

INTISARI

Sumbu Filosofi Yogyakarta merupakan kawasan cagar budaya yang telah diakui sebagai Warisan Dunia oleh UNESCO dan ditetapkan sebagai kawasan yang dikelola dengan prinsip keberlanjutan melalui Peraturan Gubernur Daerah Istimewa Yogyakarta Nomor 2 Tahun 2024. Namun, aktivitas di sepanjang koridor Sumbu Filosofi menunjukkan intensitas mobilitas yang tinggi, dengan dominasi kendaraan bermotor sebagai moda utama transportasi. Tren penggunaan angkutan umum di Daerah Istimewa Yogyakarta juga mengalami penurunan signifikan berdasarkan data Bappeda DIY pada periode 2020–2023. Kondisi ini mengindikasikan bahwa upaya pengendalian emisi kendaraan belum efektif dan memerlukan intervensi melalui kebijakan yang lebih kuat, seperti *Low Emission Zone* (LEZ).

Penelitian ini bertujuan untuk mengidentifikasi kawasan potensial penerapan LEZ pada Sumbu Filosofi Yogyakarta serta merumuskan skenario prioritas intervensi berbasis analisis kawasan guna mendukung pengendalian emisi kendaraan bermotor. Metode yang digunakan adalah pendekatan kuantitatif deduktif yang terdiri dari analisis spasial dan non spasial. Analisis spasial dilakukan melalui pembobotan *Analytical Hierarchy Process* (AHP) dan metode *weighted overlay* dalam Sistem Informasi Geografis (SIG), sedangkan analisis non spasial digunakan untuk menentukan skenario prioritas melalui metode *Eisenhower Matrix*.

Hasil penelitian menunjukkan lima alternatif kawasan potensial LEZ pada skala *neighborhood*, *neighborhood to city wide*, dan *city wide*. Dari hasil analisis, tiga skenario ditetapkan sebagai prioritas intervensi, yaitu Malioboro *Zero Emission Zone* sebagai prioritas utama jangka pendek, Sumbu Filosofi *Protection Zone* sebagai ekspansi jangka menengah/panjang, dan Tugu–Kraton *Parking Control Zone* yang menekankan reformasi tata guna lahan, parkir, serta pengembangan berbasis TOD. Strategi intervensi berjenjang ini dipandang tidak hanya relevan untuk menekan dampak emisi kendaraan bermotor, tetapi juga memperkuat upaya perlindungan kawasan cagar budaya sesuai nilai kelestarian yang ditetapkan UNESCO.

Kata Kunci: *Low Emission Zone*, Sumbu Filosofi, Kawasan Cagar Budaya, Analisis Kawasan

ABSTRACT

The Yogyakarta Philosophical Axis is a cultural heritage area recognized as a UNESCO World Heritage Site and designated as a sustainably managed area through Regional Regulation of the Governor of the Special Region of Yogyakarta Number 2 of 2024. However, activities along the corridor of the Philosophical Axis demonstrate high mobility intensity, dominated by motorized vehicles as the main mode of transportation. The trend of public transportation use in the Special Region of Yogyakarta has also experienced a significant decline according to Bappeda DIY data for the 2020–2023 period. This condition indicates that current efforts to control vehicle emissions have not been effective and require stronger policy interventions, such as the implementation of a Low Emission Zone (LEZ).

This research aims to identify potential areas for the application of LEZ within the Yogyakarta Philosophical Axis and to formulate priority intervention scenarios based on area analysis to support the control of motor vehicle emissions. The research method uses a deductive quantitative approach consisting of spatial and non-spatial analysis. The spatial analysis was carried out using Analytical Hierarchy Process (AHP) weighting and weighted overlay methods within a Geographic Information System (GIS), while the non-spatial analysis determined the priority scenarios through the Eisenhower Matrix method.

The findings reveal five potential LEZ alternatives at the neighborhood, neighborhood-to-city-wide, and city-wide scales. Among these, three scenarios are recommended as priority interventions: the Malioboro Zero Emission Zone as the immediate short-term priority, the Philosophical Axis Protection Zone as a medium-to-long-term expansion strategy, and the Tugu–Kraton Parking Control Zone focusing on land-use reform, parking regulation, and Transit-Oriented Development (TOD). This staged intervention strategy is not only expected to mitigate vehicle emissions but also to strengthen cultural heritage protection in alignment with UNESCO's conservation values.

Keywords: Low Emission Zone, Yogyakarta Philosophical Axis, Cultural Heritage Area, Area Analysis