



INTISARI

Aksesibilitas fasilitas pelayanan kesehatan (fasyankes) adalah tingkat kemudahan masyarakat untuk menjangkau fasyankes. Aksesibilitas fasyankes selama ini hanya diukur dari aspek ketersediaan saja dan belum memperhatikan aspek spasial waktu tempuh dan jarak. Kabupaten Kulon Progo termasuk wilayah yang belum memiliki perhitungan aksesibilitas secara spasial. Kegiatan ini bertujuan untuk menghitung aksesibilitas tersebut dan memetakan distribusi fasyankes di Kabupaten Kulon Progo.

Aksesibilitas spasial diukur berdasarkan waktu tempuh ke fasyankes terdekat, area layanan fasyankes, dan indeks aksesibilitas. Perhitungan aksesibilitas melibatkan data fasyankes, bangunan tempat tinggal, dan jaringan jalan. Kecepatan tiap segmen jalan dalam jaringan dikoreksi berdasarkan kemiringannya yang diekstrak dari Model Elevasi Digital Nasional (DEMNAS). Perhitungan waktu tempuh ke fasyankes terdekat menggunakan analisis jaringan *OD Cost Matrix* pada ArcGIS tanpa batasan waktu. Analisis jaringan yang sama juga digunakan untuk menghitung nilai indeks aksesibilitas, namun dengan batasan waktu 8 menit. Indeks aksesibilitas dihitung dengan metode *Enhanced Two-Step Floating Catchment Area* (E2SFCA). Adapun area layanan fasyankes dikalkulasi menggunakan analisis jaringan *Service Area* dengan interval waktu tempuh 8 dan 15 menit. Di lain pihak, distribusi fasyankes dipetakan dengan menumpang-tindihkan data fasyankes dengan kepadatan penduduk dan bentuk lahan untuk memperoleh pola sebarannya. Kepadatan penduduk yang disajikan dalam bentuk *heatmap* adalah hasil pengolahan data bangunan tempat tinggal dan jumlah penduduk menggunakan *tool Point Density*. Sementara itu, bentuk lahan dianalisis dari *slope* dan *hillshade* yang merupakan hasil pengolahan DEMNAS.

Hasil analisis menunjukkan bahwa sebagian besar penduduk Kabupaten Kulon Progo dapat mengakses fasyankes terdekat dalam waktu 8 menit dan tercakup dalam area layanan fasyankes baik 8 maupun 15 menit. Namun, indeks aksesibilitasnya cenderung rendah. Di lokasi berindeks rendah, terdapat paling banyak tiga fasyankes yang dapat diakses penduduk dalam waktu 8 menit, di lokasi berindeks tinggi rata-rata terdapat 11 unit, sementara di lokasi berindeks nol tidak ada. Sekitar 61.000 penduduk berada di lokasi berindeks nol yang berada di luar area layanan fasyankes 8 menit dan umumnya terdapat di daerah perbukitan. Aksesibilitas di daerah perbukitan lebih rendah dibanding daerah dataran sebab fasyankes cenderung terkonsentrasi di daerah dataran dan padat penduduk, terutama rumah sakit dan klinik.

Kata Kunci: aksesibilitas, fasilitas pelayanan kesehatan, analisis jaringan, area layanan



ABSTRACT

Accessibility to healthcare facilities is the level of ease for the population to reach healthcare facilities. Accessibility to healthcare facilities has solely been measured from the availability and has not considered the spatial aspects of travel time and distance. Kulon Progo Regency is a region that doesn't have spatial accessibility measurements yet. This research aims to measure the accessibility and map healthcare facilities distribution in Kulon Progo Regency.

Spatial accessibility is measured based on travel time to the nearest healthcare facility, healthcare service area, and accessibility index. Data used for accessibility calculation include healthcare facilities, residential buildings, and road networks. The speed of each road segment in the network was corrected based on the slope extracted from National Digital Elevation Model (DEMNAS). Travel time calculation to the nearest healthcare facility used the OD Cost Matrix network analysis in ArcGIS without time limits. The same network analysis was also used to calculate the accessibility index, but with an 8-minute time limit. The accessibility index was calculated based on the Enhanced Two-Step Floating Catchment Area (E2SFCA) method. As for the healthcare service area, it was calculated using Service Area network analysis with a travel time interval of 8 and 15 minutes. Meanwhile, healthcare facilities distribution was mapped by overlapping healthcare facilities data with population density and landforms to get the distribution pattern. Population density presented as a heatmap was the processing result of residential buildings and population per village data using the Point Density tool. As for landforms, it was analyzed from the slope and hillshade, which were DEMNAS processing results.

The outcomes show that the majority of the population in Kulon Progo Regency can reach the nearest healthcare facility within 8 minutes and covered in the 8 or 15-minute healthcare service area. However, the accessibility index tends to be low. At low indexed locations, there are at most three facilities that are accessible by residents within 8 minutes, at high indexed locations there are 11 units on average, while at zero-indexed locations there are none. About 61,000 residents are in zero-indexed locations outside the 8-minute healthcare service area and generally found in hilly areas. Accessibility in hilly areas is lower than in the plains because healthcare facilities tend to be concentrated in flat and densely populated areas, especially hospitals and clinics.

Keywords: accessibility, healthcare facilities, network analysis, service area