Characterization of Aquatic Plants of the Coba Lagoon and Its Potential as Biofilters in Planters

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Abstract: Over the last years, the availability of drinking water has decreased, while dead zones in water bodies has increased considerably. In the Coba lagoon, gray water discharges were observed as well as endemic flora growth. The purpose of this project was to analyze the potential use of the species found as biofilters and choose the most viable for their implementation and effiand efficiency. Therefore, in order to obtain the first record of existing aquatic plant species of Coba lagoon, the characterization of the different species of macrophytes and grasses in the lagoon was conducted. Then, the potential use of the species as biofilters in planters for the gray waters treatment was analyzed, based on physical parameters. According to our results, Thypha marinas was the most frequent specie in the Coba lagoon. Najas wrightiana, Nymphaea ampla and Echinodoros andrieuxii were selected for the biofilters assays, being Nymphaea ampla, the plant with the best filtration capacity. As a conclusion, these plants, along with another process for water treatment, could be an option in residences and restaurants to decrease the impact of the direct discharges and thereby to avoid direct contact of these gray waters into the lagoon.

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