ANALISIS PERUBAHAN TUTUPAN LAHAN DAN STATUS KEBERLANJUTAN PENGELOLAAN KAWASAN EKOSISTEM ESENSIAL MANGROVE DESA PASARBANGGI, KABUPATEN REMBANG

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INTISARI

Kawasan Ekosistem Esensial (KEE) Mangrove Desa Pasarbanggi, Kabupaten Rembang, memiliki peran yang penting terhadap keseimbangan ekosistem. Besarnya peran KEE Mangrove Pasarbanggi dapat diketahui dari banyaknya flora dan fauna yang bergantung hidup pada ekosistem mangrove. Namun, ekosistem ini mengalami tekanan akibat abrasi, konversi lahan, serta aktivitas manusia yang menyebabkan degradasi dan penurunan luas tutupan lahan. Penelitian ini bertujuan untuk menganalisis perubahan tutupan lahan dan menilai status keberlanjutan pengelolaan di KEE Mangrove Pasarbanggi.

Algoritma LandTrendr dan citra satelit Sentinel-2A tahun 2016-2024 dengan indeks *Combined Mangrove Recognition Index* digunakan untuk mengklasifikasikan tutupan lahan. Analisis keberlanjutan dilakukan dengan pendekatan *Rapid Appraisal for Fisheries* melalui metode *Multi-Dimensional Scaling* yang mencakup enam dimensi: ekologi, ekonomi, sosial, etika lingkungan, kelembagaan, dan teknologi.

Hasil penelitian menunjukkan bahwa pada KEE Mangrove Pasarbanggi terjadi penurunan luasan tutupan lahan selama kurun waktu tahun 2016 hingga 2024 seluas 5,7 Ha. Status keberlanjutan pengelolaan KEE Mangrove Pasarbanggi adalah Cukup Berkelanjutan. Demikian juga pada dimensi ekologi, ekonomi, sosial, etika lingkungan, kelembagaan, dan teknologi yang menunjukkan status Cukup Berkelanjutan. Faktor-faktor atau atribut sensitif yang memengaruhi indeks keberlanjutan ini mencakup keanekaragaman jenis mangrove, tutupan tajuk, pH air, kerapatan vegetasi, akses, jasa wisata mangrove, komunikasi, kondisi penduduk, pemahaman masyarakat, pembibitan mangrove, pemilihan jenis mangrove, pola tanam mangrove, kinerja kelompok pengelola, peran aktif pemerintah desa, sarana dan prasarana, fasilitasi dan pendampingan, serta penataan wilayah. Hasil tersebut mengindikasikan bahwa keberlanjutan pengelolaan KEE Mangrove Pasarbanggi dapat terus ditingkatkan dengan mengoptimalkan atribut sensitif dalam pengelolaannya.

Kata Kunci : *Combined Mangrove Recognition Index*, Keberlanjutan, KEE Mangrove, Perubahan Tutupan Lahan, *Rapid Appraisal for Fisheries*

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ANALYSIS OF LAND COVER CHANGE AND SUSTAINABILITY STATUS OF MANGROVE ESSENTIAL ECOSYSTEM AREA MANAGEMENT IN PASARBANGGI VILLAGE, REMBANG REGENCY

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ABSTRACT

The Mangrove Essential Ecosystem Area (KEE) of Pasarbanggi Village, Rembang Regency, has an important role in the balance of the ecosystem. The magnitude of the role of KEE Mangrove Pasarbanggi can be known from the many flora and fauna that depend on the mangrove ecosystem. However, these ecosystems are under pressure due to abrasion, land conversion, and human activities that cause degradation and decrease in land cover. This study aims to analyze land cover changes and assess the status of management sustainability in KEE Mangrove Pasarbanggi.

The LandTrendr algorithm and Sentinel-2A satellite imagery for 2016-2024 with the *Combined Mangrove Recognition Index* were used to classify land cover. Sustainability analysis is carried out using the *Rapid Appraisal for Fisheries* approach through *the Multi-Dimensional Scaling* method which includes six dimensions: ecology, economy, social, environmental ethics, institutional, and technology.

The results of the study show that in the Pasarbanggi Mangrove KEE there was a decrease in land cover area during the period from 2016 to 2024 covering an area of 5.7 Ha. The sustainability status of the management of KEE Mangrove Pasarbanggi is quite sustainable. Likewise, in the ecological, economic, social, environmental ethics, institutional, and technological dimensions that show the status of Sufficiently Sustainable. Sensitive factors- or attributes that affect this sustainability index include mangrove species diversity, canopy cover, water pH, vegetation density, access, mangrove tourism services, communication, population conditions, community understanding, mangrove nurseries, mangrove type selection, mangrove planting patterns, management group performance, active role of village government, facilities and infrastructure, facilitation and mentoring, and regional planning. These results indicate that the sustainability of the management of Pasarbanggi Mangrove KEE can continue to be improved by optimizing sensitive attributes in its management.

Keywords: Combined Mangrove Recognition Index, KEE Mangrove, Land Cover Change, Sustainability, Rapid Appraisal for Fisheries, Sustainability

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