SimiVal, a multi-criteria map comparison tool for land-change model projections

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SI 1: Regression coefficients for a selection of model projections, with 15 degrees of freedom.

	r-sq	adjr-sq	intercept	slope	Co-tval	Co-Pr(>|t|)	ResStErr	F-stat
LCM.1	0.253191	0.203404	-19.8658	0.462161	2.255099	0.039499	52.08049	5.08547
LCM.2	0.253888	0.204147	-19.8971	0.463055	2.259253	0.039185	52.08529	5.104226
LCM.3	0.207028	0.154163	-7.68343	-0.34622	-1.97893	0.066484	44.45983	3.916172
LCM.4	0.01907	-0.04633	-11.8568	0.103854	0.540009	0.597117	48.873	0.29161
LCM.5	0.032295	-0.03222	-0.51733	-0.16926	-0.70752	0.490091	60.79607	0.500584
LCM.6	0.253191	0.203404	-19.8658	0.462161	2.255099	0.039499	52.08049	5.08547
LCM.7	0.253888	0.204147	-19.8971	0.463055	2.259253	0.039185	52.08529	5.104226
LCM.8	0.207028	0.154163	-7.68343	-0.34622	-1.97893	0.066484	44.45983	3.916172
LCM.9	0.166363	0.110787	-3.84355	-0.34887	-1.73016	0.104117	51.24199	2.993447
LCM.10	0.066139	0.003882	-12.4955	0.2065	1.030704	0.319013	50.91347	1.06235
LCM.11	0.001119	-0.06547	-4.32156	-0.02928	-0.12964	0.898572	57.39753	0.016807
LCM.12	0.161931	0.10606	-13.0906	-0.26157	-1.70243	0.1093	39.04524	2.898283
LCM.13	0.155378	0.09907	-12.0226	0.363416	1.661153	0.117435	55.59574	2.759428
LCM.14	0.04983	-0.01351	-0.2135	-0.2134	-0.88694	0.389113	61.14401	0.786654
LCM.15	0.137505	0.080005	-5.59213	-0.29845	-1.54641	0.142839	49.04512	2.391398
LCM.16	0.034403	-0.02997	-0.47779	-0.17594	-0.73104	0.476018	61.15992	0.534424
LCM.17	0.119462	0.060759	-13.064	0.295906	1.426547	0.174193	52.71268	2.035037
LCM.18	0.000126	-0.06653	-6.79082	0.009385	0.043438	0.965926	54.90247	0.001887
LCM.19	0.174669	0.119647	0.668807	-0.42076	-1.78172	0.095047	60.01285	3.174522
LCM.20	0.184697	0.130344	-12.7697	-0.28047	-1.84339	0.08512	38.66516	3.398073
LCM.21	0.162953	0.10715	-11.7067	0.380226	1.708844	0.108083	56.54404	2.920146
LCM.22	0.049683	-0.01367	-0.80897	-0.20838	-0.88556	0.389832	59.79934	0.784211
LCM.23	0.151769	0.09522	-3.00064	-0.3401	-1.63825	0.12217	52.7555	2.683861
LCM.24	0.018436	-0.047	-1.90249	-0.12358	-0.53079	0.603338	59.16855	0.281733
LCM.25	0.068171	0.006049	-13.8986	0.204403	1.047559	0.311429	49.58573	1.097381
LCM.26	0.025335	-0.03964	-0.44852	-0.15062	-0.62442	0.541733	61.29792	0.389902
LCM.27	0.155816	0.099537	-2.91352	-0.34727	-1.66392	0.116874	53.03744	2.768628
LCM.28	0.2502	0.200213	-19.8128	0.457925	2.23726	0.040875	52.01459	5.00533
LCM.29	0.001421	-0.06515	-3.89414	-0.03298	-0.14613	0.885768	57.35288	0.021353
LCM.30	0.04646	-0.01711	-1.37109	-0.19855	-0.8549	0.406056	59.01968	0.730849
SML.32	0.459417	0.423378	-14.9477	0.683928	3.57041	0.00279	48.67879	12.74783
SML.101	0.354708	0.311689	-15.3768	0.548696	2.871463	0.011649	48.55965	8.245301

SML.102	0.397095	0.356902	-19.3457	0.616758	3.143176	0.006699	49.86475	9.879555
SML.103	0.393682	0.353261	-23.6383	0.645787	3.120815	0.007013	52.58581	9.739488
SML.104	0.398336	0.358226	-23.1223	0.641792	3.15133	0.006588	51.75449	9.930878
SML.105	0.270778	0.222163	-13.6314	0.440711	2.360058	0.032241	47.45467	5.569872
SML.106	0.304702	0.258349	-17.2232	0.500255	2.563881	0.021595	49.58392	6.573484
SML.107	0.177925	0.12312	-11.4752	0.336424	1.801806	0.091706	47.44898	3.246506

In general the LCM projections have a very high range of *p*-values that varied from > 0.1 to < 0.9, indicating some parameterisations of the LCM model showed similarity to the observed perfect case, whereas other projections were quite dissimilar to the observed perfect case. A majority of the LCM runs have negative gradients, up to -4.2, indicating that those models were more similar to the case of systematic-bias than the random case. This is perhaps a reflection of the selection of groups of pixels with high transition potentials, which would be in different locations depending on the combinations of explanatory variables. The SML realisations (SML.1 – SML.100) had uniformly low *p*-values, with high positive gradients, up to 0.7, showing similarity to the random case, largely due to the random choice of pixels in each realisation. See Table 3 in the main article for the average scores and variation for SML.1 – SML.100). Building the SML cumulative probability maps (SML.101 – SML.107) reduced the speckling of the individual SML realisations SML.1-SML.100 and as a result SML.101 – SML.107 showed less similarity to random.