

The Water Quality of the Selokan Mataram for Drinking Water Quality Standards, Aquaculture, and Agricultural Irrigation Water from Upstream to Downstream During the Rainy Season

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ABSTRACT

The Mataram Drainage connects the Progo River with the Opak River with a length of 31.2 kilometers, however, the increasing population around the Mataram Drainage has led to a decline in water quality. This research aims to determine the water quality and status of the Mataram Drainage water. The study was conducted from January to February during the rainy season with location determination using a survey method and sample points determined using purposive sampling method. Water samples were taken through integrated sampling from two different locations with the same volume. The results of the study indicate that sample point 1 located from the upstream of the canal can be categorized in class IV with water allocation for agriculture, with a pollution index calculation obtained a value of 16.239 including heavy pollution. At point 2 representing agricultural areas, it was categorized in class IV with a pollution index value of 14.889, including heavy pollution. At point 3 representing agricultural and residential areas, it can be categorized in class IV with a pollution index value of 12.729 including heavy pollution. Additionally, at point 4 representing the entire area, it can be categorized in class IV with a pollution index value of 12.767 including heavy pollution. These results indicate that the Mataram Drainage is directly affected by the activities of the population around the canal, both in agricultural activities and household activities that produce a lot of organic and inorganic waste.

Keywords: *water quality, pollution, Mataram Drainage*