

## ABSTRAK

Maraknya budidaya tambak udang di Desa Poncosari Kabupaten Bantul D.I.Yogyakarta menimbulkan beberapa masalah di antaranya pencemaran sungai dan pesisir pantai. Tumbuhan eceng gondok (*Eichhornia crassipes*) merupakan tumbuhan yang sangat mudah ditemukan dan sering dianggap tumbuhan pengganggu. Oleh karena itu pemanfaatan tumbuhan ini akan bermanfaat dan meningkatkan nilai ekonominya. Tujuan penelitian ini adalah untuk mengetahui efisiensi tumbuhan eceng gondok (*Eichhornia crassipes*) dengan variasi massa 0,5 kg, 1 kg, dan 1,5 kg dalam menurunkan kadar COD, residu tersuspensi (TSS) dan amonia terlarut pada limbah tambak udang *vannamei*. Pada penelitian ini dibagi menjadi empat kelompok, yaitu satu kelompok kontrol (C) dan tiga kelompok perlakuan (0,5 kg, 1 kg, dan 1,5 kg). Hasil penelitian ditinjau dan diuji setiap dua hari selama 8 hari di laboratorium. Hasil penurunan kadar COD, TSS, dan amonia terlarut adalah 60,39%, 88,5% dan 16,48% dalam rentang waktu 8 hari. Dapat disimpulkan bahwa dari hasil penelitian tersebut, eceng gondok dapat menurunkan kadar COD, TSS, dan Amonia Terlarut dalam proses fitoremediasi limbah tambak udang *vannamei* meskipun presentasinya relatif kecil.

Kata kunci : Limbah Tambak Udang *Vannamei*, Eceng Gondok, COD, TSS, Amonia Terlarut

## **ABSTRACT**

*The shrimp aquaculture in Poncosari, Srandakan, Bantul, D.I.Yogyakarta made several problems among whom the rivers and coastal areas pollution. Water hyacinth (*Eichhornia crassipes*) is a plant that is easy to found and considered to be a pests. Therefore, utilization of this plant will benefit and improve its economic value. The purpose of this research was to analyze effectiveness of water hyacinth (*Eichhornia crassipes*) with mass variation 0,5 kg, 1 kg, and 1,5 kg to decreased levels of COD, TSS, and dissolved ammonia in Vannamei Shrimp Aquaculture Sewage. In this research, samples were divided into four groups; that is, one control group (C) and three treatment groups (0,5kg, 1kg, and 1,5kg). The effect of the treatment were observed and tested every two days within 8 days in the laboratory. The analysis showed that the reduction of COD, TSS, and dissolved ammonia was at 60,39%, 88,5%, and 16,48% in eight days. In conclusion, the result of the treatment showed that there was a decreasing concentration of the COD, TSS, and Dissolved Ammonia in the phytoremediation process using water hyacinth (*Eichhornia crassipes*) in vannamei shrimp aquaculture sewage eventhough the decreasing percentage was relatively not high enough.*

*Keywords : Vannamei Shrimp Aquaculture Sewage, Water Hyacinth, COD, TSS, Dissolved Amonia*