INTISARI

Banjir genangan merupakan fenomena umum di wilayah perkotaan yang dipengaruhi oleh dinamika pengelolaan air dan perubahan penggunaan lahan. Meskipun tidak menyebabkan kerusakan fisik yang signifikan secara langsung, genangan yang berulang dapat menimbulkan ketidaknyamanan bagi masyarakat, dan apabila tidak ditangani, dapat meningkatkan risiko banjir berskala lebih besar akibat terbatasnya kapasitas sistem drainase dalam mengelola limpasan air. Penelitian ini berfokus pada kerawanan banjir genangan di Kapanewon Depok dengan dua aspek utama, yaitu identifikasi spasial wilayah rawan banjir dan analisis dampak sosial-ekonomi akibat kejadian banjir perkotaan. Analisis spasial dilakukan menggunakan parameter fisik seperti elevasi, kemiringan, curah hujan, penggunaan lahan, jenis tanah, kerapatan drainase, buffer sungai, dan buffer jalan dengan metode *Analytical Hierarchy Process* (AHP). Peta kerawanan banjir menghasilkan 42,47% (14,688 km²) sebagai risiko sedang, 39,20% (13,559 km²) risiko tinggi, dan 18,32% (6,337 km²) risiko rendah. Analisis sosial-ekonomi dilakukan melalui *Participatory Geographic Information System* (PGIS) dan wawancara terhadap 254 responden UMKM bidang makanan dan minuman. Sebanyak 67% responden menyatakan lokasi usaha mereka tidak berada di wilayah rawan banjir, sementara 33% menyatakan sebaliknya. Perbedaan ini disebabkan oleh faktor usia, jenis kelamin, pendidikan, dan posisi pekerjaan. Estimasi kerugian ekonomi berdasarkan pengurangan pendapatan harian mengindikasikan bahwa kategori pendapatan menengah (Rp2.500.001–Rp3.000.000) sering mengalami kerugian. Estimasi kerugian pada masing-masing tingkat kerawanan adalah 2,73% (Rp29,1 miliar) untuk risiko rendah, 8,2% (Rp87,4 miliar) untuk risiko sedang, dan 5,07% (Rp54 miliar) untuk risiko tinggi. Pola spasial hunian di Kapanewon Depok bersifat clustered dengan nilai nearest neighbor ratio 0,754076 (<1), z-score -8,713225, dan p-value 0,000000, yang menandakan adanya keterkaitan statistik yang sangat signifikan.

Kata Kunci: banjir genangan, Depok, kerugian ekonomi, UMKM, AHP

ABSTRACT

Flood inundation is a common phenomenon in urban areas, influenced by water management dynamics and land use changes. While it does not cause significant physical damage directly, recurring inundations can create discomfort for the community and, if left unaddressed, may escalate the risk of larger-scale flooding due to limited drainage capacity to manage water runoff. This study focuses on flood vulnerability in Kapanewon Depok, emphasizing two key aspects: spatial identification of flood-prone areas and socio-economic impacts resulting from urban flooding events. The spatial analysis identified flood-prone areas using physical parameters, including elevation, slope, rainfall, land use, soil type, drainage density, river buffers, and road buffers, with an Analytical Hierarchy Process (AHP) method. The resulting flood vulnerability map classified 42.47% (14.688 km²) as moderate risk, 39.20% (13.559 km²) as high risk, and 18.32% (6.337 km²) as low risk. Socio-economic analysis was conducted through Participatory Geographic Information System (PGIS) and interviews with 254 respondents from food and beverage Micro, Small, and Medium Enterprises (MSMEs). Results revealed that 67% of respondents believed their business locations were not flood-prone, while 33% considered their locations vulnerable. This discrepancy between community knowledge and physical parameter analysis is influenced by factors such as age, gender, education, and occupational roles. Economic loss estimation was based on income reductions by flood risk levels. Findings showed that moderate-income categories (IDR 2,500,001–3,000,000) frequently reported losses. The estimated economic losses by flood risk level were 2.73% (IDR 29.1 billion) for low risk, 8.2% (IDR 87.4 billion) for moderate risk, and 5.07% (IDR 54 billion) for high risk. The spatial pattern of settlements in Kapanewon Depok is clustered, with a nearest neighbor ratio of 0.754076 (<1), a z-score of -8.713225, and a p-value of 0.000000, indicating a highly significant statistical association.

Keywords: flood inundation, Depok, economic losses, MSMEs, AHP