

Table S1. Spectral vegetation indices (SIs) included in this study and their formulations.

No.	Vegetation Index	Equation	Reference
1	Enhanced vegetation index	$EVI = 2.5 \times (R800 - R670) / (R800 + 6 \times R670 - 7.5 \times R450 + 1)$	[1]
2	Soil adjusted vegetation index	$SAVI = 1.5 \times (R800 - R670) / (R800 + R670 + 0.5)$	[1]
3	Visible atmospherically resistant index	$VARI = (R550 - R670) / (R550 + R670 - R450)$	[2]
4	Normalized blue-green band difference vegetation index	$GBNDVI = (R800 - (R550 + R450)) / (R800 + R550 + R450)$	[3]
5	Renormalized difference vegetation index	$RDVI = (R800 - R670) \times (R800 + R670)^{0.5}$	[4]
6	Simple ratio	$SR = R900 / R680$	[5]
7	MERIS terrestrial chlorophyll index	$MTCI = (R754 - R709) / (R709 - R681)$	[6]
8	Coloration index	$CI = (R670 - R450) / R670$	[7]
9	Shape index	$IF = (2 \times (R670) - R550 - R450) / (R550 - R450)$	[7]
10	Pigments specific simple ratio-a	$PSSRa = R800 / R680$	[8]
11	Pigments specific simple ratio-b	$PSSRb = R800 / R635$	[8]
12	Red-green index	$RGI = R690 / R550$	[9]
13	Ratio analysis of reflection of spectral chlorophyll-a	$RARSa = R675 / R700$	[10]
14	Ratio analysis of reflection of spectral chlorophyll-b	$RARSb = R675 / (R700 \times R650)$	[10]
15	Ratio analysis of reflection of spectral chlorophyll-c	$RARSc = R760 / R500$	[10]
16	Photochemical reflectance index	$PRI = (R531 - R570) / (R531 + R570)$	[11]
17	Physiological reflectance index	$PhRI = (R550 - R531) / (R550 +$	[11]

		R531)	
18	Structure insensitive pigment index	$SIPI = (R800 - R445) / (R800 + R680)$	[12]
19	Normalized chlorophyll pigment ratio index	$NCPI = (R670 - R450) / (R670 + R450)$	[12]
20	Normalized pigment chlorophyll index	$NPCI = (R680 - R430) / (R680 + R430)$	[13]
21	Nitrogen reflectance index	$NRI = (R570 - R670) / (R570 + R670)$	[14]
22	Plant pigment ratio	$PPR = (R550 - R450) / (R550 + R450)$	[15]
23	Optimized soil-adjusted vegetation index	$OSAVI = (1 + 0.16) \times (R800 - R670) / (R800 + R670 + 0.16)$	[16]
24	Green leaf index	$GLI = (2 \times R550 - R670 - R450) / (2 \times R550 + R670 + R450)$	[16]
25	Green normalized difference vegetation index	$GNDVI = (R750 - R540 + R570) / (R750 + R540 - R570)$	[16]
26	Modified chlorophyll absorption ratio index-2	$MCARI2 = ((R750 - R705) - 0.2 \times (R750 - R550)) \times (R750 / R705)$	[17]
27	Anthocyanin (Gitelson)	$AntGitelson = (1/R550 - 1/R700) \times R780$	[18]
28	Fluorescence ratio index-1	$FRI1 = R690 / R630$	[19]
29	Fluorescence ratio index-2	$FRI2 = R750 / R800$	[19]
30	Fluorescence curvature index	$FCI = (R683)^2 / (R675 \times R691)$	[19]
31	Fluorescence ratio index-3	$FRI3 = R690 / R600$	[20]
32	Fluorescence ratio index-4	$FRI4 = R740 / R800$	[20]
33	Modified red-edge simple ratio index	$mRESR = (R750 - R445) / (R705 + R445)$	[21]
34	Normalized Pheophytization index	$NPQI = (R415 - R435) / (R415 +$	[22]

		R435)	
35	Red-edge vegetation stress index-1	$RVS1 = (R651 - R750) / 2 - R733$	[23]
36	Red-edge vegetation stress index-2	$RVS2 = (R651 - R750) / 2 - R751$	[23]
37	Red edge position	$RRE = (R670 - R780) / 2$	[24]
38	Water band index	$WBI = R900 / R970$	[25]
39	Water stress and canopy temperature	$WSCT = (R970 - R850) / (R970 + R850)$	[26]
40	Green-band optimized soil adjusted vegetation index	$GOSAVI = 1.16 \times (R800 - R550) / (R800 + R550 + 0.16)$	[27]
41	Plant senescence reflectance index	$PSRI = (R660 - R510) / R760$	[28]
42	Anthocyanin reflectance index	$ARI = 1/R550 - 1/R700$	[29]
43	Greenness index	$GI = R554 / R667$	[30]
44	Narrow-band normalized difference	$NBNDVI = (R850 - R680) / (R850 + R680)$	[31]
45	Normalized difference vegetation index	$NDVI = (R800 - R670) / (R800 + R670)$	[32]
46	Triangular vegetation index	$TVI = 0.5 \times (120(R750 - R550) - 200 \times (R670 - R550))$	[32]
47	Red-edge NDVI	$RNDVI = (R750 - R705) / (R750 + R705)$	[33]
48	Ratio vegetation structure index	$RVSI = (R712 - R752) / 2 - R732$	[34]
49	Modified triangular vegetation index-1	$MTVI1 = 1.2 \times (1.2(R800 - R550) - 2.5 \times (R670 - R550))$	[35]
50	Modified simple ratio	$MSR = (R800/R670 - 1) / (R800/R670 + 1)^{0.5}$	[36]

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