

S1. Spectral Profile of Polluted and Control Transects

The spectral profile of selected segments on polluted and control transects suggest that oil pollution impacted on vegetation spectra. The effect is most apparent the VNIR region, particularly the red band known for maximum radiance absorption. The profiles in Figure 4 showed decreased red reflectance and increased NIR reflectance in control transects whereas the reverse was observed on polluted transects. Since healthy and dense vegetation are associated with high NIR reflectance, the spectral profiles confirmed that polluted vegetation spectra was impacted by the presence of TPH in the soil.

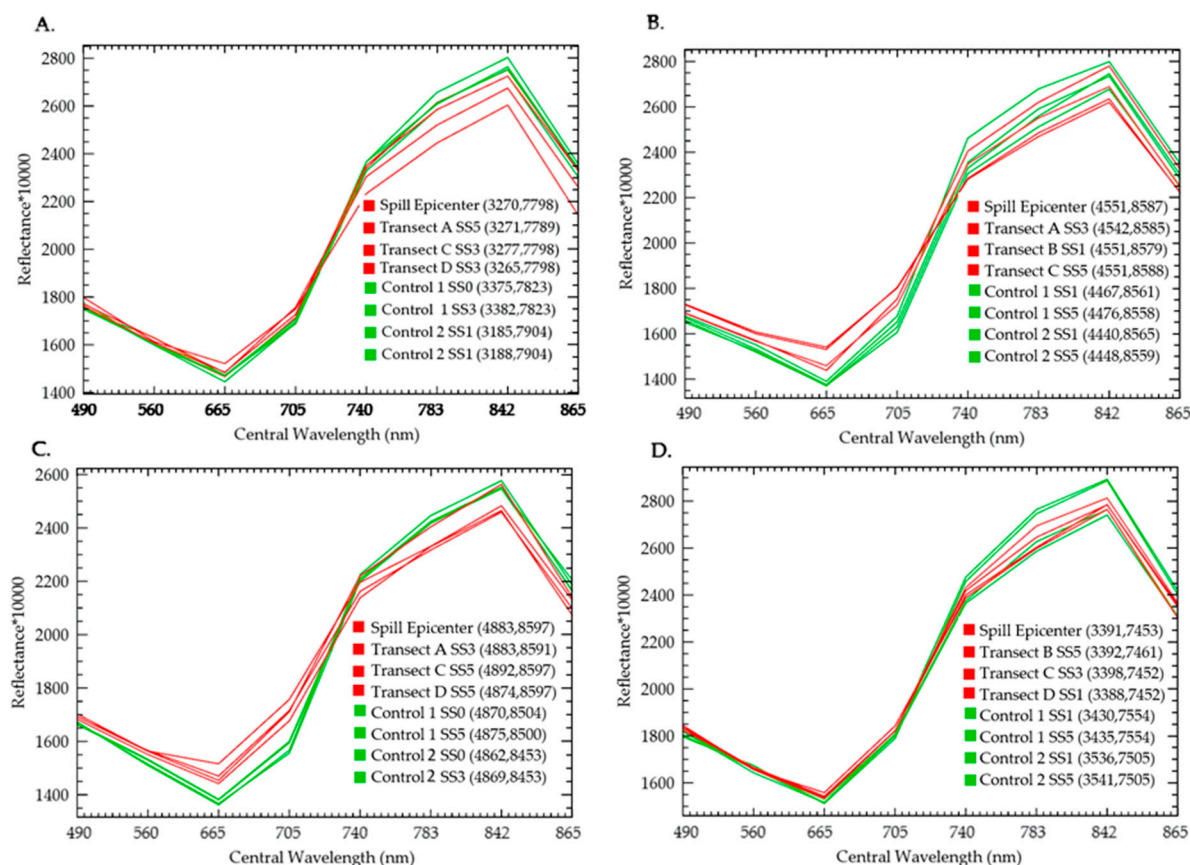


Figure S1. Spectral profile of vegetation on polluted (red curves) and control (green curves) transects sampled from A. Rumuekpe, B. Umukpoku, C. Omoigwor and D. Alimini locations in Rivers State of Nigeria. Random pixels were selected from segments and the column and row numbers are shown in parenthesis. Profiles clearly show decreased red reflectance and increased NIR reflectance on control transects which contrasts with the pattern of red and NIR reflectance of polluted vegetation.

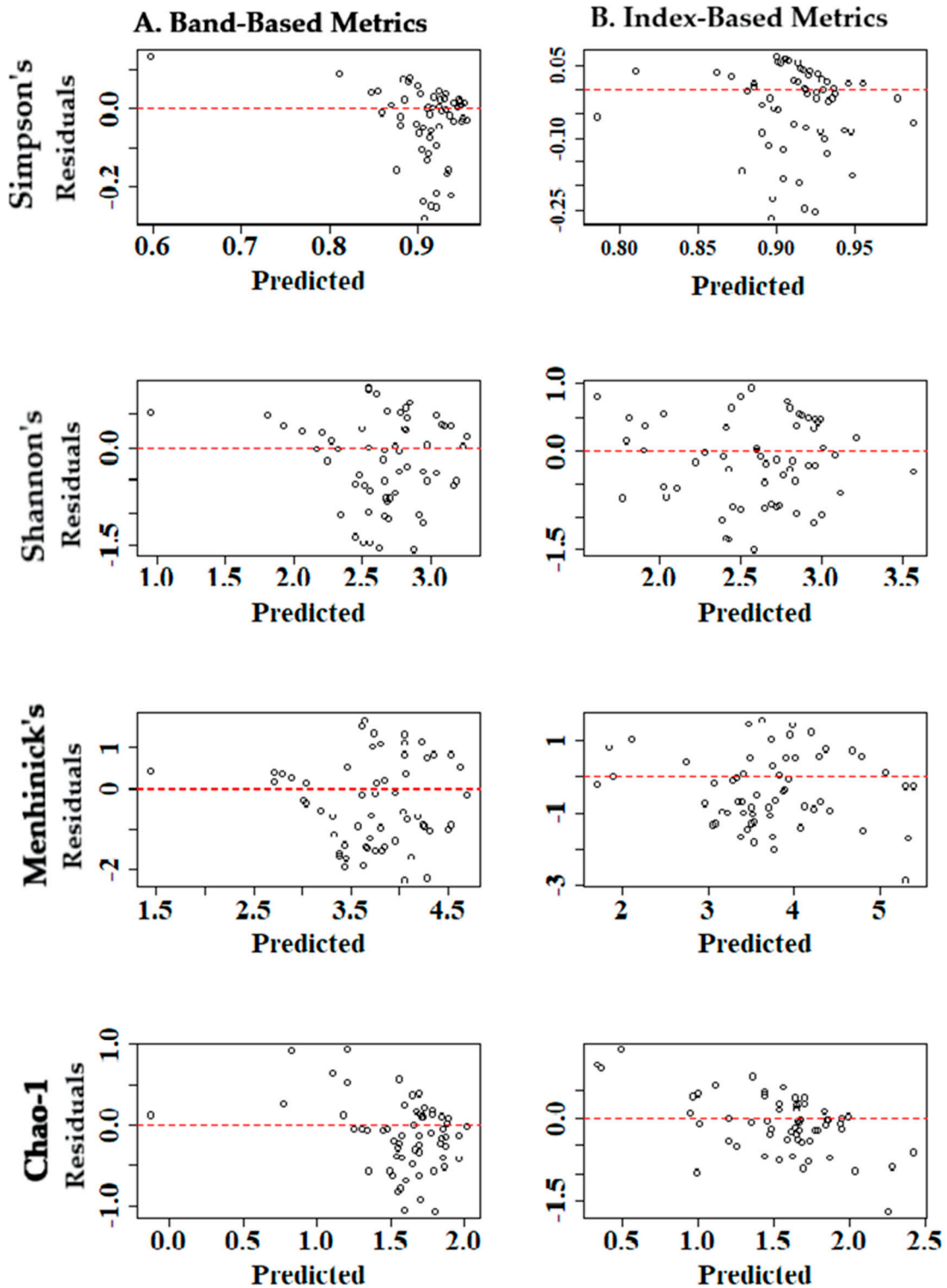


Figure S2: Graphical plots of residuals from model validation using test data. Model parameters are from regression of spectral diversity metrics (A = band metrics and B = index metrics) on species diversity indices using test data (n = 60). The residual plots from both band and index based metrics meet the goodness-of-fit assumptions of linearity, randomness and homoscedacity.