

ABSTRAK

Luas hutan mangrove di Indonesia diperkirakan mencapai 3.112.989 ha atau 22,6% dari total keseluruhan mangrove di dunia. Konservasi karbon merupakan suatu aktivitas untuk konservasi ekosistem melalui proses penyerapan karbon. Tujuan dari penelitian ini untuk mengetahui luasan dan potensi karbon mangrove berdasarkan tingkat kerapatan dengan analisis *Normalized Different Vegetation Index* (NDVI) dan *Mangrove Vegetation Index* (MVI) serta mengetahui pemetaan potensi karbon mangrove Segara Anakan Kabupaten Cilacap. Citra satelit yang digunakan adalah Sentinel-2A daerah Segara Anakan periode perekaman 06 Juni 2022. Analisis data spasial dengan menggunakan *index* NDVI dan MVI serta validasi data lapang. Potensi luasan kawasan mangrove di Segara Anakan adalah 6.625,8 ha. Pemetaan potensi stok karbon mangrove di Segara Anakan berdasarkan analisis NDVI dan MVI. Potensi stok karbon mangrove di Segara Anakan berdasarkan analisis NDVI sebesar 0,38 ton/ha, berdasarkan analisis MVI sebesar 0,4 ton/ha.

Kata Kunci : Potensi karbon mangrove, Segara Anakan, Sentinel-2A, NDVI, MVI.



ABSTRACT

Mangrove forests estimated in Indonesia has 3,112,989 hectares, or 22.6% of all mangroves worldwide. Through the process of carbon absorption, carbon conservation works to preserve ecosystems. The purpose of this study is to map the carbon potential of Segara Anakan mangroves in Cilacap Regency and to ascertain the extent and carbon potential of mangroves based on density level using Normalized Different Vegetation Index (NDVI) and Mangrove Vegetation Index (MVI) analysis. Sentinel-2A satellite imagery from June 6, 2022, was used in the Segara Anakan region. Validation of field data and NDVI and MVI index analysis of spatial data. Segara Anakan's possible mangrove area is located in 6,625.8 ha. Mapping potential mangrove carbon stocks in Segara Anakan based on NDVI and MVI analysis. The potential for mangrove carbon stock in Segara Anakan based on NDVI analysis is 0.38 tons/ha, based on MVI analysis it is 0.4 tons/ha.

Keywords: Mangrove carbon potential , Segara Anakan, Sentinel-2A, NDVI, MVI.

