

# Establishment of Spectral Signature Bank of Sri Lanka

Arthur C Clarke institute have in hand spectroscopic facility with hand-held contact probe and PSR-1100F portable Spectroradiometer (spectral range of 320–1100 nm) which take measurements of spectral reflectance and spectral radiance of a source. This instrument has stand-alone systems that work independently without need to be connected to a PC. This makes highly portable while maintaining the accuracy of a spectroradiometer. Establishment of the Spectral Signature Bank of the Sri Lanka is one of the Major projects using PSR-1100F. Spectroradiometers can handle attaining Spectral bank of spectral signatures of various sources like soil, vegetation, mineralogy and rock types and etc. Spectroradiometers are used in many applications, and can be made to meet a wide variety of specifications. Example applications include: Spectroradiometers are used to take measurements of radiation at specific wavelengths, and are used to infer plant health, determine the transmissivity of a material, monitor atmospheric energy flux, optimize electric lighting for plant growth, and many other purposes.

As an initial step Evaluation of traditional rice varieties in Sri Lanka is carried out with collaboration of Rice research Development Institute, Bathellogoda. Data collection was completed on rice varieties and data analysis is doing with statistical approaches behind Hyperspectral remote sensing. Spectral characteristics of plants at various wavelengths are governed by leaf inter and intra cellular structure, biochemical contents such as chlorophyll, carotenoid, nitrogen, and water content in this project. Universities and research organizations are welcome if they are interested with collaborative projects.

