

Supplementary material:

Li, Q. et al. (2022). Assessment of active LiDAR data and passive optical imagery for double-layered mangrove leaf area index estimation: a case study in Mai Po, Hong Kong.

Supplementary Note 1:

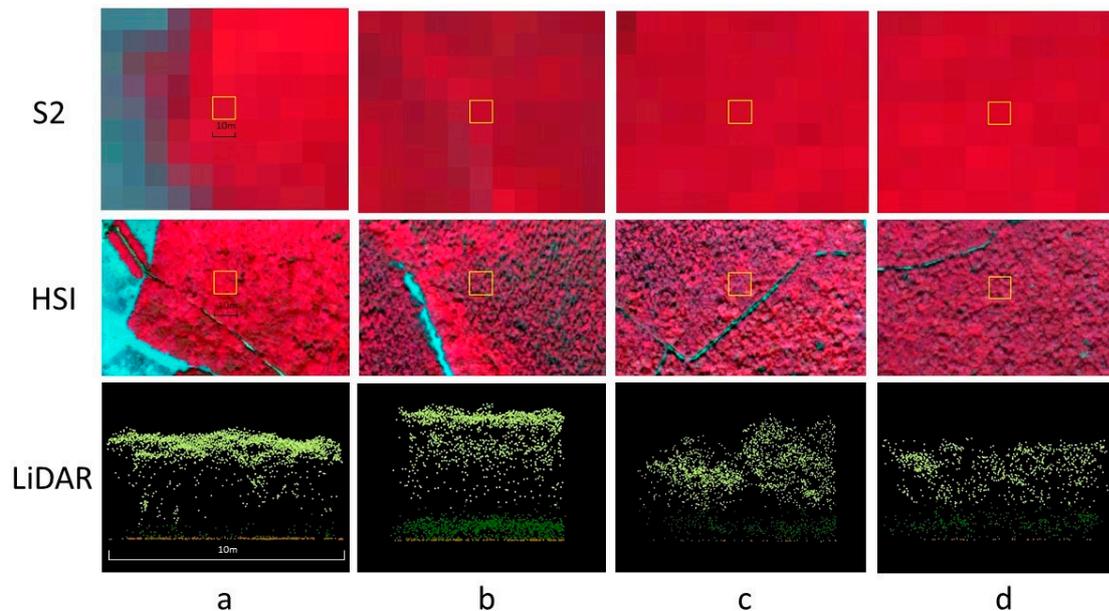


Figure S1. Examples of mangrove pixels in Sentinel-2 image (S2), hyperspectral imagery (HSI), and vertical profile in LiDAR data based on field plots. Yellow square boxes and LiDAR point clouds show coincident sites with the same size of 10 m × 10 m. Plot a is dominated by dense *Kandelia obovate* (KAOB) and minimal undergrowth; plot b consists of moderate KAOB and dense *Acanthus ilicifolius* (ACIL) beneath; plot c and d are composed of *Avicennia marina* (AVMA) and ACIL. Light green points are high vegetation, green points are low vegetation, brown points are ground.

Supplementary Note 2:

Table S1. Statistical summary of effective leaf area index (LAI) for field plots.

Effective LAI	Min	Max	Mean	Standard deviation
<i>OLE</i>	0.84	2.28	1.48	0.44
<i>OLE</i> of AVMA	1.37	1.94	1.61	0.16
<i>OLE</i> of KAOB	0.84	2.28	1.31	0.36
<i>ULE</i>	0	3.45	2.57	0.85
<i>ULE</i> of AVMA	2.69	3.45	3.07	0.19
<i>ULE</i> of KAOB	0	3.43	0.78	0.94

(Note: overstory LAI (*OLE*), and understory LAI (*ULE*), *Avicennia marina* (AVMA), *Kandelia obovata* (KAOB))