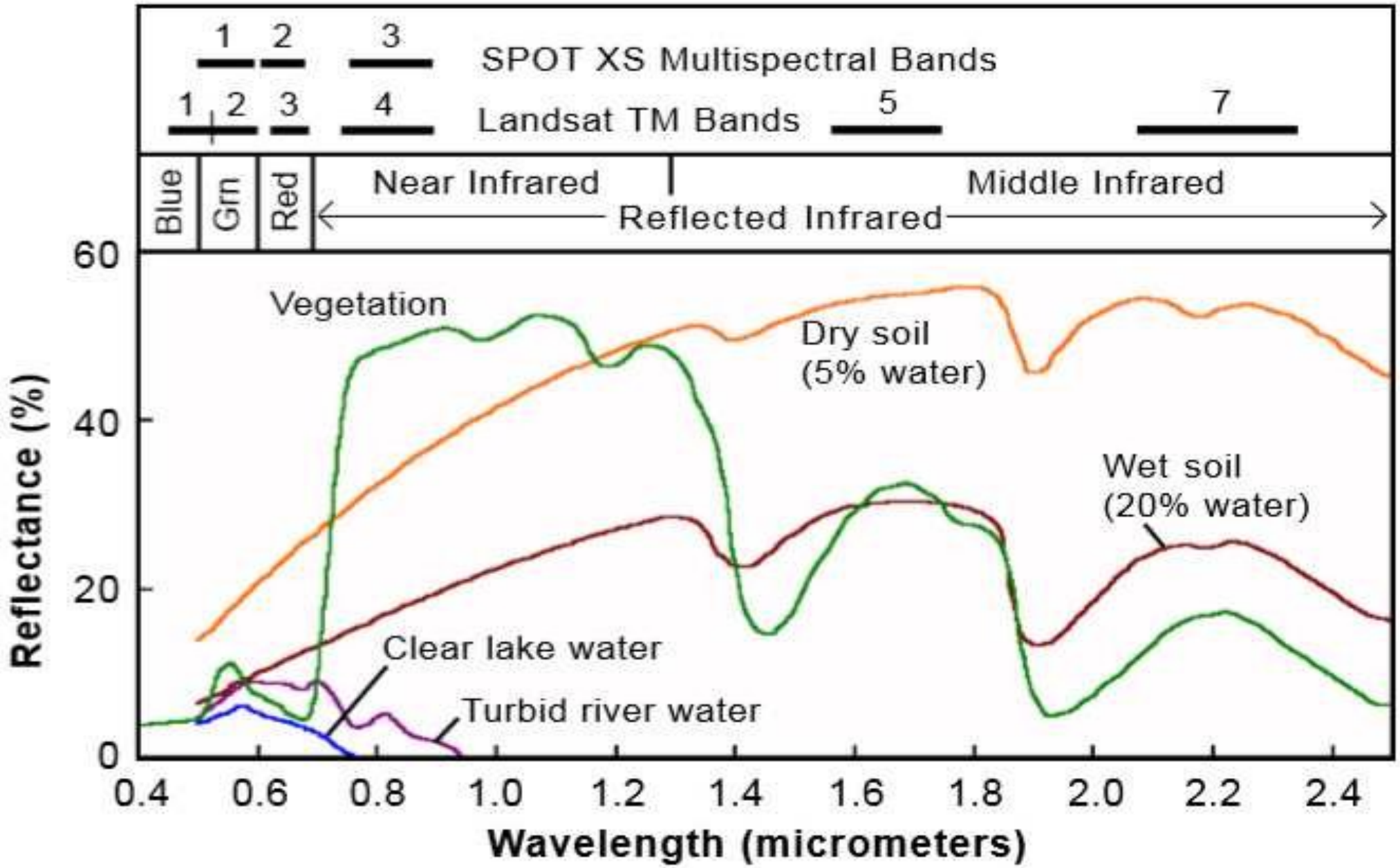
Landsat 8 Operational Land Imager (OLI) and Thermal InfraRed Sensor (TIRS)- launched 11 February 2013

Bands	Wavelength (Micrometers)	Resolution(meters)
Band1- Coastal aerosol	0.43-0.45	30
Band 2 – Blue	0.45-0.51	30
Band 3 – Green	0.53-0.59	30
Band 4 – Red	0.64-0.67	30
Band 5 – Near InfraRed (NIR)	0.85-0.88	30
Band 6 – SWIR 1	1.57-1.65	30
Band 7 – SWIR 2	2.11-2.29	30
Band 8 – Panchromatic	0.50-0.68	15
Band 9 – Cirrus	1.36-1.38	30
Band 10 - Thermal Infrared (TIRS) 1	10.60-11.19	100 * (30)
Band 11 – Thermal infrared (TIRS) 2	11.50-12.51	100* (30)


1 2 3
SPOT XS Multispectral Bands
1 2 3 4
Landsat TM Bands
5
7
Blue
Grn
Red
Near Infrared
Reflected Infrared
Middle Infrared
Vegetation
Dry soil
(5% water)
Wet soil
(20% water)
Clear lake water
Turbid river water
Reflectance (%)
60
40
20
0
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
Wavelength (micrometers)

Normalized Difference Vegetation Index

NDVI = (NIR – Red) / (NIR + Red)

For Landsat 7 data, NDVI = (Band 4 – Band 3) / (Band 4 + Band 3)

For Landsat 8 data, NDVI = (Band 5 – Band 4) / (Band 5 + Band 4)

Normalized Difference Water Index

NDWI = (Green - NIR) / (Green + NIR)

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NDWI = (Band 3 - Band 5) / (Band 3 + Band 5)

Normalized Difference Built-up Index

NDBI = (SWIR – NIR) / (SWIR + NIR)

For Landsat 7 data, NDBI = (Band 5 – Band 4) / (Band 5 + Band 4)

For Landsat 8 data, NDBI = (Band 6 – Band 5) / (Band 6 + Band 5)

Normalized Difference Moisture Index

(NIR - SWIR) / (NIR + SWIR)

In Landsat 4-7, NDMI = (Band 4 – Band 5) / (Band 4 + Band 5).

In Landsat 8-9, NDMI = (Band 5 – Band 6) / (Band 5 + Band 6).