

ABSTRACT

EFFECT OF FLOATING NET CAGES DENSITY ON THE WATER QUALITY OF WAY TEBABENG RESERVOIR IN NORTH LAMPUNG

By

ERWINSYAH PUTRA

Way Tebabeng reservoir is located in the Jagang Village, North Lampung. In 2014 this reservoir had high density with a total of 214 floating net cages. The purpose of the study is to analyze the influence of floating net cages percentage density to describe the water quality condition and aquaculture activities in Way Tebabeng Reservoir. The study used a purposive random sampling method. There were six observation stations namely, inlet reservoir, 25 % floating net cages density, 50 % floating net cages density, 75 % floating net cages density, 100 % floating net cages density, and outlet reservoir. The observation period was performed 4 times, on 0, 15th, 30th, and 45th days. Water quality parameters were observed included physical parameter (temperature, brightness, TSS), chemical parameter (pH, DO, BOD, COD, NO₃, NO₂, NH₃, PO, H₂S), and microbiological parameter (coliform total). Determination of reservoir water quality based on the pollution index value. Pollution index is determined from the calculation of all water quality parameters. The results showed that the percentage increase in the density of floating net cages is not give an affect an the pollution index value.

Pollution index of the six stations on the 45th day observation showed range from 10.28-14.19. Pollution index all of the six stations categorized high polluted. The correlation value of floating net cages density versus pollution index value is negatively correlated at $r = -0.085$. Effect of floating net cages percentage density against pollution index valued is showed at $R = 0.7 \%$. Aquaculture activities in Way Tebabeng reservoir was managed traditionally by using a single net.

Key words: aquaculture, floating net cages, pollution index, Way Tebabeng Reservoir