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Analysis of Macro and Microplastic Distribution in Wonorejo River Estuary, Surabaya, Indonesia

Poor handling of plastic waste can cause plastic pollution in water bodies, especially rivers. Wonorejo River became one of plastic contaminated rivers in the city of Surabaya, Indonesia. Not less than 100 tons of plastic waste can be found along this river every day. This can cause serious problems in the future for the river and marine ecosystems where the Wonorejo River ends. Analysis of plastic waste distribution at Wonorejo River estuary has not been conducted to date. This research has a specific purpose to analyze the distribution of plastic waste, both macro and micro, in the estuary of the Wonorejo River, Surabaya, Indonesia. Analysis of plastic waste distribution in Wonorejo river estuary will be conducted at 3 representative points and will be focused on microplastic, considering that microplastic has more harmful effect on aquatic biota. Analysis will be distributed in 3 depth locations: water surface, 1 meter below the surface and on the river bottom sediment for each point. The expected results of this research are plastic waste distribution pattern at Wonorejo River estuary, in terms of macroplastic size, type, microplastic components and an overview of which part of the estuary where plastic waste is concentrated.