ABSTRAK

Penambangan pasir di wilayah Daerah Aliran Sungai (DAS) Kali Kuning, Kecamatan Ngemplak, Kabupaten Sleman, menjadi isu penting karena berdampak langsung terhadap kerusakan lingkungan dan sosial masyarakat setempat. Penelitian ini bertujuan menganalisis tingkat kerusakan lingkungan fisik akibat penambangan pasir selain itu, menganalisis faktor yang mempengaruhi kerusakan lingkungan dan dampaknya terhadap tingkat status sosial budaya akibat penambangan pasir gunung merapi di Kali Kuning Kecamatan Ngemplak. Metode yang digunakan meliputi observasi lapangan, studi spasial, dan wawancara. Hasil penelitian menunjukkan bahwa tingkat kerusakan lingkungan fisik tergolong sedang, dengan nilai rata-rata 7,5 berdasarkan empat parameter: jarak bangunan terhadap sungai, bentuk alur sungai, erosi tebing, dan degradasi. Aspek abiotik, tanah regosol yang mudah tererosi, pendalaman dasar sungai, serta perubahan geomorfologi menjadi faktor utama percepatan kerusakan. Aspek biotik menunjukkan bahwa vegetasi lokal seperti bambu, suren, dan semak berperan penting dalam menstabilkan tanah dan menjaga keanekaragaman hayati. Sementara itu, tingkat status sosial budaya mengungkapkan bahwa aktivitas penambangan tanpa izin dan pengawasan turut memicu kerusakan lingkungan serta berdampak pada tingkat sosial budaya. Skor rata-rata 13,33 dari wawancara menunjukkan tingkat dampak sosial budaya berada pada kategori sedang. Temuan ini menegaskan perlunya pengelolaan tambang yang berkelanjutan dan berbasis regulasi untuk menjaga keseimbangan ekosistem dan kesejahteraan masyarakat.

***Kata kunci*:** Penambangan Pasir, Kali Kuning, Kerusakan Lingkungan, Pendekatan Abiotik-Biotik-Sosial

ABSTRACT

Sand mining in the Kali Kuning River Basin (DAS) area, Ngemplak District, Sleman Regency, has become a significant issue due to its direct impact on the environmental and social damage of the local community. This study aims to analyze the level of physical environmental damage due to sand mining, in addition to analyzing the factors influencing environmental damage and its impact on the level of socio-cultural status due to volcanic sand mining in Kali Kuning, Ngemplak District. The methods used include field observation, spatial studies, and interviews. The results of the study indicate that the level of physical environmental damage is classified as moderate, with an average value of 7.5 based on four parameters: distance of buildings from the river, river channel shape, bank erosion, and degradation. Abiotic aspects, easily eroded regosol soil, riverbed deepening, and geomorphological changes are the main factors accelerating damage. Biotic aspects indicate that local vegetation such as bamboo, suren, and shrubs play an important role in stabilizing the soil and maintaining biodiversity. Meanwhile, the level of socio-cultural status reveals that mining activities without permits and supervision have contributed to environmental damage and have an impact on the socio-cultural level. The average interview score of 13.33 indicates a moderate level of socio-cultural impact. This finding underscores the need for sustainable, regulation-based mining management to maintain ecosystem balance and community well-being.

***Keywords*:** Sand mining, Kali Kuning, Environmental Degradation, Abiotic-Biotic- Social Approach