

Kajian Kandungan Merkuri (Hg) Air, Sedimen, Tanah, Tanaman dan Ikan dari Limbah Penambangan Emas Rakyat di Sungai Cicarucub Cibeber, Lebak, Banten

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ABSTRAK

Penambangan emas tanpa izin (PETI) di Kecamatan Cibeber mulai marak setelah resmi penutupan PT. Antam tahun 2015. Penambangan emas rakyat biasa menggunakan merkuri (Hg) yang berlebihan sebagai media pengikat emas dan limbahnya mencemari sungai. Tujuan penelitian yaitu mengetahui tingkat pencemaran merkuri (Hg) pada air sungai, sedimen, tanah, tanaman dan ikan dari limbah penambangan emas rakyat di sungai Cicarucub. Penelitian ini dilaksanakan di Desa Neglasari Kecamatan Cibeber, Lebak, Banten pada bulan Februari 2019 – April 2019. Penelitian ini menggunakan metode survei dengan penentuan titik sampling menggunakan metode *purposive sampling*. Pengambilan sampel dilaksanakan pada 4 titik sampel yaitu 1) Titik 1 : Lokasinya ± 2 km ke arah hulu sebelum lokasi pencemar sebagai pembanding, 2) Titik 2 : Berjarak 0 meter di lokasi sumber pencemar, 3) Titik 3 : Berjarak 100 meter ke arah hilir dari titik 2, 4) Titik 4 : Berjarak 100 meter ke arah hilir dari titik 3. Parameter yang dianalisis yaitu kadar merkuri (Hg) total dengan metode AAS (*Atomic Absorbtion Spektrophotometri*), pH H₂O dengan pH meter, bahan organik dengan metode *Walkley and Black* dan Kapasitas Pertukaran Kation (KPK) dengan NH₄OAc 1N, pH 7,0. Hasil menunjukkan bahwa merkuri (Hg) pada air berkisar 4,7 – 21 ppm, pada sedimen berkisar 54,7 – 79 ppm, pada tanah sawah dan tanaman padi memiliki nilai 41,7 ppm dan 67,7 ppm, pada ikan nila dan wader memiliki nilai 0,72 ppm dan 0,2 ppm. Hasil analisis tanah menunjukkan adanya hubungan yang kuat antara pH air sungai dan KPK sedimen sungai terhadap kandungan merkuri (Hg).

Kata Kunci : Merkuri (Hg), Air, Sedimen, Tanah Sawah, Tanaman Padi, Ikan, PETI.

A Study on the Contents of Mercury (Hg), Water, Sediment, Soil, Plants and Fish in the Traditional Gold Mining Waste at the River of Cicarucub Cibeber, Lebak, Banten

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ABSTRACT

Illegal gold mining (*Penambangan Emas Tanpa Izin* or *PETI*) at Cibeber sub district started to flourish as PT Antam was officially shut down in 2015. Traditional gold mining uses excessive mercury (Hg) as a gold adhesive agent and its waste contaminated the rivers. This research was aimed at finding the level of mercury contamination in the river water, sediment, soil, plants and fish coming from the waste of traditional gold mining at the river of Cicarucub. This research was carried out at Neglasari village Cibeber sub district, Lebak, Banten from February 2019 to April 2019. This research used survey method where the sampling point determination used purposive sampling method. Sampling collection was done on 4 sample points i.e. 1) Point 1, located \pm 2km towards the upstream before contaminating location as a control group. 2) Point 2, located 0 meters from the location of contaminating source. 3) Point 3, located 100 meters towards the downstream from point 2. 4) Point 4, located 100 meters towards the downstream from point 3. Parameters analyzed were total mercury content, using AAS (Atomic Absorption Spectrophotometri), pH of H₂O with pH meter, organic material with Walkley and Black method and Cation-Exchange Capacity (CEC) with NH₄OAc 1N, pH 7.0. the result showed that mercury (Hg) in the water was ranging from 4.7 – 21 ppm, in the sediment from 54.7 – 79 ppm, in the field soil and padi were 41.7 ppm and 67.7 ppm respectively, in the tilapias and spotted barbs were 0.72 ppm and 0.2 ppm respectively. Soil analysis result showed a strong connection between river water pH and the CEC of river sediment towards mercury (Hg) content.

Keyword: Mercury (Hg), Water, Sediment, Field Soil, Padi, Fish, Illegal Gold Mining (PETI)