

Evaluation and Priority Assesement of Green Open Space in Bekasi City Based On Remote Sensing Integration

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City is one of fundamental element in sustainable development planning , so that the city planning became one of an essential thing to create an ideal urban region that can accommodate people who live on it. City development planning has many dimensions, one of which is a Green Open Space. Green Open Space in urban development planning has an important role as a counterweight it has an ecological function, a social function, an economic function, an architectural function and an aesthetics function. According to Law Spatial Planning No. 26 of 2007 , city must have a Green Open Space with a minimum value of 30% of the city area. In fact many cities in Indonesia are not able to meet the requirements of Urban Green Open Space, especially in the big city for example Bekasi City. Bekasi City is a metropolitan city that became the satellite city of Jakarta with an area of 210. 490 ha and population of 1,870,637 inhabitants with vast land up to 74% or approximately 155.400 ha. Evaluation of Green Open Space is important to determine the availability of Green Open Space and to determine the site location of Green Open along with the types of Green Open Space in accordance with the conditions of the city's region. Evaluation of green open space can be done through the integrated GIS (Geography Information System) and Remote Sensing. Remote Sensing imagery which is used in this research is Landsat 7 ETM +, based on the number of channels produced at the recording includes the visible, near infrared, middle Infrared, far Infrared and thermal. Evaluation and assessment priorities of Green Open Space is processed by extracting the remote sensing imagery. The evaluation process and priority assesement uses transformation of NDVI by using digital number value on channel 6 (thermal) become the surface temperature on Landsat 7 ETM + imagery. The evaluation is processed by looking at the value of Green Open Space with a size of the basic value of 30% of the Bekasi City area. The area of Green Open Space values found by using a vegetation density value which is transformed by the Normalized Difference Vegetation Index (NDVI) . Normalized Difference Vegetation Index (NDVI) range from -1 to 1 and then regressed based on the results of the field to obtain the vegetation density map and used as a Green Open Space. The assesment of Green Open Space location placement priority uses the surface temperature values which is obtained through the transformation of digital number values into the value of radiation that is converted to the value of the surface temperature through the surface temperature algorithm. Surface with the high temperature values can be used as a site location of Green Open Space in Bekasi City.

Keywords: Green Open Space, Evaluation, NDVI, Priority, Surface Temperature