

Earth Observation Fact Sheet

LANDSAT 8

Background

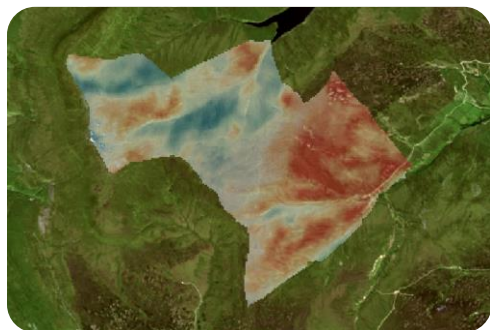
This factsheet is part of a series produced by the Yorkshire Peat Partnership (YPP) to share the knowledge developed in the application of open source earth observation technologies for the remote monitoring of peatland habitats.

Satellite technology

Earth observation satellites provide us with the capability to analyse current and retrospective data at a landscape scale.

Landsat 8

Landsat 8 is the most current earth observation satellite of the Landsat programme, providing up to date imagery uncompromised by Landsat 7's SLC error. The satellite continues to provide applications for image classifications, vegetation indices, and soil moisture indices. The introduction of the Cirrus bands allows for improvements in atmospheric corrections. Furthermore, the addition of the 15m panchromatic band allows users to pansharpen the 30m resolution RGB images to 15m.



Soil Moisture Index (Blue = wet, Red = dry) overlaid onto a 15m pan sharpened RGB image

SPECIFICATION

LAUNCH DATE:	11 th February 2013
BANDS (Resolution):	1 – Ultra Blue (30m)
	2 – Blue (30m)
	3 – Green (30m)
	4 – Red (30m)
	5 – Near Infrared (30m)
	6 – Shortwave Infrared 1 (30m)
	7 – Shortwave Infrared 2 (30m)
	8 – Panchromatic (15m)
	9 – Cirrus (30m)
	10 – Thermal Infrared 1 (100m)
	11 – Thermal Infrared 2 (100m)
SWATH WIDTH:	185 km
REVISIT TIME:	16 days (8 days offset from Landsat 7)



Artist's rendering of NASA's Landsat 8 satellite
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Data Sources

Landsat 8 data can be downloaded for free from the following sources:

- EarthExplorer USGS (<https://earthexplorer.usgs.gov>)
- GloVIS USGS (<https://glovis.usgs.gov>)
- LandViewer (<https://lv.eosda.com>)
- Google Earth Engine (<https://earthengine.google.com>)