



INTISARI

INTEGRASI PENGINDERAAN JAUH DAN SIG UNTUK MEMETAKAN KENYAMANAN BERSEPEDA DI KOTA YOGYAKARTA

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Pandemi Covid-19 yang sempat merebak beberapa tahun lalu memicu masyarakat untuk meningkatkan pola hidup sehat salah satunya dengan olahraga bersepeda. Animo masyarakat akan kegiatan bersepeda meningkat semenjak pandemi. Melonjaknya jumlah pesepeda dapat menimbulkan permasalahan terkait dengan kenyamanan dan keamanan bersepeda di jalan umum. Terjadi beberapa kasus kecelakaan dan kriminal dengan korban pesepeda di beberapa daerah. Kota Yogyakarta yang dikenal sebagai Kota Sepeda dahulu memiliki program yang dicanangkan oleh pemerintah setempat berupa *Sego Segawe* yang bertujuan untuk meningkatkan penggunaan sepeda dalam kegiatan sehari-hari masyarakat di Kota Yogyakarta. Infrastruktur seperti jalur sepeda dibangun untuk mendukung kegiatan tersebut. Meski demikian seiring berjalannya waktu infrastruktur tersebut terbengkalai sehingga kualitas fasilitas pendukung kegiatan bersepeda yang ada menurun. Penelitian ini memanfaatkan mosaik Google Earth sebagai data penginderaan jauh dan Sistem Informasi Geografi bertujuan untuk mengetahui tingkat kenyamanan bersepeda saat ini. Penelitian dilakukan dengan membuat model kenyamanan bersepeda berdasarkan indeks *Bicycle Level of Service* (BLOS) yang menilai tingkat kenyamanan berdasarkan kondisi infrastruktur pendukung kegiatan bersepeda di jalan umum. Validasi model kenyamanan bersepeda juga dilakukan memanfaatkan kuesioner untuk membandingkan persepsi kenyamanan bersepeda berdasarkan model dengan persepsi kenyamanan bersepeda menurut pesepeda lokal. Hasil penelitian menunjukkan bahwa berdasarkan model BLOS tingkat kenyamanan bersepeda di Kota Yogyakarta umumnya berada pada kelas Buruk. Hal ini dikarenakan infrastruktur pendukung seperti jalur sepeda yang kondisinya terbengkalai dan lalu lintas di Kota Yogyakarta pada jam puncak cenderung semrawut. Hasil kuesioner menunjukkan respon yang berbeda menurut pesepeda lokal di mana kelas kenyamanan berada pada kelas Sedang. Hal ini dikarenakan persepsi pesepeda lokal yang cukup berbeda dan juga dipengaruhi unsur subjektivitas pengalaman masing-masing pesepeda di samping standar penilaian indeks BLOS yang tinggi.

Kata Kunci: Penginderaan Jauh, SIG, Sepeda, Kenyamanan Jalur Sepeda, Infrastruktur Bersepeda, *Bicycle Level of Service*



ABSTRACT

REMOTE SENSING AND GIS INTEGRATION FOR CYCLING COMFORT MAPPING IN YOGYAKARTA

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The Covid-19 pandemic, which broke out a few years ago, has triggered people to improve their healthy lifestyle, one of which is through cycling. Public interest in cycling has increased since the pandemic. The increase in the number of cyclists can cause problems related to the comfort and safety of cycling on public roads. There have been several cases of accidents and crimes involving cyclists in several areas. The city of Yogyakarta, known as the City of Bicycles, used to have a program launched by the local government in the form of *Sego Segawe* which aims to increase the use of bicycles in the daily activities of the people in the City of Yogyakarta. Infrastructure such as bicycle lanes were built to support these activities. However, over time this infrastructure was neglected so that the quality of existing facilities supporting cycling activities decreased. This study utilizes Google Earth mosaic imagery as remote sensing data and the Geographic Information System aims to determine the current comfort level of cycling in Yogyakarta. The research was conducted by creating a cycling comfort model based on the Bicycle Level of Service (BLOS) index which assesses the level of comfort based on the condition of infrastructure supporting cycling activities on public roads. The validation of the cycling comfort model was also carried out using a questionnaire to compare the perception of cycling comfort based on the model with the perception of cycling comfort according to local cyclists. The results showed that based on the BLOS model, the comfort level of cycling in the city of Yogyakarta is generally in the Bad classification. This is because supporting infrastructure such as bicycle lanes are in a neglected condition and traffic in the city of Yogyakarta tends to be chaotic during peak hours. The results of the questionnaire showed different responses according to local cyclists where the comfort class was in the Medium classification. This is because the perceptions of local cyclists are quite different and are also influenced by the subjectivity of each cyclist's experience in addition to the high BLOS index rating standards.

Keywords: *Remote Sensing, GIS, Bicycle, Bicycle Lane Comfort, Cycling Infrastructure, Bicycle Level of Service*