



NEXTLAND

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# VEGETATION WATER CONTENT

## Keep an eye on drought

Monitor vegetation water content and detect drought stress in an early stage using indices such as NDWI, NDII or MSI. These general qualitative descriptors allow you e.g. to assess the variability in crop water content within a field, or to monitor the evolution of water content over time to see how drought is progressing in a field or forest.

*"Drought is a large scale phenomenon, but the local impact is highly variable. EO products such as the vegetation water indices fully exploit the satellite signal to detect how a crop at a specific parcel reacts to drought and are useful to identify crop losses, steer irrigation or evaluate drought impact on crop varieties."*

**Roel Van Hoolst**  
VITO Remote Sensing, Belgium

### Key benefits

- ⊕ Improved drought monitoring and early warning with Sentinel-2 based vegetation water indices at 10m resolution
- ⊕ These vegetation water indices react to drought more sensitively than classical NDVI
- ⊕ You were looking for another drought index? No problem! Calculate your preferred index by selecting the right Sentinel-2 spectral bands





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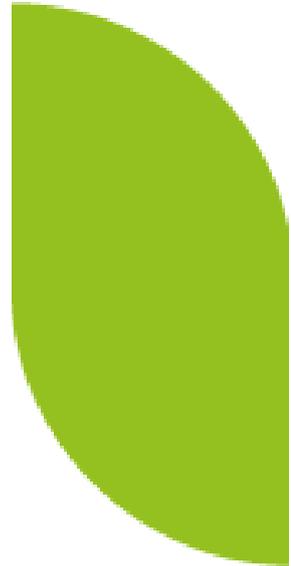
## Collaborators

For anyone involved in crop or forest monitoring!

- ⊕ Agricultural or forestry service providers
- ⊕ Farmers and foresters and their associations
- ⊕ Public authorities
- ⊕ Insurance companies



Moisture stress index (MSI) for an agricultural region in Belgium



## Key specifications

Key specifications	NDWI	NDII	MSI
Coverage	Global	Global	Global
Data availability	Jul 2015 - current	Jul 2015 - current	Jul 2015 - current
Data delivery	API	API	API
File format	GeoTIFF	GeoTIFF	GeoTIFF
Local overpass time	10 AM - 11 AM	10 AM - 11 AM	10 AM - 11 AM
Other data used	-	-	-
Pixel size	10m & 20m	10m & 20m	10m & 20m
Satellites used	Sentinel 2	Sentinel 2	Sentinel 2
Sensing depth	TOC	TOC	TOC
Temporal resolution	5 days	5 days	5 days
Timeliness	1-2 days	1-2 days	1-2 days
Unit	-	-	-



[blog.vito.be/remotesensing/europe-heatwave](http://blog.vito.be/remotesensing/europe-heatwave)

