

Evaluation of internal factors that affect the health condition of the Mangrove Forest in the Coast of East Lampung Regency

Rahmat Safe'i^{1*}, Ferdy Ardiansyah², Irlan Rahmat Maulana³

^{1, 2, 3}, Master of Forestry Study Program, Faculty of Agriculture, Postgraduate University of Lampung

Jln. Prof. Dr. Ir. Soemantri Brojonegoro No. 1, Gedong Meneng, Bandar Lampung, 35145, Indonesia

Abstract. The surrounding community widely uses mangrove forests as a fulfillment of life. This requires an efforts to preserve the mangrove forest so that no damage occurs. This study aimed to determine the internal factors that affect the health condition of mangrove forests. The research method used to obtain internal factor data is by measuring the ecological indicators of forest health using the Forest Health Monitoring (FHM) method, then the data is processed by the Multiple Regression Analysis method using SPSS 20 through data on internal factors of mangrove forest health which are analyzed for their effect on health conditions of the mangrove forest. The results showed that the significant value of the regression was 0.008 ($\alpha = 0.05$) > 0.008, this means that simultaneously the independent variables (tree damage, crown damage, Cation Exchange Capacity-CEC, and biodiversity) have an effect on the dependent variable (mangrove forest health) at the level of = 5%. Furthermore, through individual regression coefficients from internal factor data, it is found that the internal factors of biodiversity indicators in measurements 1 and 2 and crown conditions in the second measurement do not affect forest health conditions. Therefore, this research concludes that the internal factors that affect the level of forest health in the first measurement are vitality indicators (tree damage/cluster Plot Index-CLI and crown condition) and site quality indicators (CEC). Meanwhile, in the second measurement, there was a change in the crown condition parameters, which did not significantly affect forest health.