Satellite offers a unique source of information for many agricultural applications. Recent advances in satellite technology in terms of high resolution , multi-spectral bands provide useful information for agricultural operations. Integrated use of satellite data and conventional meteorological observations is found to be very useful to extract information relevant to agriculture in India. Agricultural meteorology is one of the fields of hydrometeorology for which satellite data are very important. Agrometeorological parameters are very variable in time and space. Ground observations do not provide end–users with required spatial and temporal resolution. Information about large areas can only be obtained by remote sensing. The flow of data from new satellites such as Meteosat-8, Terra, etc. is much more informative which opens new areas for agrometeorological applications.

Satellite remote sensing technology is increasingly gaining recognition as an important source of operational agrometeorological services. The regular and national scale agrometeorological monitoring of the physiological processes and growth indicators require retrieval of basic land surface variables using spatial observations. The challenge for research therefore is to develop new systems extracting this information from remotely sensed data, giving to the final users near-real-time information. Satellite based agrometeorological products and the interpretation of the same in terms of crop and soil moisture status will help the experts to frame the advisories in better way and ultimately improve the quality of the advisories. In order to extend the support the ongoing operational AAS, generation of satellite products for generation of location specific agromet advisories is required to meet the end user requirement

APPLICATION AREAS

Agriculture

Acreage estimation

Crop yield forecasting

Crop condition assessment

Cropping systems analysis

Vegetation Dynamics

Land & Soil

Salt affected soils mapping

Land degradation analysis

Soil resource mapping

Soil suitability analysis

Support to Soil moisture estimation

Water Resources

Ground water potential zones

Surface water inventory

Tanl/well command area studies

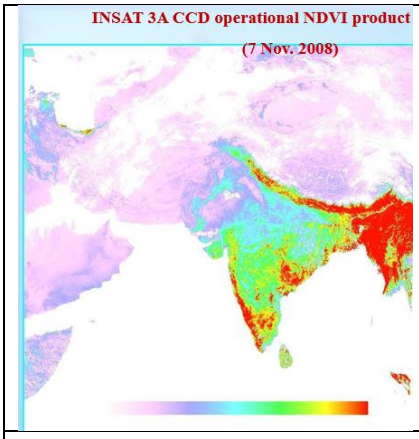
Drought impact assessment on crop yield

Hydrology

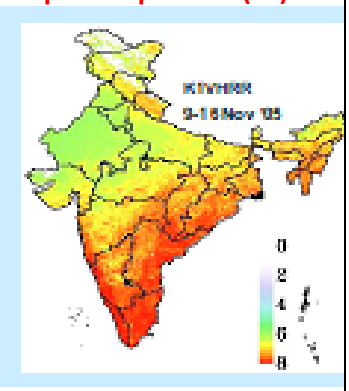
Flood damage information and management

Drought monitoring

Different Products

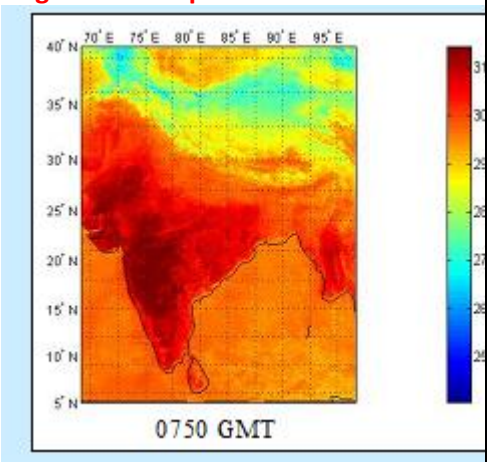


Evapotranspiration (ET)

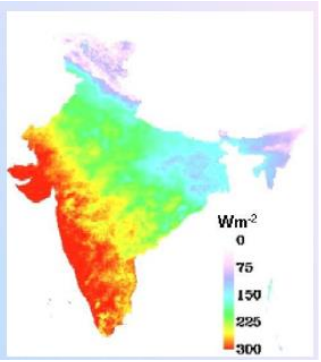


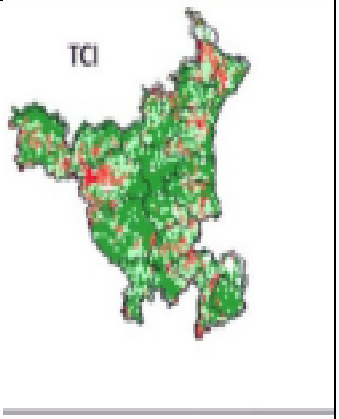
Land Surface Temperature (LST)

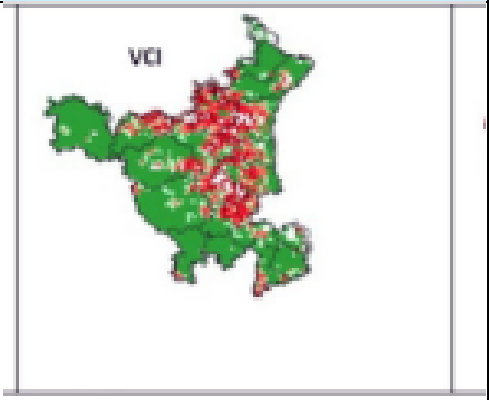
Brightness Temperature



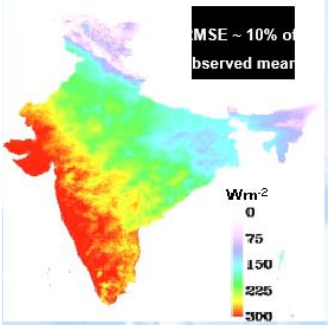
Solar Radiation







Surface Insolation



Hyper Spectral Data