

SNPP data access for agricultural monitoring

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The Suomi National Polar Partnership (SNPP) satellite, flown by NASA and NOAA, is the next generation polar orbiting environmental satellite of the US government. The primary imager on board is the Visible Infrared Imaging Radiometer Suite (VIIRS). NPP data are freely available from the NOAA Comprehensive Large-data Array Stewardship System (CLASS). SNPP produces a number of data products relevant to agricultural monitoring, such as vegetation index, land surface temperature, vegetation fraction, and rain rates. However there are three significant barriers to utilization of the SNPP data for agricultural monitoring: 1) The file format available from CLASS is HDF5, which few users are able to work with. 2) The stacking of metadata layers such as scan angle and solar elevation angles in the HDF5 makes the download size a problem for distant users with limited download bandwidth. 3) There are no cloud-free composites available in CLASS. NGDC has developed processing systems to convert the HDF5 data to geolocated images in geotiff format and cloud-free compositing for several key data types, vastly reducing download data volumes. A prototype web access system has been established for a region in Asia. This presentation will provide an overview of the SNPP sensors and the NGDC products and services relevant to agricultural monitoring.