fed to the treatment unit containing cattail which were planted in broad plastic basins with the soil depth of 1 foot.

Strength of influent				Average effluent quality		
Parameters	*Rice mill*	*Textile*	*Paper mill*	*Rice mill*	*Textile*	*Paper mill*
COD(mg/l)	1080	1000	1000	150	407	370
Total solids(g/l)	6.5	7.8	13.5	1.95	3.86	2.56
Turbidity(FAU)	140	864	255	53	64	47
pH	5.5	6.6	6.6	6.4	7.0	6.5

The efficiency of *Typha latifolia* was evaluated by determining COD, solids and turbidity removal efficiencies. The quality of the effluent in terms of its strength was identified by measuring the pH. The plants showed more than 85% of COD and solids removal efficiencies in the treatment of rice mill waste water with maximum tiller production. It also showed a maximum turbidity reduction of 93% in the treatment of textile mill waste water.