

Dinamika Tingkat Kerapatan Kanopi Hutan Mangrove di Kawasan Pesisir Desa Pasar Banggi, Kabupaten Rembang

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INTISARI

Pengelolaan hutan mangrove Desa Pasar Banggi telah dilaksanakan sejak lama. Selain kegiatan rehabilitasi, masih ditemukan adanya permasalahan berupa gangguan yang menyebabkan perubahan kondisi hutan mangrove. Diperlukan adanya pemantauan secara berkala guna mengetahui dinamika kondisi hutan mangrove. Informasi kerapatan kanopi dapat digunakan untuk mengetahui kondisi vegetasi penyusun hutan mangrove. Tujuan penelitian ini adalah menduga kerapatan kanopi hutan mangrove menggunakan citra satelit Landsat dan mengkuantifikasi dinamika tingkat kerapatan kanopi hutan mangrove di kawasan pesisir Desa Pasar Banggi tahun 1990 – 2021.

Pendugaan nilai kerapatan kanopi mangrove diperoleh dengan membangun persamaan melalui nilai transformasi *Normalized Difference Vegetation Index* (NDVI) dari citra Landsat dan nilai kerapatan kanopi hasil pengambilan data lapangan. Hasil pendugaan kemudian dilakukan kuantifikasi untuk memperoleh dinamika tingkat kerapatan kanopi hutan mangrove tahun 1990 – 2021.

Hasil penelitian menunjukkan bahwa pendugaan kerapatan kanopi mangrove menggunakan citra satelit Landsat dapat dimodelkan melalui persamaan $Y = 82.889X + 24.707$. Model yang diperoleh memiliki kemampuan yang baik dalam menduga kerapatan kanopi mangrove, dibuktikan dengan nilai R^2 sebesar 0,734. Hutan mangrove di pesisir Desa Pasar Banggi, Rembang pada tahun 1990 – 2021 terjadi penambahan luas pada kelas kerapatan jarang 1,26 Ha, kelas kerapatan sedang 13,23 Ha, dan kelas kerapatan tinggi 4,59 Ha. Secara keseluruhan, terjadi penambahan 19,08 Ha tutupan hutan mangrove.

Kata kunci: *Kerapatan Kanopi, Hutan Mangrove, NDVI, Penginderaan Jauh*

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***Dynamics of Mangrove Forest Canopy Density in the Coastal Area of Pasar
Banggi Village, Rembang Regency***

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ABSTRACT

Mangrove forest management in Pasar Banggi Village has been implemented for long time. Other than rehabilitation activities, there are still problems in the form of disturbances that cause changes in the condition of the mangrove forest. Periodic monitoring is needed to determine the dynamics of the condition of the mangrove forest. Canopy density information can be used to determine the condition of the vegetation that makes up the mangrove forest. The purpose of this study was to estimate the density of the mangrove forest canopy using Landsat satellite imagery and to quantify the dynamics of the mangrove canopy density level in the coastal area of Pasar Banggi Village from 1990 to 2021.

The estimation of the mangrove canopy density value was obtained by building an equation using the Normalized Difference Vegetation Index (NDVI) transformation value from the Landsat image and the canopy density value from the field data collection. The estimation results are then quantified to obtain the dynamics of the mangrove forest canopy density level from 1990 to 2021.

The results showed that the estimation of mangrove canopy density using Landsat satellite imagery could be modeled using the equation $Y = 82.889X + 24,707$. The model obtained has a good ability to estimate the density of the mangrove canopy, as evidenced by the R^2 value of 0.734. Mangrove forest on the coast of Pasar Banggi Village, Rembang, in 1990-2021 there was an increase in area in the rare density class of 1.26 Ha, medium density class 13.23 Ha, and high density class 4.59 Ha. Overall, there was an addition of 19.08 Ha of mangrove forest cover.

Keywords: Canopy Density, Mangrove Forest, NDVI, Remote Sensing

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