**Application of Hyperspectral Data for Discriminating**

**Tree Species in Peatland, Central Kalimantan, Indonesia**

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**Abstract**: The tropical peatland in Central Kalimantan has been recognized as one of the most significant carbon reservoirs in the world. It is important to conserve its biodiversity through mapping. This study has tried to discriminate tree species or plants and to know their distribution (mapping) in peatland by utilizing hyperspectral imagery. The mapping method used SAM (Spectral Angle Mapper) and the data used HyMAP. SAM is an automated method for comparing image spectra to individual spectra or to a spectral library. HyMap is an airborne hyperspectral imaging sensor that has 128 spectral bands spanning the wavelength interval 0.45–2.5 μm. The HyMap data for the study site was taken on July 16, 2011. The input spectra data for HyMAP classification was obtained from field measurements using spectrometer ASD FieldSpec-3. With threshold set to 0.2 radians, the SAM results showed that the Bangka species dominated 56 % of the study site, followed by Gercinia (29%) and the rest are for Balau Alau Decidium, Grunggang, Shorea-B and unclassified class.

Keywords: hyperspectral, HyMAP, Spectral Angle Mapper, peatland