

Supplementary material

Table S1. Overall accuracy of the models tested.

Sensor	Data included	Model	Accuracy
Sentinel-2 (S2)	Dry season s2	1	0.77
	Short-dry season s2	2	0.83
	Wet season s2	3	0.78
	Dry + short-dry seasons s2	4	0.85
	Dry + wet seasons s2	5	0.80
	Wet + short-dry seasons s2	6	0.85
	All seasons s2	7	0.85
Sentinel-1 (S1)	Dry season s1	8	0.59
	Short-dry season s1	9	0.58
	Wet season s1	10	0.58
	Dry + short-dry seasons s1	11	0.64
	Dry + wet seasons s1	12	0.63
	Wet +short-dry seasons s1	13	0.62
	All seasons s1	14	0.65
Sentinel-1 and Sentinel-2 combinations (S1&S2)	Dry season S1&S2	15	0.79
	Short-dry seasons S1&S2	16	0.86
	Wet season S1&S2	17	0.79
	Dry + short-dry seasons S1&S2	18	0.86
	Dry + wet seasons S1&S2	19	0.81
	Wet + short-dry seasons S1&S2	20	0.86
	All seasons S1&S2	21	0.86

Table S2. User's and Producer's accuracy of all land cover types and models tested.

	Bareland		Bushland		Forest		Grassland		Montane heath	Shrubland		Woodland		
Statistic U: User's P: Producer's	U	P	U	P	U	P	U	P	U	P	U	P	U	P
Model 1	0.79	0.46	0.67	0.65	0.67	0.74	0.87	0.91	0.61	0.68	0.41	0.34	0.65	0.60
Model 2	0.87	0.69	0.75	0.85	0.82	0.79	0.90	0.92	0.71	0.62	0.52	0.46	0.75	0.70
Model 3	0.86	0.54	0.69	0.72	0.65	0.66	0.87	0.90	0.61	0.57	0.45	0.35	0.63	0.66
Model 4	0.88	0.84	0.75	0.91	0.90	0.84	0.90	0.96	0.94	0.79	0.60	0.50	0.84	0.65
Model 5	0.82	0.44	0.71	0.75	0.72	0.69	0.87	0.93	0.92	0.74	0.44	0.37	0.69	0.63
Model 6	0.89	0.61	0.75	0.88	0.86	0.80	0.90	0.94	0.88	0.73	0.59	0.49	0.80	0.73
Model 7	0.92	0.67	0.74	0.90	0.92	0.83	0.91	0.95	0.94	0.81	0.57	0.46	0.82	0.70
Model 8	0.20	0.30	0.47	0.21	0.31	0.30	0.87	0.77	0.17	0.10	0.20	0.32	0.34	0.53
Model 9	0.34	0.35	0.35	0.22	0.28	0.19	0.82	0.78	0.00	0.00	0.12	0.16	0.32	0.51
Model 10	0.20	0.33	0.44	0.16	0.37	0.28	0.81	0.78	0.14	0.02	0.15	0.19	0.35	0.57
Model 11	0.44	0.37	0.45	0.24	0.38	0.33	0.88	0.83	0.21	0.13	0.23	0.36	0.37	0.54
Model 12	0.40	0.27	0.46	0.25	0.31	0.28	0.86	0.82	0.22	0.13	0.21	0.34	0.41	0.58
Model 13	0.40	0.37	0.45	0.24	0.40	0.30	0.84	0.82	0.17	0.04	0.19	0.27	0.39	0.60
Model 14	0.53	0.34	0.54	0.29	0.34	0.28	0.88	0.83	0.42	0.21	0.21	0.32	0.39	0.61
Model 15	0.83	0.40	0.71	0.67	0.69	0.78	0.90	0.91	0.67	0.78	0.42	0.43	0.63	0.62
Model 16	0.97	0.77	0.70	0.88	0.83	0.78	0.92	0.94	0.80	0.64	0.59	0.54	0.85	0.76
Model 17	0.87	0.48	0.69	0.73	0.67	0.68	0.89	0.92	0.73	0.46	0.47	0.40	0.67	0.70
Model 18	0.89	0.70	0.76	0.92	0.91	0.84	0.93	0.95	0.91	0.84	0.53	0.49	0.84	0.73
Model 19	0.89	0.42	0.70	0.78	0.72	0.66	0.91	0.92	0.75	0.78	0.49	0.42	0.67	0.72
Model 20	0.94	0.60	0.75	0.91	0.83	0.81	0.91	0.96	0.85	0.56	0.65	0.50	0.84	0.76
Model 21	0.97	0.56	0.76	0.89	0.84	0.81	0.92	0.96	0.96	0.75	0.56	0.48	0.82	0.71