

# **Evaluation of geometrical characteristics of vegetation distribution in Tokyo central with high resolution satellite data**

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Geometrical characteristics of vegetation distribution fulfill an important role for advancing excellent urban development especially because vegetation's role in urban area is large in making the condition of temperature and solving various climatic issues. However, neither a proper amount nor suitable layout of vegetation seems to be satisfied by various reasons. The purpose of city planning is maximization of the urban area's function, which satisfy better productive condition for the population density. At the same time, it is necessary to maximize vegetation effects in the space in order to give better natural environmental condition for the population density. The authors are studying about geometrical characteristics of the vegetation distribution to fulfill these contradictory requirements. Urban vegetation has been watched through numerous aerial photographs. However, high resolution satellite data have same and new potentials for this issue. This study uses both IKONOS and Quickbird satellite data to investigate the whole image of the city's vegetation distribution within a 10km radius from Tokyo central. Extracting the vegetation distribution in the area, the geometric characteristic is investigated as a result. A regular arrangement of vegetation is found in the central. On the other hand, an irregular distribution of small-scale vegetation is detected in the surrounding area. The ratio of the cover of large-scale vegetation with a continuous distribution is evaluated in the center area. The few ratio of small-scale vegetation is evaluated in the surrounding area. The necessity that the characteristic of different respectively of the center and the surrounding vegetation distribution is harmonized is considered.