

PHOSPHORUS LOADING FROM FISH FARMING ACTIVITIES TO WADASLINTANG RESERVOIR WATERS

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Abstract	<p>Wadaslintang Reservoir located in Wonosobo Regency of Central Java provides to fish farming area using floating net cage. There are 2 feeding system applied that are semi intensively system managed by local community and super intensively managed by PT. Aquafarm. Both different feeding systems resulted in the amount of pollutant load coming into the reservoirs in the form of total P derived from the remaining feed and feces of fish entering into the reservoir. This can trigger the eutrophication condition of the reservoir waters. The purposes of this study were 1) to calculate the capacity of Wadaslintang reservoir to phosphorus load based on its morphometry and hydrology, 2) to evaluate the capacity of wadaslintang reservoir to Phosphorus load from floating net cage activities in wadaslintang reservoir, and 3) to design the program on the reducing load of Total Phosphorus from floating net activities in wadaslintang reservoir. The research was conducted by survey method in the Wadaslintang Reservoir during January 2016 in both locations of floating net cage fish farming. Parameters measured were P content in fish and P content of feed used in both cultivation systems, and P concentration of reservoir water. The amount of pollutant load coming into the reservoir and its impact on the P concentration of water was calculated using the formula. The results showed that Wadaslintang Reservoir to phosphorus load capacity was 106,56 ton P/year. The Phosphorus load from floating net cage was 216,2 ton P/year. The P load from PT. Aquafarm have exceeded the capacity as much as 70,74 ton P/year. In general the existence of fish farming system using floating net cage in Wadaslintang Reservoir has contributed to increase the concentration of P equal to 43,9% or in other words as much as 50% of P load that goes into reservoir of wadaslintang. Programs designed to reduce the phosphorus load could be done by reducing the number of floating net and decreasing all the activities in the catchment area up to 50% to fulfill phosphorus standard of 100 mg/m³).</p>
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