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Potensi banjir (genangan) di Kotamadya Mataram: (Suatu kajian berdasarkan perspektif kelingkungan)
Gulam Abbas, Dr. Karmono Mangunsukardjo, M.Sc.
Universitas Gadjah Mada, 1997 | Diunduh dari http://etd.repository.ugm.ac.id/

INTISARI

Penelitian ini bertujuan mengkaji potensi banjir (genangan) di wilayah Kotamadya Mataram ditinjau dari karakteristik lahan (kondisi fisik lingkungan) dan keadaan perubahan penggunaan lahan (perkembangan area terbangun) karena pertambahan jumlah penduduk.

Penentuan karakteristik lahan dalam hubungan dengan banjir (genangan) menggunakan metode deskriptif kualitatif. Penentuan hubungan pertambahan jumlah penduduk, peningkatan luas area terbangun dan banjir (genangan) menggunakan analisis keruangan dan analisis regresi. Analisis regresi digunakan untuk mengetahui pengaruh pertambahan jumlah penduduk terhadap luas area terbangun dan untuk mengetahui pengaruh peningkatan luas area terbangun dan pertambahan jumlah penduduk terhadap area banjir (genangan).

Hasil penelitian menunjukkan bahwa karakteristik lahan yang berkontribusi terhadap banjir (genangan) sebagai berikut: topografi (relief) sebagian besar wilayah adalah datar (flat land), kemiringan lahan 0-2%; permukaan airtanah tergolong dangkal (berkisar 1,0-6.0 meter), sungai-sungai induk seluruhnya bermeander, lereng bagian hilir berkisar 3%, muara sungai kerapkali tertutup pasir pantai, lahan miskin anak sungai (drainase alam buruk); dan kondisi curah hujan cukup tinggi.

Analisis keruangan menunjukkan bahwa di seluruh daerah penelitian, pada *periode pertama* (1975-1985), persentase peningkatan kepadatan penduduk seimbang dengan peningkatan luas area terbangun (masing-masing 42,5% dan 45%), sedangkan persentase peningkatan luas banjir (genangan) meningkat 141%. Pada *periode kedua* (1985-1995), persentase dimaksud masih tetap berimbang (masing-masing 25,3% dan 23,8%), sedangkan persentase luas banjir meningkat 104%. Selain itu analisis keruangan memperlihatkan perluasan area banjir (genangan) cenderung menuju ke arah Barat dan ke arah Selatan. Sementara pertambahan jumlah penduduk, perluasan area terbangun, dan perluasan area banjir (genangan) cenderung terpusat pada wilayah yang sama.

Analisis regresi menunjukkan bahwa pertambahan jumlah penduduk mengakibatkan peningkatan luas area terbangun, yakni tiap-tiap pertambahan satu penduduk akan meningkatkan area terbangun seluas 10,85 m^2. Sementara peningkatan luas area terbangun dan pertambahan jumlah penduduk tidak menunjukkan adanya pola hubungan linier terhadap luas area banjir (genangan).

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ABSTRACT

The aim of this study was to examine the potential of flooding (inundation) in Mataram Municipality, observed from land characteristics (the physical environmental conditions) and the land use changes (the extension of the built up area), due to population increase.

In order to determine land characteristics which are related with flooding (inundation), the qualitative descriptive method was used. In order to determine the relationship between population increase, extension of the built up area and flooding (inundation), spatial and regression analysis were used. Regression analysis was used to determine the influence of population increase towards the extension of the built up area, and to determine the influence of extension of the built up area and the increase in population towards flooding (inundation).

Result of the study indicated that the land characteristics that contributes towards flooding (inundation) are: topography (relief) of the area which is generally flat, slope steepness of the land wich is between 0 - 2%; the area has shallow groundwater (1.0 - 6.0 meters), the major rivers meanders, the lower slope of the rivers are more or less than 3%, the rivers mouth are often blocked by the sand, the area has no tributaries (poor drainage); and high amount of rainfall.

The spatial analysis indicated that in the entire study area, during the first period (1975-1985), the percentage increase in population density was in balance with the extension of the built up area (42,5% and 45% resfectively), while the percentage extention in flooding (inundation) was 141%. During the second period (1985-1995), the percentage increase was in balance (25,3% and 23,8% resfectively), but the percentage increase in flooding area was 104%. Besides that it also indicated that the direction of flooding extension tends towards the West and South. Increase in the total number of people, extension of the built up area and extension of flooding tends to concentrate in the same area.

Regression analysis indicated that population increase caused an extension in the built up area, that is; every increase by a single person was followed by an extension in the built up area of about 10.85 m^2. While an extension in the built up area and increase in population did not indicate any significant influence on the flooding area.