

## Accepted Manuscript

Title: Constructed floating wetland for the treatment of domestic sewage: A real-scale study

Authors: Tatiane Benvenuti, Fernando Hamerski, Alexandre Giacobbo, Andréa M. Bernardes, Jane Zoppas-Ferreira, Marco A.S. Rodrigues



PII: S2213-3437(18)30521-9  
DOI: <https://doi.org/10.1016/j.jece.2018.08.067>  
Reference: JECE 2615

To appear in:

Received date: 19-7-2018  
Revised date: 24-8-2018  
Accepted date: 27-8-2018

Please cite this article as: Benvenuti T, Hamerski F, Giacobbo A, Bernardes AM, Zoppas-Ferreira J, Rodrigues MAS, Constructed floating wetland for the treatment of domestic sewage: A real-scale study, *Journal of Environmental Chemical Engineering* (2018), <https://doi.org/10.1016/j.jece.2018.08.067>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Constructed floating wetland for the treatment of domestic sewage: a real-scale study

TATIANE BENVENUTI<sup>a,\*</sup>, FERNANDO HAMERSKI<sup>b</sup>, ALEXANDRE GIACOBBO<sup>b</sup>, ANDRÉA M. BERNARDES<sup>b</sup>, JANE ZOPPAS-FERREIRA<sup>b</sup>, MARCO A. S. RODRIGUES<sup>a</sup>

<sup>a</sup> Laboratório Aquário, Universidade Feevale, Rodovia 239, n. 2755 – Vila Nova, Novo Hamburgo/RS, Brasil. Tel: +555135868800

<sup>b</sup> Programa de Pós-Graduação em Engenharia de Minas, Metalúrgica e de Materiais – PPGE3M, Universidade Federal do Rio Grande do Sul – UFRGS. Av. Bento Gonçalves, n. 9500, Porto Alegre/RS, Brasil. Tel: +555133089428 - Fax: +555133089427

\*Corresponding author e-mail: [benvenuti.tatiane@gmail.com](mailto:benvenuti.tatiane@gmail.com)

**Abstract**

A constructed floating wetland using macrophytes *Typha domingensis* Pers. was applied to the treatment of raw sewage in a municipal sewage treatment plant in south Brazil. During 12 months, the average removal of organic matter was evaluated by chemical oxygen demand (COD), 5-day biochemical oxygen demand (BOD<sub>5</sub>) and by total suspended solids (TSS) analysis and a removal efficiency of 55, 56 and 78 % was, respectively, obtained. For nutrients, total Kjeldahl nitrogen (TKN) was reduced in 41 % and total phosphorus, in 37 %. The floating mats supported satisfactorily the macrophytes. This floating arrangement was applied as a single step

Download English Version:

<https://daneshyari.com/en/article/8965101>

Download Persian Version:

<https://daneshyari.com/article/8965101>

[Daneshyari.com](https://daneshyari.com)