Supplementary Material

1. Data set

Table S1: Pleiades images: Bands, wavelengths, and spatial resolution

Bandes	Wavelengths (nm)	Resolution (meters)
Blue	430-550 nm	0.7 m
Green	490-610 nm	0.7 m
Red	600-720 nm	0.7 m
NIR	750-950 nm	0.7 m
Panchromatic	480-830 nm	0.5 m

Table S2: Sentinel-2 images: Bands, wavelengths, and spatial resolution

Band	B1	B2	B3	B4	B5	B6	B7	B8	B8a	B9	B10	B11	B12
Center λ (nm)	443	490	560	665	705	740	783	842	865	945	1375	1610	2190
Width λ (nm)	20	65	35	30	15	15	20	115	20	20	30	90	180
Spatial resolution (m)	60	10	10	10	20	20	20	10	20	60	60	20	20

2. Methodology

Table S3 : Different indices used for classifications

Indice	**Formule**	**Characteristics / Definitions**	**Source**
EVI (Enhanced Vegetation Index)	2.5*(NIR-Red/(NIR+6*Red-7.5*Blue)+1)	**EVI** quantifies vegetation greenness. Vegetation index, more suitable than NDVI for areas with high biomass	Huete et al. (2002), [1].
MCARI (Modified Chlorophyll Absorption in Reflectance Index)	((RedEdge1-Red)-0.2*(RedEdge1-Green))*(RedEdge1-Red)	**MCARI** gives a measure of the depth of chlorophyll absorption and is very sensitive to variations in chlorophyll concentrations as well as variations in Leaf Area Index (LAI).	Daughtry et al. (2000), [2].

NDPI (Normalized Difference Pond Index)	(MIR1-Green)/(MIR1+Green)	**NDPI** when used in conjunction with NDVI, provides better discrimination of the aquatic and wetland vegetation from the normal vegetation compared to the NDVI, which detects all types of vegetation.	Lacaux et al. (2007), [3].
NDTI (Normalized Difference Turbidity Index)	(Red-Green)/(Red+Green)	The **NDTI** allows the detection of high turbidity (low clarity) water cover.	Lacaux et al. (2007), [3].
NDVI (Normalized Difference Vegetation Index)	(NIR-Red)/(NIR+Red)	**Normalized difference** between the near infrared (NIR) and visible red reflectance, corresponding respectively to the strong chlorophyll absorption region and high reflectance plateau of vegetation canopies.	Tucker (1979), [4].
NDWI (Gao) (Normalized Difference Water Index)	(NIR-MIR1)/ (NIR+MIR1)	**NDWI 1** is sensitive to water content in leaves (so to water stress).	Gao (1996), [5].
NDWI (McFeeters) (Normalized Difference Water Index)	(Green-NIR)/(Green+NIR)	**NDWI 2** is used to delineate open water features.	Mc Feeters (1996), [6].
PSSR (Pigment Specific Simple Ratio)	NIR/Red	**PSSR** is more sensitive to chlorophyll-a concentration than the NDVI and specifically useful for differentiation in stressed and senescent vegetation.	Gitelson et al. (1996), [7].

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