

**KAJIAN PENCEMARAN LINGKUNGAN PERAIRAN WADUK
DURIANGKANG AKIBAT PEMBUANGAN LIMBAH DI KOTA BATAM
KEPULAUAN RIAU**

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INTISARI

Kota Batam, Provinsi Kepulauan Riau khususnya pada perairan Waduk Duriangkang berpotensi menjadi salah satu penyebab terjadinya kerusakan lingkungan. Hal tersebut dikarenakan limbah dari aktivitas kawasan domestik dan industri, khusus kawasan domestik dibuang langsung ke aliran air langsung menuju Waduk tanpa melalui proses pengolahan terlebih dahulu. Penelitian ini bertujuan: (1) mengkaji aktivitas pembuangan dan karakteristik limbah yang masuk ke perairan Waduk Duriangkang; (2) mengkaji tingkat pencemaran perairan Waduk Duriangkang; dan (3) merumuskan strategi pengendalian lingkungan untuk pelestarian Waduk Duriangkang.

Metode yang digunakan dalam penelitian ini adalah metode survei, yaitu metode yang menekankan observasi dan pengukuran terhadap berbagai objek kajian atau variabel penelitian. Hasil pengukuran tersebut kemudian digunakan untuk analisis kajian pencemaran dan kerusakan lingkungan perairan yang ditinjau dari penurunan kualitas air Waduk Duriangkang, kondisi biotik serta pengaruh aktivitas sosial masyarakat.

Ditinjau dari aspek abiotik, berdasarkan hasil pengujian kualitas air limbah yang masuk ke dalam perairan Waduk Duriangkang, diketahui bahwa telah terjadi pencemaran untuk parameter Ammonia-N ($\text{NH}_3\text{-N}$) dan Total Coliform. Aspek biotik dapat disimpulkan bahwa kondisi vegetasi pada area aliran bertemunya limbah dengan perairan Waduk Duriangkang banyak sekali terdapat tanaman air seperti eceng gondok dan kangkung. Dilihat dari aspek kultural dapat disimpulkan bahwa kondisi pencemaran serta kerusakan lingkungan perairan Waduk Duriangkang berhubungan dengan persepsi masyarakat. Sementara untuk melakukan strategi pengendalian pencemaran lingkungan perairan Waduk Duriangkang dengan adanya upaya melakukan adanya pengelolaan limbah sebelum masuk ke perairan Waduk, melakukan pengawasan dan monitoring terhadap kualitas perairan Waduk Duriangkang.

Kata-kata Kunci : Waduk Duriangkang, Kerusakan Lingkungan,
Limbah, Strategi Pengelolaan Lingkungan

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**STUDY OF ENVIRONMENTAL POLLUTION IN WADUK
DURIANGKANG COUSED BY WASTE DISPOSAL IN BATAM,
KEPULAUAN RIAU.**

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ABSTRACT

Batam City, Kepulauan Riau Province especially in the waters of Duriangkang Reservoir has the potential to be one cause of environmental damage. Waste from the activities of domestic and industrial areas, specifically the domestic area is discharged directly into the water flow directly to the reservoir without going through the processing first. This study aims: (1) review the disposal activities and characteristics of waste into the waters of Duriangkang Reservoir; (2) to assess the level of pollution of the waters of the Duriangkang Reservoir; and (3) formulate environmental control strategy for conservation of Duriangkang Reservoir.

The method used in this study is a survey method, which is a method that emphasizes observation and measurement of various study objects or research variables. The measurement results are then used to analyze the study of pollution and damage to the aquatic environment in terms of decreasing the water quality of the Duriangkang Reservoir, the biotic conditions and the influence of community social activities.

Observed from the abiotic aspect, based on the quality of wastewater testing that goes into the waters of Duriangkang Reservoir, it is known that there has been pollution for Ammonia-N (Nh3-N) and Total Coliform. Biotic aspect can be concluded that the condition of vegetation in the area of the flow of waste meeting with the waters of Duriangkang Reservoir there are many water plants. Viewed from the cultural aspect can be concluded that the condition of pollution, as well as damage to the waters of the Duriangkang Reservoir, was related to the public perception. Meanwhile, to carry out the strategy of controlling the environmental contamination of Duriangkang Waters' waters with the effort to conduct the waste management before entering the waters of the reservoir, to supervise and monitor the quality of the waters of Duriangkang Reservoir.

**Keywords : Duriangkang reservoirs, Environmental Damage,
Waste, Environmental Management Strategy**

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