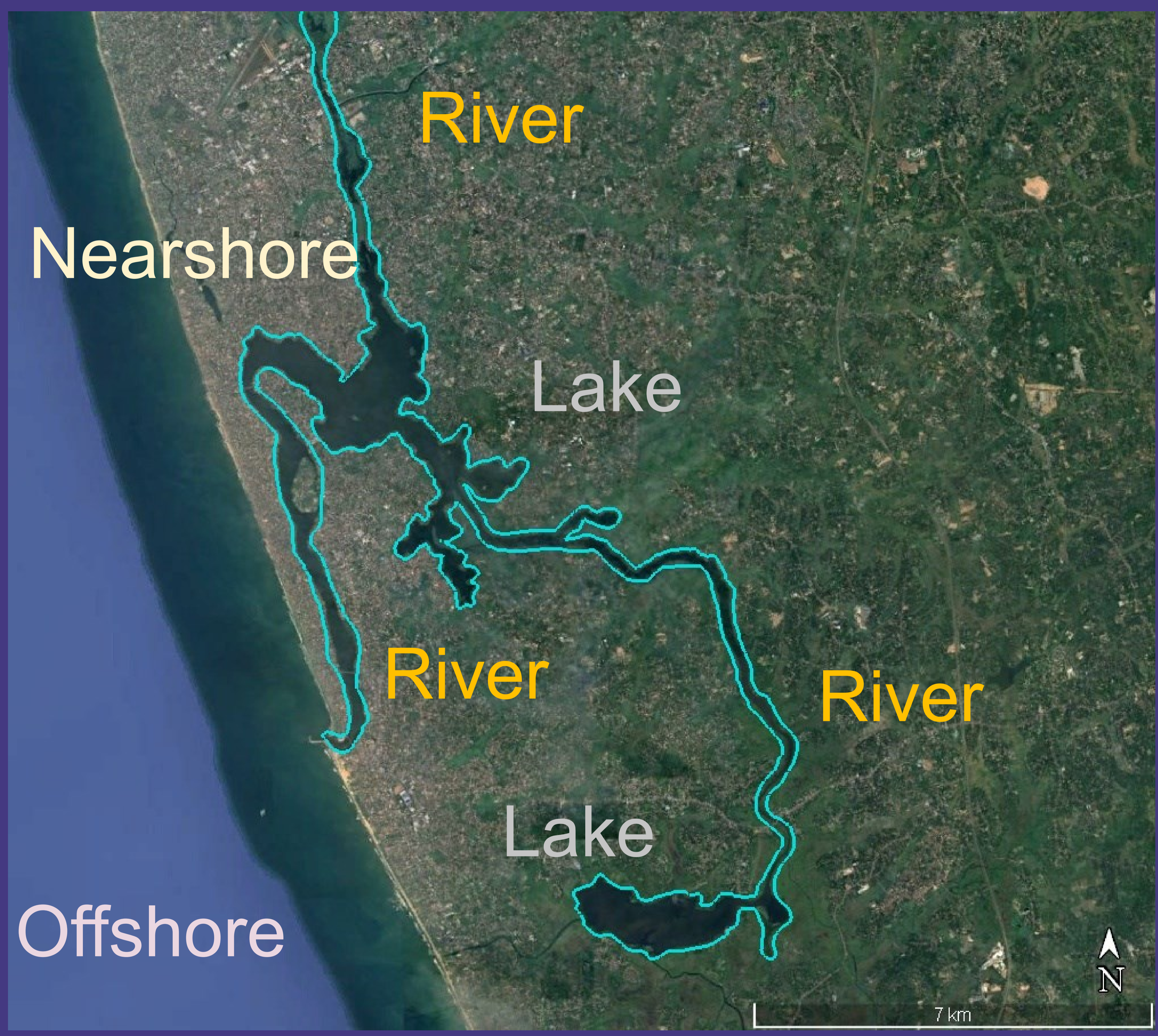


Decode subclasses of water resources with the indicator matrix

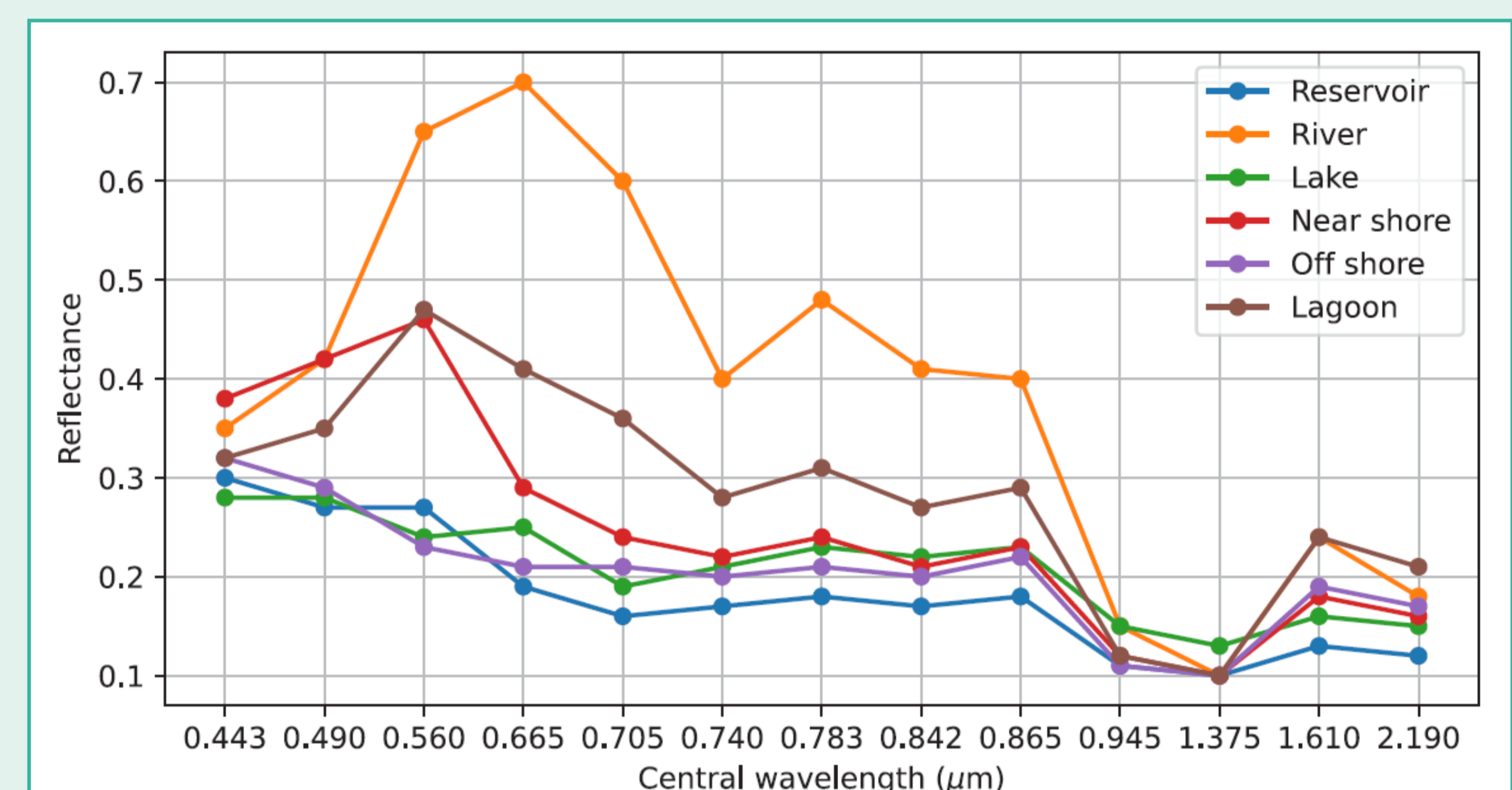
SUBCLASSIFICATION OF WATER RESOURCES WITH SENTINEL-2 SATELLITE IMAGERY: SPECTRA-BASED INSIGHT

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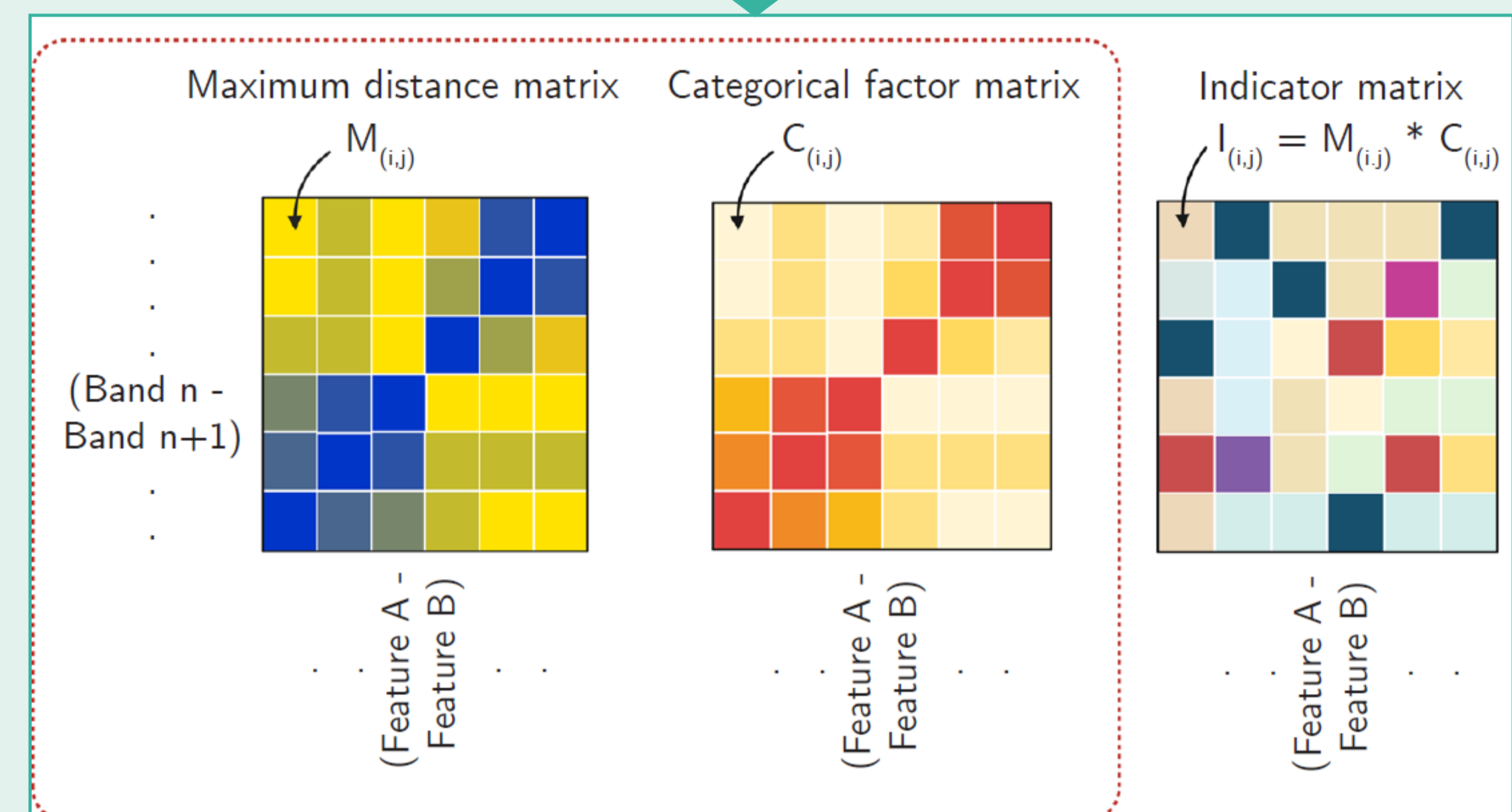


Classifying water resources into subcategories and maintaining records aid in sustainable water management practices

Workflow



Extraction of pure pixels from water resources using MNDWI and defined mean spectral plot for individual water resources



Assessment of band behaviours through developed matrices

Central wavelength (μm)	Reservoir & Lake	Reservoir & Near-shore	Reservoir & Off-shore	Reservoir & Lagoon	Reservoir & River	Lake & Near-shore	Lake & Off-shore	Lake & Lagoon	Lake & River	Near-shore & Off-shore	Near-shore & Lagoon	Near-shore & River	Off-shore & Lagoon	Off-shore & River	Lagoon & River
0.443 - 0.490	0.000	0.143	0.000	0.078	0.143	0.135	0.000	0.071	0.135	0.122	0.000	0.000	0.057	0.122	0.000
0.490 - 0.560	0.000	0.196	0.000	0.204	0.380	0.222	0.000	0.229	0.406	0.236	0.000	0.000	0.244	0.420	0.000
0.560 - 0.665	0.059	0.000	0.000	0.000	0.509	0.222	0.034	0.229	0.000	0.000	0.034	0.414	0.000	0.484	0.296
0.665 - 0.705	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.705 - 0.740	0.000	0.086	0.000	0.206	0.431	0.051	0.000	0.121	0.404	0.038	0.000	0.000	0.158	0.391	0.000

Selection of band combinations for subclass discrimination with the threshold of 0.400 in indicator matrix

Key findings

Central wavelengths for water subclass discrimination

