



“VanderSat can determine soil moisture with remote sensing on any watershed or field. Its unique technology can see through clouds & vegetation, is 1000 times cheaper than alternative methods, and has accuracy similar to ground sensors.”

Partnering with KISTERS

As a KISTERS' partner, **VanderSat** is a leading global provider of satellite-observed water and temperature data, products and services.

Understanding the crucial role water plays, the company uses proprietary satellite technology to help address drought and flooding risks.

The predictive value of soil moisture is greater than the Normalized Difference Vegetation Index (NDVI) or any other parameter to assess plant health.

VanderSat has developed a patented method to provide accurate, precise and reliable high-resolution images and data on soil moisture at any place on earth. Information is delivered through a web viewer, API or KISTERS' software.

Extensively validated, the technology is documented in scientific peer-reviewed literature. By combining microwave data obtained from different satellites, the revolutionary data sets reveal critical information about the vulnerability of water resources at watershed and field level.

Satellite Soil Moisture Data

Patented methodology provides soil moisture information on watershed or field scale

- ✓ Global data set
- ✓ Available for different root zone depths
- ✓ Dynamic open water bodies taken into account

Unique Spatio-temporal Resolution

- ✓ 100 x 100 meter
- ✓ Daily

Near Real Time (NRT) data

- ✓ Available within 6 hours after overpass of satellite
- ✓ Cloud and darkness proof; sees through crops

Long-term Time Series

- ✓ High resolution data from June 2002

High Quality Information

- ✓ Accuracy similar to ground sensor data with better spatial representation and consistency

Benefits

- Supplement monitoring data especially when ground sensors are inconsistent or undeployable
- More accurate and less expensive than other satellite data services
- Provide context to monitoring events
- Enhance data analytics with key input for drought indices, saturation, crop, irrigation and calibrate hydrological modelling

Specifications

KISTERS - VanderSat Soil Moisture Monitoring	
Unit	Moisture content in m ³ /m ³
Sensing depth	0-5 cm
Rootzone Options	10 cm // 20 cm // 40 cm
Pixel resolution	100x100 meter // 25x25 km
Temporal resolution	Daily
Data availability 100m product	June 2002 - present
Data availability ¼ degree product	October 1978 - present
File format	GeoTiff (images), csv (time series)
Data delivery	VanderSat API or KISTERS' software
Data viewer	VanderSat Viewer