

## Supplementary Materials

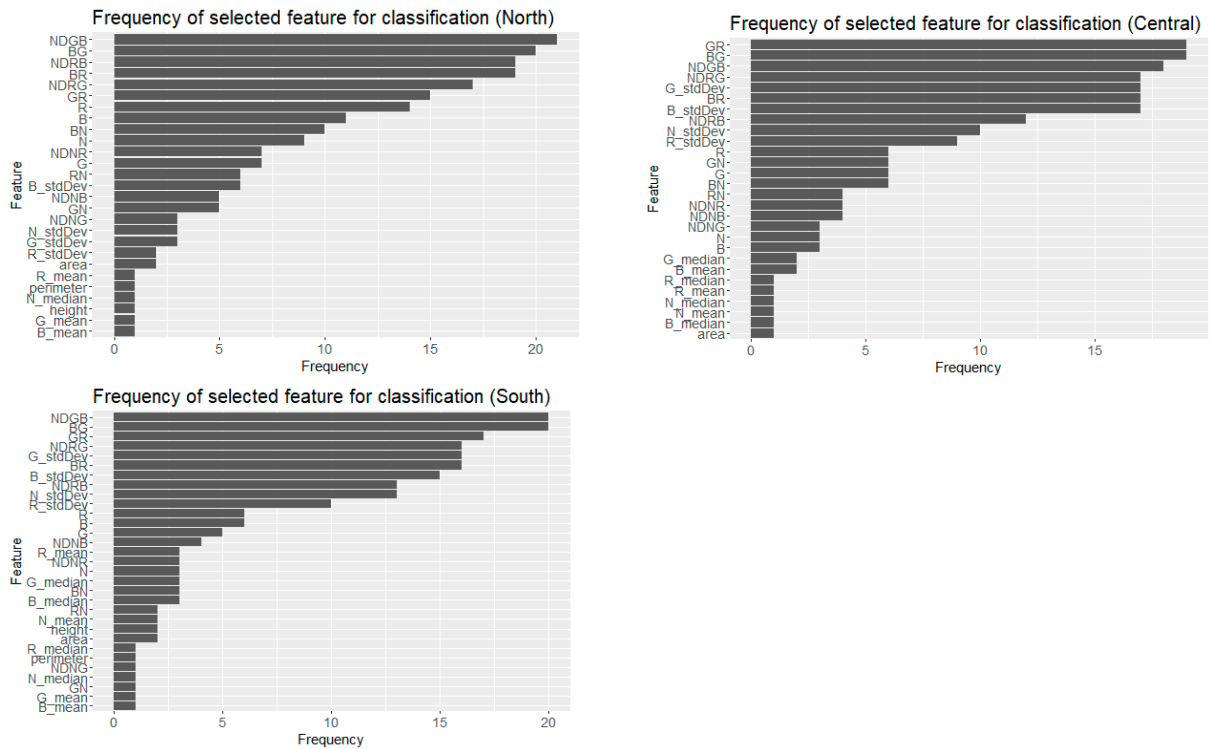


Figure S1: Frequency plots showing the occurrence of the selected band features in the top ten most important variables for the classification. These were sampled across different segmentation parameters and are not repeats. The table below explains the names of the features used.

Table S1: Table showing list of feature (band) names for the plots in Figure A1 and their definitions.

Feature Names	Definition
B	Blue
G	Green
R	Red
N	Infrared
ND- $ij$	Normalised difference of bands $i$ and $j$
$ij$	Depth-invariant Index of bands $i$ and $j$
$i\_stats$	Segmentation feature of band $i$ based on the $stat$ test used in a 3x3 moving window

Table S2: Table showing the changes in validation metrics when different groups of features are excluded from the classification. The analysis is purely quantitative, and not verified with the qualitative map performance. ND denotes the Normalised Difference feature group while DII denote the Depth Invariant feature group. OA denotes overall accuracy.

	Overall accuracy (based on best OA)					
	Spectral + ND + DII + Segment (all features)	Spectral + ND + DII	Spectral + ND + Segment	Spectral + DII + Segment	Spectral + Segment	Spectral
North	69.7	68.91	69.8	70.3	71.6	66.37

<b>Central</b>	73.4	68.6	71.2	72.39	71.34	66.99
<b>South</b>	89.2	73.98	76.62	75.42	73.33	72.53

	<b>Producer's Accuracy, seagrass (based on best OA)</b>					
	<b>Spectral + ND + DII + Segment (all features)</b>	<b>Spectral + ND + DII</b>	<b>Spectral + ND + Segment</b>	<b>Spectral + DII + Segment</b>	<b>Spectral + Segment</b>	<b>Spectral</b>
<b>North</b>	62.6	56.48	63.78	66.83	64.61	52.85
<b>Central</b>	89.2	88.57	87.09	86.89	82.93	87.14
<b>South</b>	86.9	86.23	88.02	89.22	80.7	86.82

	<b>User's Accuracy, seagrass (based on best OA)</b>					
	<b>Spectral + ND + DII + Segment (all features)</b>	<b>Spectral + ND + DII</b>	<b>Spectral + ND + Segment</b>	<b>Spectral + DII + Segment</b>	<b>Spectral + Segment</b>	<b>Spectral</b>
<b>North</b>	63.9	64.12	62.77	67.18	65.97	58.29
<b>Central</b>	77.7	69.47	76.32	77.88	77.05	69.32
<b>South</b>	81.5	78.26	81.21	79.68	75.82	77.54

	<b>F1, seagrass (based on best OA)</b>					
	<b>Spectral + ND + DII + Segment (all features)</b>	<b>Spectral + ND + DII</b>	<b>Spectral + ND + Segment</b>	<b>Spectral + DII + Segment</b>	<b>Spectral + Segment</b>	<b>Spectral</b>
<b>North</b>	63.6	60.06	63.27	67.00	65.28	55.44
<b>Central</b>	83.1	77.87	81.35	82.14	79.88	77.22
<b>South</b>	84.1	82.05	84.48	84.18	78.18	81.92