

NATIONAL REMOTE SENSING CENTRE

HYDERABAD

RES-NRSC-2022-001

Name of ISRO Centre/Unit

National Remote Sensing Centre, Hyderabad

Title of the research proposal

Comprehensive Agricultural Drought Assessment.

Name of Co PI from ISRO Centre/Unit

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Area of Research

Agricultural drought assessment & monitoring

Summary of the proposed research and expected deliverables

Quantifying agricultural drought is very important in addressing both farmer's distress as well as efficient governance in addressing crop situation by the state departments in this proposal an attempt is made to develop a comprehensive drought assessment technique integrating satellite data, ground based weather information, crop simulation models.

Scope of the Work:

- There are several remote sensing indices to visualize, monitor the crop growth and development to help facilitate agricultural drought monitoring. However, a unified reliable index which gives information on available soil water, precipitation and its influence on crop response is very essential to forecast regions of agricultural drought/impact on agricultural yields at monthly or seasonal scale are still in their development process.
- The study aims to identify location specific indices or parameters for agricultural drought and testing of new indices/models and development of quantifiable techniques towards integrating remote sensing and ground based agricultural drought assessment indicators for kharif and rabi seasons. This helps in realizing a comprehensive drought assessment technique and further a protocol development to address yield loss due to agricultural drought.

Deliverables:

- Comprehensive drought assessment indicators integrating satellite data meteorology and crop simulation models suitable for Indian regions.
- Development of protocol for crop loss assessment due to agricultural drought.