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Article

# Land-Use Mapping with Multi-Temporal Sentinel Images Based on Google Earth Engine in Southern Xinjiang Uygur Autonomous Region, China

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supplementary

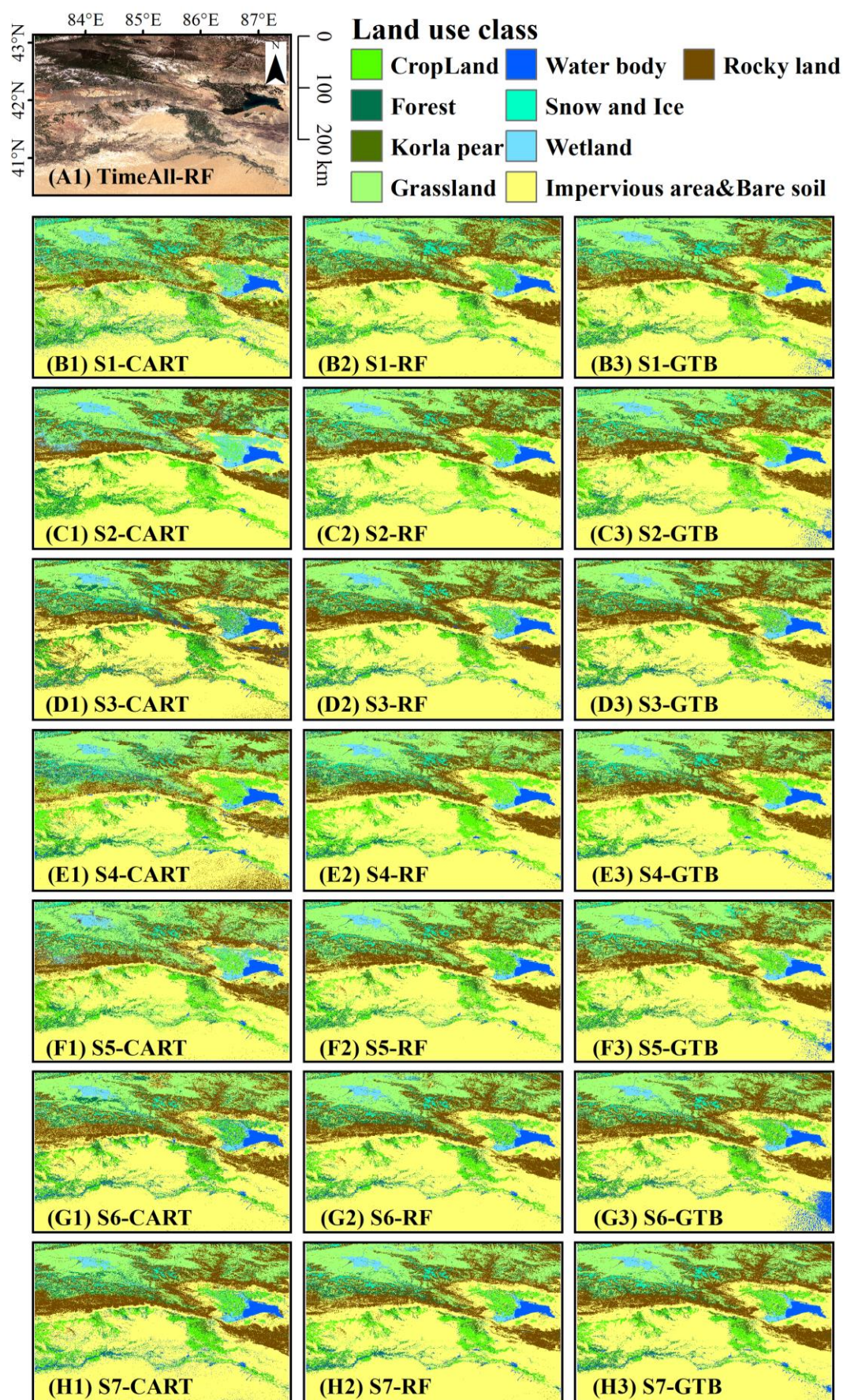


Figure S1. Mapping result for Schemes 1~7 using Classification and Regression Trees (CART), Random Forest (RF) and Gradient Tree Boost (GTB); S1: using Time1 Features, S2: using Time2 Features, S3: using Time3 Features, S4: using Time4 Features, S5: using Time1 and Time2 Features, S6: using Time1, Time2 and Time3 Features, S7: using Time1, Time2, Time3 and Time4 Features.



Table S1. Area statistics for different classes of multiple classification results.

Algorithms	Scheme	Area of land use classification (km <sup>2</sup> )								
		Cro.	For.	Kor.	Gra.	Wat.	Sno.	Wet.	Imp.	Roc.
CART	S1	10831	7340	2564	23548	5927	3889	4232	68113	23995
	S2	13095	9865	632	23241	1884	1940	7216	68406	24159
	S3	5444	12103	1280	21554	2872	2393	2870	73853	28071
	S4	12374	5247	2383	29143	4349	2668	2936	68823	22518
	S5	8740	7798	1852	29572	1978	2623	4955	68186	24736
	S6	7333	9856	1236	24565	2993	1782	2691	73194	26789
	S7	8931	7650	1115	25606	4277	2173	2255	69128	29305
RF	S1	8424	7240	1470	25680	2190	3853	2683	72465	26435
	S2	9825	6655	1297	27125	2161	2320	2939	72066	26052
	S3	6342	8621	1553	25465	2486	1802	2710	74298	27164
	S4	14044	5097	1008	25428	2806	2977	2737	72806	23535
	S5	7987	7046	1314	28179	2050	2623	2341	73864	25037
	S6	7308	7642	948	27099	2287	1998	2566	75092	25499
	S7	7820	7071	956	27545	2419	2185	2451	75856	24138
GTB	S1	8349	6823	1715	27195	2738	3711	2860	72519	24531
	S2	9706	6001	1470	26891	2977	3075	2451	72185	25683
	S3	6340	8748	1710	23440	3043	1958	2486	75041	27674
	S4	11466	4917	1427	24834	2708	3007	2274	74206	25600
	S5	7668	5881	1741	27089	2717	3114	2604	74061	25565
	S6	7174	7649	1263	25175	4548	2122	2317	73092	27101
	S7	7514	6736	1240	25166	2509	2432	2266	75585	26991

Note: Cro., For., Kor., Gra., Wat., Sno., Wet., Imp. and Roc. stand for cropland, forest, grassland, water, snow and ice, wetland, impervious area and bare soil, and rocks, respectively.

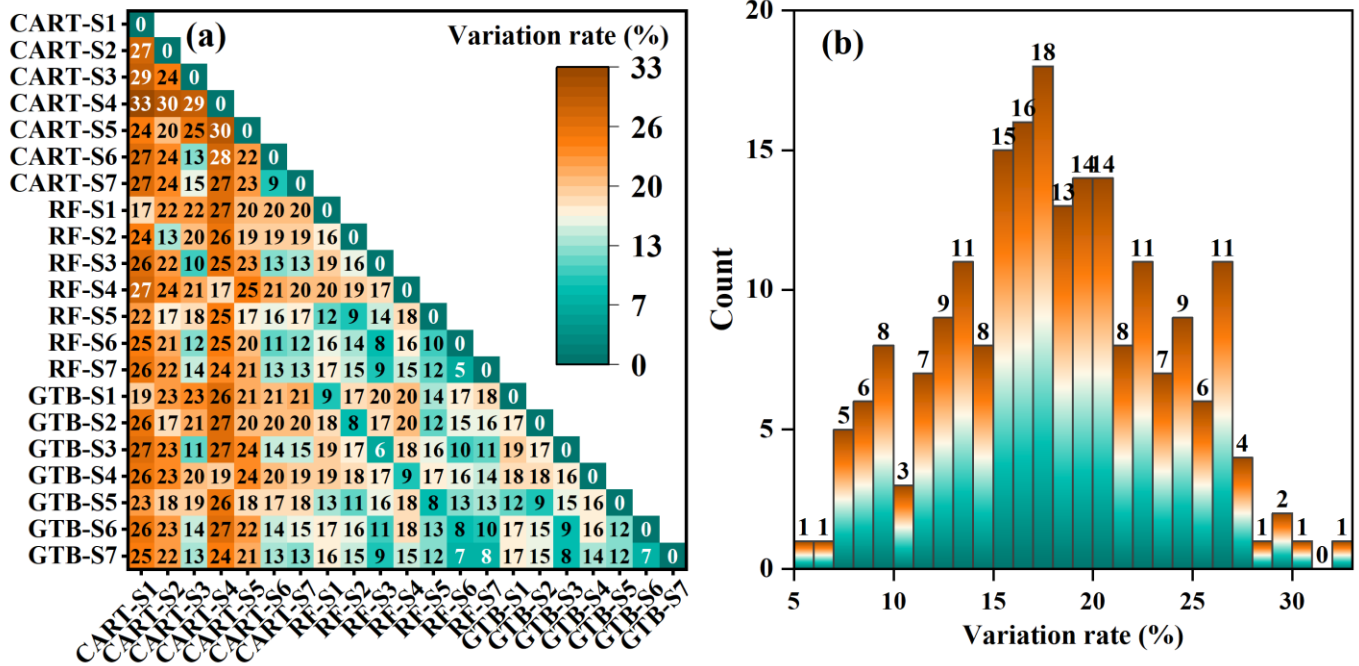


Figure S2. Rates of variation in all classes between results of multiple classifications. (a) Heat map and (b) statistical charts of difference rates. Variation rates: Ratio of different pixels in the two images to the total pixels.