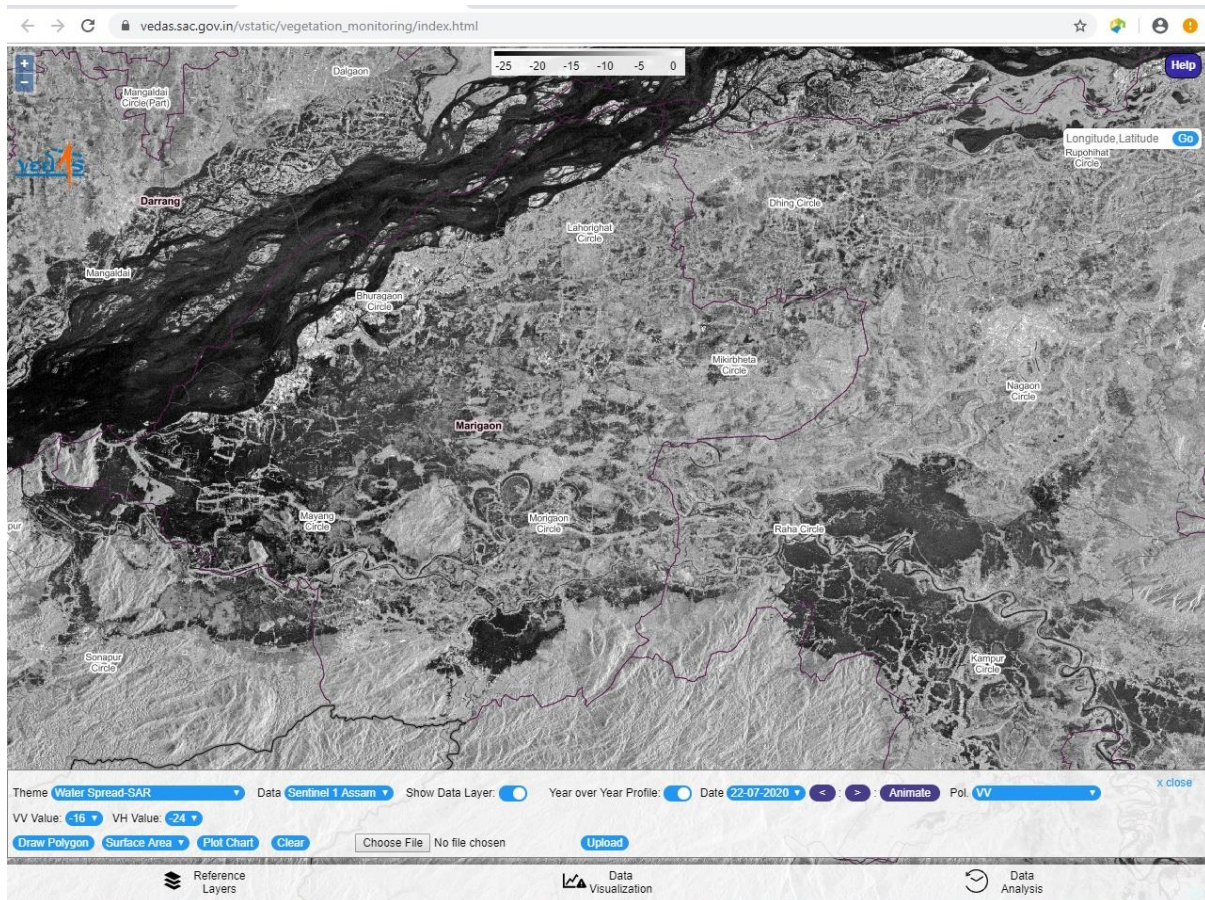


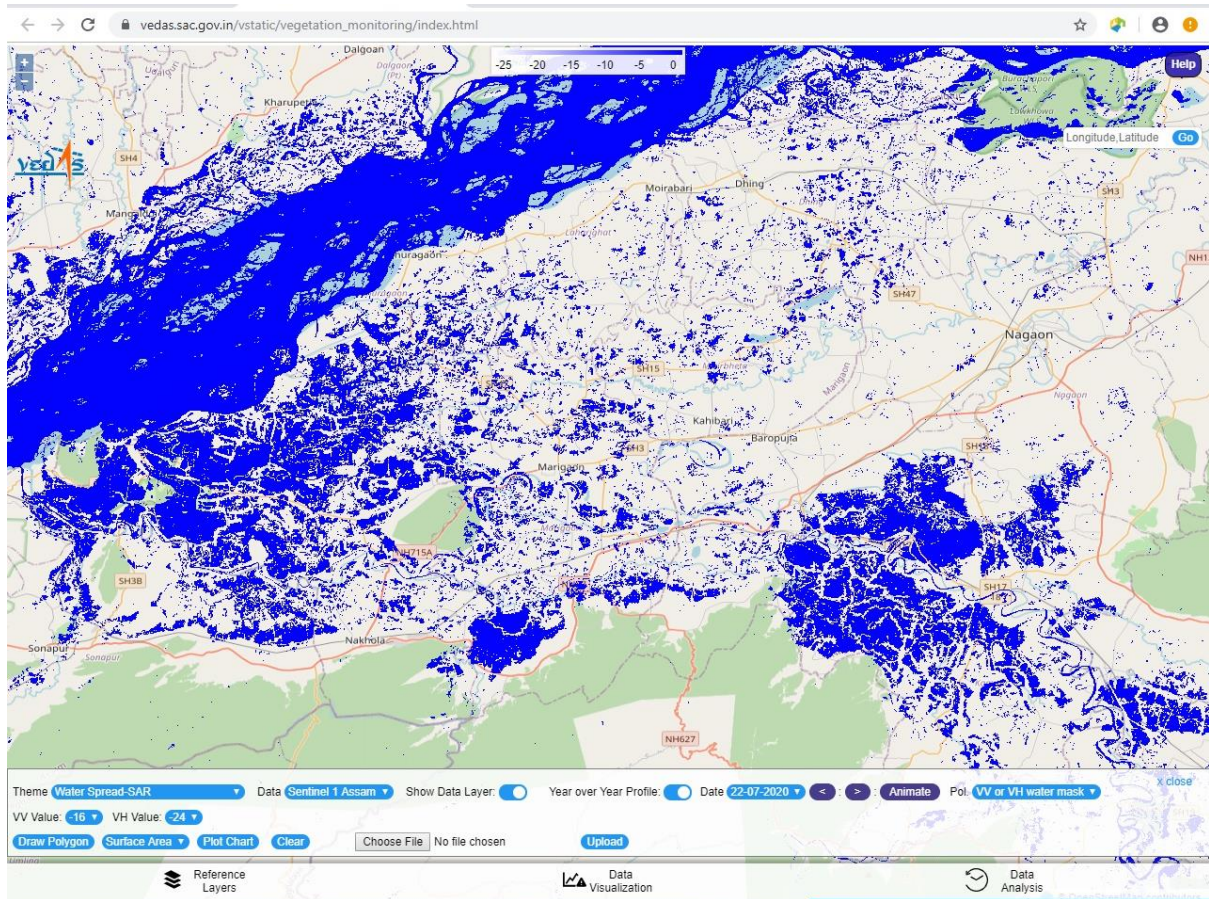
## Water spread mapping during Floods in Assam on VEDAS Platform

VEDAS Research Group (VRG/EPASA/SAC) has developed and deployed a fully automatic application of water spread (flood) mapping using Sentinel-1 (microwave data). A Proof of Concept (PoC) run of the same was carried out during recent floods of Assam (July 2020). Shown below in plate-1 is Sentinel-1 data of July 22, 2020 and water spread areas were extracted using default values of thresholds.



*Plate-1: Sentinel-1 VV polarized data of July 22, 2020 over parts of Assam*

In the present case, water mask is generated for pixel values which are between -24 to -16 dB in any of the VV and VH band of Sentinel 1 data of July 22, 2020 (Plate-2).



*Plate-2: Water spread map (blue) generated using condition “pixel values between -24 to -16 dB in any of the VV and VH band” for Sentinel-1 data of July 22, 2020*

It may be noted that, even though the default values were arrived at after studying many sets of images, this application provides flexibility of adjusting either choice of polarization (VV or VH or both) or threshold values based on user choice.

This application can be accessed through following link:

[https://vedas.sac.gov.in/vstatic/vegetation\\_monitoring/index.html](https://vedas.sac.gov.in/vstatic/vegetation_monitoring/index.html)

and going to Data Analysis (bottom right); choosing theme as Water Spread - SAR; data Sentinel-1 (Assam). Users have to choose date, polarization and thresholds.

----- Team VEDAS

