



Researchers look overseas for radar images of floods

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Highlights

- A joint team of researchers from the University of Kerala and the Michigan Technological University, USA, have come out with an **inundation map using satellite images to assess the extent of flooding** that caused widespread devastation in Kerala last month.
- Researchers in Kerala are turning to foreign space agencies to source satellite radar imagery for post-flood analysis and damage assessment as the **decommissioning of ISRO's RISAT-1** last year has left India without an indigenous radar imaging satellite for civilian applications.
- The results showed a 95% accuracy.
- The analysis also showed a **peak rise of 5 m in the water level in the Kuttanad region**, going up to **10 m in the kole lands**.
- While the University of Kerala has tied up with the Michigan Technological University to map the areas that were flooded in the recent rains, the Kerala Agricultural University has partnered with the Tamil Nadu Agricultural University to assess the crop damage.

Inundation maps

- The research teams are sourcing radar images from the **European Space Agency (ESA)** and the **Canadian Space Agency** to prepare inundation maps.
- Radar imaging satellites like ESA's Sentinel and ISRO's RISAT are particularly useful for monitoring floods and assessing damage because they are capable of penetrating cloud cover and operating day and night and in all weather conditions.
- In 2016, **NASA had reported a 'debris generating' event near RISAT-1** which is no longer operational and decommissioned last year.
- Launched on April 26, 2012, the satellite was equipped with a **C-band synthetic aperture radar for earth observation** and had a design life of five years.
- In 2017, the satellite was decommissioned and declared non-operational in the annual report of the Department of Space.
- **RISAT- 2**, another satellite in the series that was built by Israel Aerospace Industries and launched in 2009, remains in orbit but is **reserved for strategic applications**.