

# Penggunaan citra satelit dan normalized difference vegetation index (NDVI) untuk prediksi pola kekayaan spesies burung dan habitatnya di Taman Nasional Bali Barat = Using satellite imaginary and normalized difference vegetation index (NDVI) to predicting bird species richness pattern and their habitat in West Bali National Park

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## Abstrak

Penelitian telah dilakukan dengan tujuan untuk menganalisis dan memprediksi pola kekayaan spesies burung dan habitatnya di Taman Nasional Bali Barat TNBB . Penelitian dilakukan pada tanggal 23--27 Juli 2016 di kawasan TNBB, Kabupaten Buleleng meliputi lima lokasi yaitu Trimbawan pelataran , Trimbawan baru, Prapat Agung, Lampu Merah dan Tegal Bunder. Metode observasi burung menggunakan Point Count, sedangkan profil habitat dilakukan dengan analisis vegetasi. Pengolahan data citra menggunakan citra satelit Landsat 7 Thematic Mapper TM. Nilai NDVI dihitung melalui perbandingan rasio band 4 sebagai near-infrared NIR dan band 3 sebagai red-light RED. Analisis hubungan dan pengaruh antara kekayaan spesies burung dengan nilai NDVI dihitung dengan analisis regresi linier. Hasil menunjukkan terdapat 52 spesies burung dan 303 individu. Hubungan antara kekayaan spesies burung dengan nilai NDVI berkorelasi signifikan  $R^2 = 0.808$ ;  $p\text{-value} = 0.037$ ;  $P < 0.05$  menunjukkan bahwa nilai NDVI dapat memprediksi kekayaan spesies burung di TNBB.

.....Research has been conducted to analyze and predict bird species richness pattern and their habitat in the West Bali National Park TNBB . Research was conducted on 23 27 July 2016 in TNBB area, Buleleng Regency covering five locations namely Trimbawan pelataran , Trimbawan baru, Prapat Agung, Lampu Merah and Tegal Bunder. Bird observation was carried out using Point Count method, while habitat profile is measure by vegetation analysis. Image data processing used Landsat 7 Thematic Mapper TM satellite image. The NDVI value is calculated by comparison of ratio band 4 as near infrared NIR and band 3 as red light RED . Analysis of relationship and the effect of bird species richness with NDVI values was calculated by linear regression. Results showed that there were 52 species of birds and 303 individuals. The association between bird species richness and NDVI values was significant  $R^2 0.808$   $p$  value  $0.037$   $P 0.05$  indicating that NDVI values can predict the bird species richness in TNBB.