



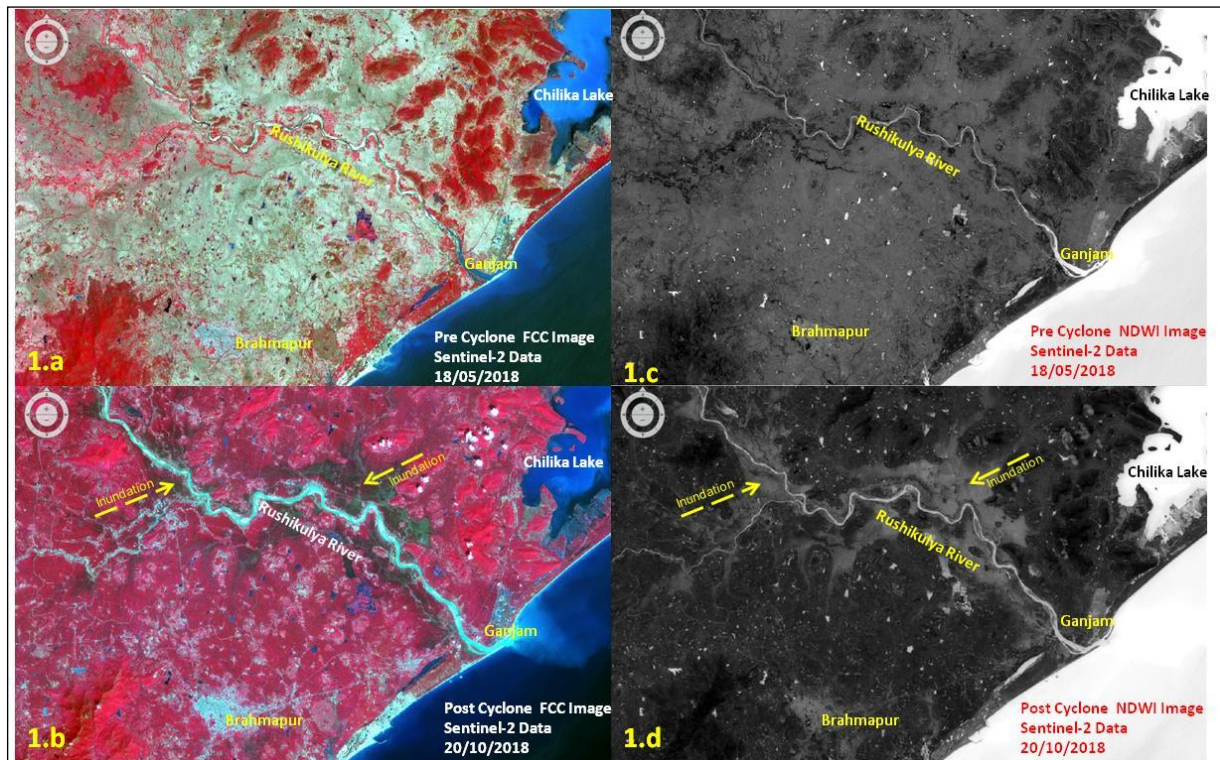
सुदूर संवेदन के माध्यम से तितली चक्रवात के छाप IMPRINTS OF TITLI CYCLONE THROUGH REMOTE SENSING

Cyclone Titli hit South Odisha and North Andhra Pradesh coast on 11th October which triggered heavy rains leading to inundation in low lying areas of Ganjam as well as Srikakulam districts respectively.

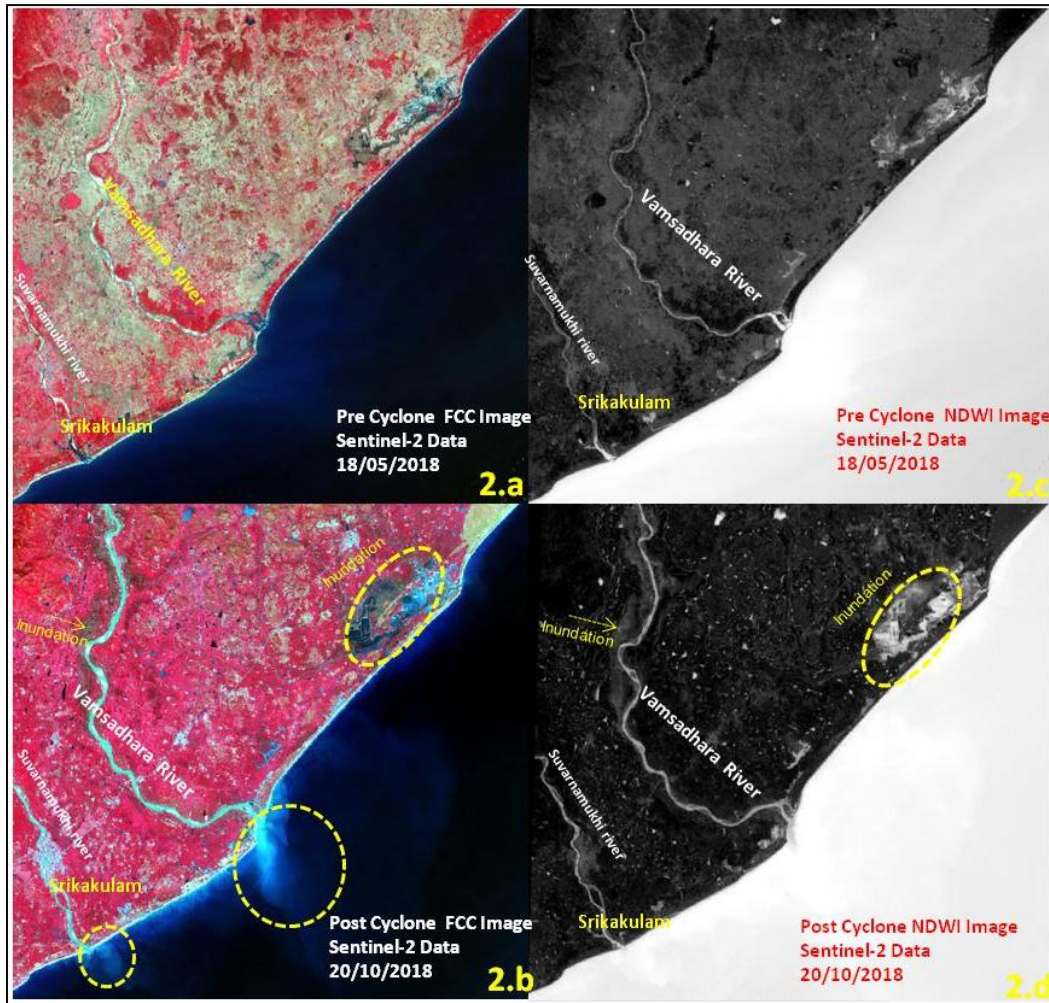
An attempt was made to analyse the post cyclonic impact through Remote Sensing, using High Resolution Multispectral Sentinel-2 data (European Space Agency data) having 10m spatial resolution to capture the inundated areas by PGRS Division of Geological Survey of India Training Institute, Hyderabad.

The FCC (False Color Composite) imageries of pre cyclonic period showing sparsely vegetated surface and natural water bodies (Fig: 1a & Fig: 2a) have been compared, analyzed and interpreted with imprints of vegetation / moisture laden and flooded / inundated recent post cyclonic period (Fig: 1b & Fig: 2b) for parts of Ganjam district of Odisha and Srikakulam district of Andhra Pradesh. High concentration of sediment dispersion to Bay of Bengal is clearly visible in the FCC image of Srikakulam (Fig 2b) from Vamsadhara and Survarnamukhi rivers.

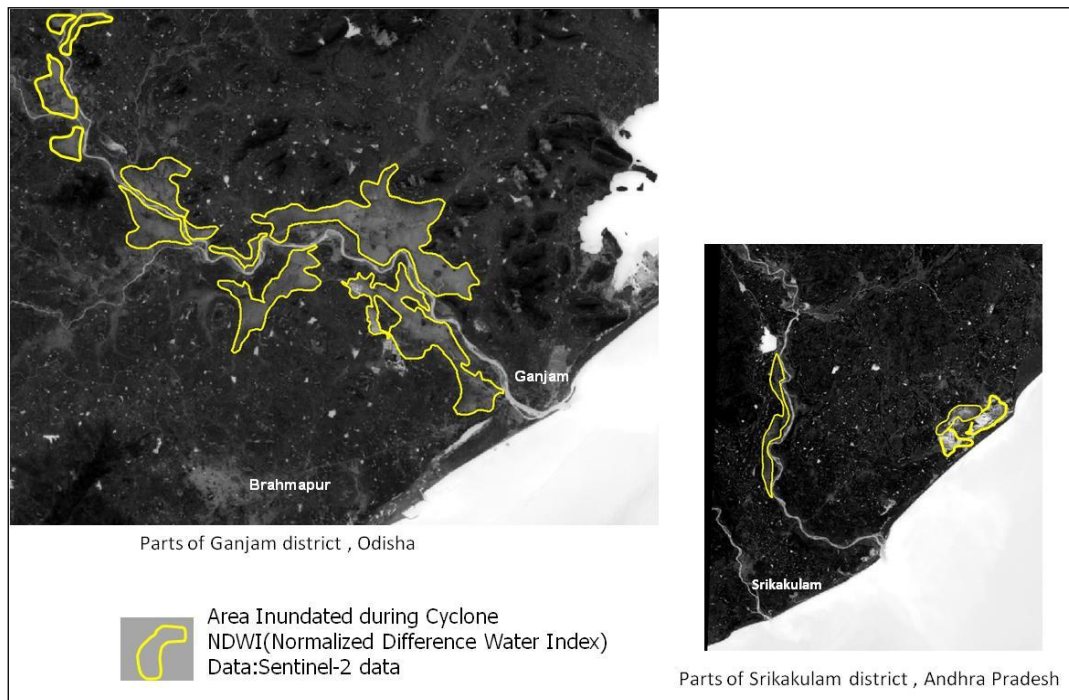
In order to map the moisture laden / inundated area, Normalised Difference Water Index (NDWI) method has been used. The inundation level is clearly visible in the low lying areas along the Rushikulya river (Fig:1d) in Ganjam district through NDWI. The low lying areas along river Vamsadhara (Fig: 2d) also shows imprints of high moisture through NDWI concentration, indicating the inundation level.



Imprints of Titli Cyclone in Parts of Ganjam district, Odisha.



Imprints of Titli Cyclone in Parts of Srikakulam district, Andhra Pradesh



Inundated/Moisture laden areas demarcated using NDWI technique by using Sentinel -2 data

Note: This laboratory based analytical study was carried out by PGRS Division GSITI, using Digital Image Processing Techniques on freely available Satellite data products.