Supplementary materials

Table S1 Vegetation indices applied in this study (ρ represents reflectance, NIR represents near-infrared band, Red represents red band, Blue represents blue band)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Vegetation index | Formula | Abbreviation | Derived using bands of worldview-2 image | Reference |
| Simple ratio |  | SR1 |  | Jordan 1969 |
| SR2 |  |
| SR3 |  |
| SR4 |  |
| Simple ratio 2 |  | SR5 |  | Derived based on simple ratio  |
| SR6 |  |
| SR7 |  |
| SR8 |  |
| Normalized difference vegetation index |  | NDVI1 |  | Rouse et al. 1974 |
| NDVI2 |  |
| NDVI3 |  |
| NDVI4 |  |
| Enhanced vegetation index |  | EVI1 |  | Huete et al. 1996, 1997 |
| EVI2 |  |
| EVI3 |  |
| EVI4 |  |
| EVI5 |  |
| EVI6 |  |
| EVI7 |  |
| EVI8 |  |
| Alternative enhanced vegetation index |  | EVI9 |  | Mishra et al. 2012 |
| EVI10 |  |
| EVI11 |  |
| EVI12 |  |
| Green atmospherically resistant vegetation index |  | GARI1 |  | Gitelson et al. 1996 |
| GARI2 |  |
| GARI3 |  |
| GARI4 |  |
| GARI5 |  |
| GARI6 |  |
| GARI7 |  |
| GARI8 |  |
| Wide-dynamic range vegetation index |  | WDRVI1a |  | Gitelson 2004 |
| WDRVI1b |  |
| WDRVI1c |  |
| WDRVI1d |  |
| Wide-dynamic range vegetation index |  | WDRVIIa |  |
| WDRVIIb |  |
| WDRVIIc |  |
| WDRVIId |  |
| Wide-dynamic range vegetation index |  | WDRVIIIa |  |
| WDRVIIIb |  |
| WDRVIIIc |  |
| WDRVIIId |  |
| Green chlorophyll index |  | CI1Green |  | Gitelson et al. 2003, 2005 |
| CI2Green |  |
| Red chlorophyll index |  | CI1Red |  | Mishra et al. 2012 |
| CI2Red |  |
| Red-edge chlorophyll index |  | CI1Red-edge |  | Gitelson et al. 2003, 2005 |
| CI2Red-edge |  |
| Soil-adjusted vegetation index |  | SAVI1 |  | Huete et al. 1988 |
| SAVI2 |  |
| SAVI3 |  |
| SAVI4 |  |
| Transformed vegetation index |  | TVI1 |  | Mishra et al. 2012 |
|  | TVI2 |  |
|  | TVI3 |  |
|  | TVI4 |  |
| MERIS terrestrial chlorophyll index |  | MTCI1 |  | Dash and Curran 2004 |
|  | MTCI2 |  |