

**DISTRIBUTION OF HEAVY METAL CONTENT OF LEAD (Pb) AND
COPPER (Cu) IN THE KARANGSONG MANGROVE ECOTOURISM,
INDRAMAYU DISTRICT, WEST JAVA**

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ABSTRACT

The waters of Karangsong are significantly influenced by human activities along the Mangrove Ecotourism area of Karangsong, with a potential for waste discharge that leads to pollution. This study aims to determine the distribution of heavy metals lead (Pb) and copper (Cu) in the waters around mangroves, mangrove sediments, and mangrove roots in the Mangrove Ecotourism area of Karangsong, Indramayu Regency. The method used is a survey, with sampling points determined using purposive sampling based on the potential concentrations of heavy metals. The parameters analyzed include Pb and Cu heavy metals, organic matter, and soil texture. Field observations were conducted by measuring salinity, pH, temperature, and redox. Data analysis involved calculating the bioconcentration factor (BCF) and performing a simple correlation test between environmental parameters and the concentrations of Pb and Cu heavy metals. The results show that the Pb concentration in water ranges from 0.02 mg/l to 0.03 mg/l, while Cu was not detected. The Pb concentration in sediment ranges from 11 mg/kg to 23.1 mg/kg, while Cu ranges from 14.81 mg/kg to 39.19 mg/kg. For mangrove roots, Pb concentrations range from 0.0 mg/kg to 3.5 mg/kg, and Cu concentrations range from 2.6 mg/kg to 6.6 mg/kg. The BCF values between mangrove root concentrations and sediment concentrations for Pb and Cu are less than 1, indicating that these plants fall into the excluder category.

Keywords: Heavy Metals, Mangrove, Copper (Cu), Lead (Pb)