Nitrate Concentration Ciliwung River Bogor City

Spatial and temporal distribution of nitrate concentration in Ciliwung River, Bogor City

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Abstract

Water is very important as a source of life for human and other living organism. Bogor City has two main rivers, i.e. Cisadane River and Ciliwung River. Those rivers, particularly Ciliwung River has low in water quality, that has been affected by land use changes and human activities. Nitrate concentration is one of hazardous chemical observed in this research, due to Nitrate contamination is very dangerous for human health. Focus of this paper is how the spatial distribution of Nitrate concentration in Ciliwung River. There were 13 sites of water sampling in Ciliwung River. Water samples were collected in December 2016, January 2017, and February 2017. Inverted Distance Weighted method was used to identify spatial distribution of Nitrate concentration. According to the analysis results, Nitrate had different concentrations in December 2016, January 2017, and February 2017. The highest concentration of Nitrate in December 2016 has occurred in three sites, i.e. Kedung Halang, Cibuluh and Sukaresmi. Nitrate concentration had increased from 4.30 to 5.70 mg/L in January 2017, and the highest had occurred in Sukaresmi. Further more, Nitrate concentration had decreased become 4.80 mg/L in February 2017, where the highest concentration of Nitrate had occurred in Cibuluh, Sukaresmi, Bantar Jati, and Kebun Raya Bogor.

PDF can be downloaded at  http://iopscience.iop.org/article/10.1088/1755-1315/179/1/012039
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