

**Application of Nature-Based, Low-Cost and Sustainable
Floating Treatment Wetland Technology for the Remediation
of Detergent Contaminated Wastewater**

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Washing liquid is the most toxic contaminants in the effluents released from household and industry to the river. The effluents add linear alkylbenzene sulfonate (LAS), an anionic surfactant that has harmful effects on li terrestrial and marine or aquatic lives. Numerous, time consuming and costly techniques are screened for the removal of detergents, may not be applied in developing countries Pakistan. Pakistan. Floating treatment wetlands (FTWs) is nature-based technology and becoming more popular due to its low capital and operation cost, effective, sustainable, and environmentally -friendly nature. FTWs mesocosms were vegetated with *Brachiaria mutica* (Para grass), and augmented with LAS-degrading bacteria. It was observed in this study that the nearly all LAS were degraded from the washing liquid contaminated water. FTWs, minimized the COD and BOD to nearly 90%. This is concluded from this study that FTWs with bacteria had a significant effect on the degradation of LAS, COD and BOD with TOC of the water with washing liquid.

Keywords: Floating wet lands; bacterial; contaminated water; COD; BOD