

Band Combinations for Landsat 8 and Sentinel-2

Band Combination Output	Landsat 8	Sentinel-2
Natural Color	4 3 2	4 3 2
False Color (urban)	7 6 4	12 11 4
Color Infrared (vegetation)	5 4 3	8 4 3
Agriculture	6 5 2	11 8 2
Atmospheric Penetration	7 6 5	12 11 5
Healthy Vegetation	5 6 2	8 11 2
Land/Water	5 6 4	8 11 4
Natural With Atmospheric Removal	7 5 3	12 8 3
Shortwave Infrared	7 5 4	12 8 4
Vegetation Analysis	6 5 4	11 8 4

False Color - makes use of both of the SWIR bands, image is crisper than band combinations that make use of bands in shorter wavelengths, which have more haze.

Color Infrared - Vegetation really pops in red, with healthier vegetation being more vibrant. It's also easier to tell different types of vegetation apart than it is with a natural color image. This is a very commonly used band combination in remote sensing when looking at vegetation, crops and wetlands.

Agriculture - useful for the monitoring of agricultural crops, which appear as a vibrant green. Bare earth appears as a magenta and non-crop vegetation appears as more subdued shades of green.

Atmospheric Penetration - makes use of both of the SWIR bands.

Land/Water - land appears in shades of orange and green, ice stands out as a vibrant magenta color, and water appears in shades of blue.

Natural with Atmospheric Removal - similar to the 5, 6, 4 band combination but vegetation shows up in more vibrant shades of green, used for the global Landsat mosaic created by NASA.

Comparing Landsat 7 & Landsat 8

Landsat 7			Landsat 8		
Band Name	Bandwidth (µm)	Resolution (m)	Band Name	Bandwidth (µm)	Resolution (m)
			Band 1 Coastal	0.43 – 0.45	30
Band 1 Blue	0.45 – 0.52	30	Band 2 Blue	0.45 – 0.51	30
Band 2 Green	0.52 – 0.60	30	Band 3 Green	0.53 – 0.59	30
Band 3 Red	0.63 – 0.69	30	Band 4 Red	0.64 – 0.67	30
Band 4 NIR	0.77 – 0.90	30	Band 5 NIR	0.85 – 0.88	30
Band 5 SWIR 1	1.55 – 1.75	30	Band 6 SWIR 1	1.57 – 1.65	30
Band 7 SWIR 2	2.09 – 2.35	30	Band 7 SWIR 2	2.11 – 2.29	30
Band 8 Pan	0.52 – 0.90	15	Band 8 Pan	0.50 – 0.68	15
			Band 9 Cirrus	1.36 – 1.38	30
Band 6 TIR	10.40 – 12.50	30/60	Band 10 TIRS 1	10.6 – 11.19	100
			Band 11 TIRS 2	11.5 – 12.51	100