

Table S1. (a) The weights of the 14 landslide conditioning factors. Only the first 7 factors were used in model 1.

No	Landslide Conditioning Factor	Class	Landslide Number	Total pixel in class	% pixel in class	Total Pixel area (m <sup>2</sup> )	Mean landslide density (per m <sup>2</sup> )	Landslide density in class (per m <sup>2</sup> )	Weight
1	Topographic Position Index (TPI)	Valley	20	508875	5.25	12721875	2.68E-06	1.57E-06	-0.53
		Lower Slope	80	1534798	15.83	38369950	2.68E-06	2.08E-06	-0.25
		Flat Slope	1	3772697	38.90	94317425	2.68E-06	1.06E-08	-5.53
		Middle Slope	401	1930231	19.90	48255775	2.68E-06	8.31E-06	1.13
		Upper Slope	98	1475735	15.22	36893375	2.68E-06	2.66E-06	-0.01
		Ridge	50	475978	4.91	11899450	2.68E-06	4.20E-06	0.45
2	Slope	0 - 5	9	6381891	65.80	159547275	2.68E-06	5.64E-08	-3.86
		5 - 15	117	1898655	19.58	47466375	2.68E-06	2.46E-06	-0.08
		15 - 25	229	841770	8.68	21044250	2.68E-06	1.09E-05	1.40
		25 - 35	201	475209	4.90	11880225	2.68E-06	1.69E-05	1.84
		35 - 60	93	99929	1.03	2498225	2.68E-06	3.72E-05	2.63
		> 60	1	860	0.01	21500	2.68E-06	4.65E-05	2.85
3	Distance to Lineament	0 - 125 m	118	1113719	11.48	27842975	2.68E-06	4.24E-06	0.46
		125 - 250 m	117	1095919	11.30	27397975	2.68E-06	4.27E-06	0.47
		250 - 500 m	164	1827880	18.85	45697000	2.68E-06	3.59E-06	0.29
		500 - 1000 m	149	2384978	24.59	59624450	2.68E-06	2.50E-06	-0.07
		> 1000 m	102	3275818	33.78	81895450	2.68E-06	1.25E-06	-0.77
4	Distance to Road	0 - 25 m	306	4466411	46.05	111660275	2.68E-06	2.74E-06	0.02
		25 - 50 m	164	2053554	21.17	51338850	2.68E-06	3.19E-06	0.18
		50 - 75 m	73	996370	10.27	24909250	2.68E-06	2.93E-06	0.09
		75 - 100 m	40	595063	6.14	14876575	2.68E-06	2.69E-06	0.00
		100 - 125 m	14	374598	3.86	9364950	2.68E-06	1.49E-06	-0.58
		125 - 150 m	10	253123	2.61	6328075	2.68E-06	1.58E-06	-0.53
		> 150 m	43	959195	9.89	23979875	2.68E-06	1.79E-06	-0.40
5	Surface Geology	Alluvium	9	2343724	24.17	58593100	2.68E-06	1.54E-07	-2.86
		Residual Soil -KH	447	2449847	25.26	61246175	2.68E-06	7.30E-06	1.00
		Mined-out	12	1827169	18.84	45679225	2.68E-06	2.63E-07	-2.32
		Residual Soil- HS	38	385718	3.98	9642950	2.68E-06	3.94E-06	0.39
		Residual Soil- Gr	127	2257866	23.28	56446650	2.68E-06	2.25E-06	-0.18

		Residual Soil -DS	17	218731	2.26	5468275	2.68E-06	3.11E-06	0.15
		Water body	0	177569	1.83	4439225	2.68E-06	0.00E+00	0.00
		Landfill	0	37690	0.39	942250	2.68E-06	0.00E+00	0.00
6	Elevation	0 - 50 m	121	4812689	49.62	120317225	2.68E-06	1.01E-06	-0.98
		50 - 100 m	447	4081859	42.09	102046475	2.68E-06	4.38E-06	0.49
		100 - 150 m	65	559180	5.77	13979500	2.68E-06	4.65E-06	0.55
		150 - 200 m	16	166365	1.72	4159125	2.68E-06	3.85E-06	0.36
		>200 m	1	78221	0.81	1955525	2.68E-06	5.11E-07	-1.66
7	Surface Roughness	Low	206	2289706	23.61	57242650	2.68E-06	3.60E-06	0.29
		Moderate	344	4808678	49.58	120216950	2.68E-06	2.86E-06	0.07
		High	100	2599930	26.81	64998250	2.68E-06	1.54E-06	-0.56
8	Stream Power Index (SPI)	Very low	12	11033	0.11	275825	2.68E-06	4.35E-05	2.79
		Low	89	212168	2.19	5304200	2.68E-06	1.68E-05	1.83
		Moderate	32	321765	3.32	8044125	2.68E-06	3.98E-06	0.39
		High	380	8840351	91.15	221008775	2.68E-06	1.72E-06	-0.44
		Very high	137	312997	3.23	7824925	2.68E-06	1.75E-05	1.88
9(a)	Slope aspect (granite)	North	14	336255	3.47	8406375	1.86E-06	1.67E-06	-0.11
		Northeast	11	305244	3.15	7631100	1.86E-06	1.44E-06	-0.26
		East	15	374322	3.86	9358050	1.86E-06	1.60E-06	-0.15
		Southeast	13	328917	3.39	8222925	1.86E-06	1.58E-06	-0.16
		South	17	345840	3.57	8646000	1.86E-06	1.97E-06	0.05
		Southwest	13	340488	3.51	10556050	1.86E-06	1.23E-06	-0.41
		West	31	422242	4.35	9004250	1.86E-06	3.44E-06	0.61
		Northwest	18	360170	3.71	9004250	1.86E-06	2.00E-06	0.07
9(b)	Slope aspect (meta-sediments)	North	59	475627	4.90	11890675	5.23E-06	4.96E-06	-0.05
		Northeast	54	480686	4.96	12017150	5.23E-06	4.49E-06	-0.15
		East	65	504788	5.20	12619700	5.23E-06	5.15E-06	-0.02
		Southeast	59	498859	5.14	12471475	5.23E-06	4.73E-06	-0.10
		South	60	515505	5.32	12887625	5.23E-06	4.66E-06	-0.12
		Southwest	75	480983	4.96	12024575	5.23E-06	6.24E-06	0.18
		West	71	483308	4.98	12082700	5.23E-06	5.88E-06	0.12
		Northwest	66	450861	4.65	11271525	5.23E-06	5.86E-06	0.11
10	Topographic Wetness Index	0 to 0.200	575	1902580	19.62	47564500	2.68E-06	1.21E-05	1.51
		0.200 to 0.278	62	2512812	25.91	62820300	2.68E-06	9.87E-07	-1.00
		0.278 to 0.349	9	2957172	30.49	73929300	2.68E-06	1.22E-07	-3.09

	(TWI)	0.349-0.443	3	1950988	20.12	48774700	2.68E-06	6.15E-08	-3.77
		0.443-1.000	1	374762	3.86	9369050	2.68E-06	1.07E-07	-3.22
11	Normalized Difference Vegetation Index (NDVI)	water	1	195576	2.02	4889400	2.68E-06	2.05E-07	-2.57
		Barren, road, built up area	14	1634010	16.85	40850250	2.68E-06	3.43E-07	-2.06
		Sparse vegetation	43	2384786	24.59	59619650	2.68E-06	7.21E-07	-1.31
		Low vegetation	141	2117228	21.83	52930700	2.68E-06	2.66E-06	-0.01
		Moderate vegetation	210	1699225	17.52	42480625	2.68E-06	4.94E-06	0.61
		Dense vegetation	241	1667489	17.19	41687225	2.68E-06	5.78E-06	0.77
12	Distance to Streams	0 - 25 m	100	1924565	19.84	48114125	2.68E-06	2.08E-06	-0.25
		25 - 50 m	103	1563080	16.12	39077000	2.68E-06	2.64E-06	-0.02
		50 - 75 m	87	1310577	13.51	32764425	2.68E-06	2.66E-06	-0.01
		75 - 100 m	86	1063037	10.96	26575925	2.68E-06	3.24E-06	0.19
		> 100 m	274	3837055	39.56	95926375	2.68E-06	2.86E-06	0.06
13	Slope Curvature	Concave	132	692424	7.14	17310600	2.68E-06	7.63E-06	1.05
		Flat	374	8459242	87.22	211481050	2.68E-06	1.77E-06	-0.42
		Convex	144	546648	5.64	13666200	2.68E-06	1.05E-05	1.37
14	Bedrock Geology	Kenny Hill Fm.	454	3173147	32.72	79328675	2.68E-06	5.72E-06	0.76
		Limestone	10	3054520	31.50	76363000	2.68E-06	1.31E-07	-3.02
		Granite	131	2788209	28.75	69705225	2.68E-06	1.88E-06	-0.36
		Hawthornden Schist	38	438623	4.52	10965575	2.68E-06	3.47E-06	0.26
		Dinding Schist	17	243815	2.51	6095375	2.68E-06	2.79E-06	0.04

Table S1. (b) The weights for model A where all the 377 landslide points in zone A were used as the training dataset.

No	Landslide Conditioning Factor	Class	Landslide Number	Total pixel in class	Total Pixel area (m <sup>2</sup> )	Mean landslide density (per m <sup>2</sup> )	Landslide density in class (per m <sup>2</sup> )	Weight
1	Topographic Position Index (TPI)	Valley	12	250432	6260800	3.08475E-06	1.92E-06	-0.48
		Lower Slope	44	763301	19082525	3.08475E-06	2.31E-06	-0.29
		Flat Slope	1	1888633	47215825	3.08475E-06	2.12E-08	-4.98
		Middle Slope	235	1004831	25120775	3.08475E-06	9.35E-06	1.11
		Upper Slope	53	738471	18461775	3.08475E-06	2.87E-06	-0.07
		Ridge	32	242893	6072325	3.08475E-06	5.27E-06	0.54
2	Slope	0 - 5	3	3175874	79396850	3.08475E-06	3.78E-08	-4.40
		5 - 15	51	962713	24067825	3.08475E-06	2.12E-06	-0.38
		15 - 25	147	434828	10870700	3.08475E-06	1.35E-05	1.48
		25 - 35	117	261439	6535975	3.08475E-06	1.79E-05	1.76
		35 - 60	59	53365	1334125	3.08475E-06	4.42E-05	2.66
		> 60	0	342	8550	3.08475E-06	0.00E+00	0.00
3	Distance to Lineament	0 - 125 m	71	632899	15822475	3.08475E-06	4.49E-06	0.37
		125 - 250 m	78	596227	14905675	3.08475E-06	5.23E-06	0.53
		250 - 500 m	90	909138	22728450	3.08475E-06	3.96E-06	0.25
		500 - 1000 m	81	1094032	27350800	3.08475E-06	2.96E-06	-0.04
		> 1000 m	57	1656265	41406625	3.08475E-06	1.38E-06	-0.81
4	Distance to Road	0 - 25 m	176	2241678	56041950	3.08475E-06	3.14E-06	0.02
		25 - 50 m	87	1040970	26024250	3.08475E-06	3.34E-06	0.08
		50 - 75 m	49	509644	12741100	3.08475E-06	3.85E-06	0.22
		75 - 100 m	30	301272	7531800	3.08475E-06	3.98E-06	0.26
		100 - 125 m	9	185533	4638325	3.08475E-06	1.94E-06	-0.46
		125 - 150 m	3	123014	3075350	3.08475E-06	9.75E-07	-1.15
		> 150 m	23	486450	12161250	3.08475E-06	1.89E-06	-0.49
5	Surface Geology	Alluvium	6	1202082	30052050	3.08475E-06	2.00E-07	-2.74
		Residual Soil -KH	280	1277497	31937425	3.08475E-06	8.77E-06	1.04
		Mined-out	3	864543	21613575	3.08475E-06	1.39E-07	-3.10
		Residual Soil- HS	20	186068	4651700	3.08475E-06	4.30E-06	0.33
		Residual Soil- Gr	56	1150727	28768175	3.08475E-06	1.95E-06	-0.46

		Residual Soil -DS	12	103692	2592300	3.08475E-06	4.63E-06	0.41
		Water body	0	80260	2006500	3.08475E-06	0.00E+00	0.00
		Landfill	0	23692	592300	3.08475E-06	0.00E+00	0.00
6	Elevation	0 - 50 m	64	2359895	58997375	3.08475E-06	1.08E-06	-1.05
		50 - 100 m	263	2074042	51851050	3.08475E-06	5.07E-06	0.50
		100 - 150 m	44	290302	7257550	3.08475E-06	6.06E-06	0.68
		150 - 200 m	6	104622	2615550	3.08475E-06	2.29E-06	-0.30
		>200 m	0	59700	1492500	3.08475E-06	0.00E+00	0.00
7	Surface Roughness	Low	123	1139765	28494125	3.08475E-06	4.32E-06	0.34
		Moderate	199	2434279	60856975	3.08475E-06	3.27E-06	0.06
		High	55	1314517	32862925	3.08475E-06	1.67E-06	-0.61

Table S1. (c) The weights for model B where all the 274 landslide points in zone B were used as the training dataset.

No	Landslide Conditioning Factor	Class	Landslide Number	Total pixel in class	Total Pixel area (m <sup>2</sup> )	Mean landslide density (per m <sup>2</sup> )	Landslide density in class (per m <sup>2</sup> )	Weight
1	Topographic Position Index (TPI)	Valley	9	258394	6459850	2.28E-06	1.39E-06	-0.49
		Lower Slope	40	771281	19282025	2.28E-06	2.07E-06	-0.09
		Flat Slope	2	1883662	47091550	2.28E-06	4.25E-08	-3.98
		Middle Slope	161	925219	23130475	2.28E-06	6.96E-06	1.12
		Upper Slope	46	737130	18428250	2.28E-06	2.50E-06	0.09
		Ridge	16	233051	5826275	2.28E-06	2.75E-06	0.19
2	Slope	0 - 5	3	3205224	80130600	2.28E-06	3.74E-08	-4.11
		5 - 15	55	935773	23394325	2.28E-06	2.35E-06	0.03
		15 - 25	81	406890	10172250	2.28E-06	7.96E-06	1.25
		25 - 35	93	213768	5344200	2.28E-06	1.74E-05	2.03
		35 - 60	42	46564	1164100	2.28E-06	3.61E-05	2.76
		> 60	0	518	12950	2.28E-06	0.00E+00	0.00
3	Distance to Lineament	0 - 125 m	49	480696	12017400	2.28E-06	4.08E-06	0.58
		125 - 250 m	38	499554	12488850	2.28E-06	3.04E-06	0.29
		250 - 500 m	73	918611	22965275	2.28E-06	3.18E-06	0.33
		500 - 1000 m	69	1290724	32268100	2.28E-06	2.14E-06	-0.06
		> 1000 m	45	1619152	40478800	2.28E-06	1.11E-06	-0.72
4	Distance to Road	0 - 25 m	132	2224428	55610700	2.28E-06	2.37E-06	0.04
		25 - 50 m	75	1012420	25310500	2.28E-06	2.96E-06	0.26
		50 - 75 m	23	486590	12164750	2.28E-06	1.89E-06	-0.19
		75 - 100 m	13	293680	7342000	2.28E-06	1.77E-06	-0.25
		100 - 125 m	6	188988	4724700	2.28E-06	1.27E-06	-0.58
		125 - 150 m	6	130060	3251500	2.28E-06	1.85E-06	-0.21
		> 150 m	19	472571	11814275	2.28E-06	1.61E-06	-0.35
5	Surface Geology	Alluvium	2	1141513	28537825	2.28E-06	7.01E-08	-3.48
		Residual Soil -KH	170	1172209	29305225	2.28E-06	5.80E-06	0.93
		Mined-out	9	962303	24057575	2.28E-06	3.74E-07	-1.81
		Residual Soil-HS	18	199579	4989475	2.28E-06	3.61E-06	0.46
		Residual Soil-Gr	70	1106817	27670425	2.28E-06	2.53E-06	0.10
		Residual Soil -DS	5	115015	2875375	2.28E-06	1.74E-06	-0.27

		Water body	0	97303	2432575	2.28E-06	0.00E+00	0.00
		Landfill	0	13998	349950	2.28E-06	0.00E+00	0.00
6	Elevation	0 - 50 m	59	2452508	61312700	2.28E-06	9.62E-07	-0.86
		50 - 100 m	182	2007125	50178125	2.28E-06	3.63E-06	0.46
		100 - 150 m	23	268854	6721350	2.28E-06	3.42E-06	0.41
		150 - 200 m	9	61739	1543475	2.28E-06	5.83E-06	0.94
		>200 m	1	18511	462775	2.28E-06	2.16E-06	-0.05
7	Surface Roughness	Low	94	1149718	28742950	2.28E-06	3.27E-06	0.36
		Moderate	134	2373883	59347075	2.28E-06	2.26E-06	-0.01
		High	46	1285136	32128400	2.28E-06	1.43E-06	-0.46

Table S2. Comparison of the area extent of the landslide conditioning factor classes in zone A and zone B.

No	Landslide Conditioning Factor	Class	Total Pixel in Zone A (m <sup>2</sup> )	Total Pixel in Zone B (m <sup>2</sup> )	Difference = (A - B)/A, (%)
1	Topographic Position Index (TPI)	Valley	6260800	6459850	-3.2
		Lower Slope	19082525	19282025	-1.0
		Flat Slope	47215825	47091550	0.3
		Middle Slope	25120775	23130475	7.9
		Upper Slope	18461775	18428250	0.2
		Ridge	6072325	5826275	4.1
2	Slope	0 - 5	79396850	80130600	-0.9
		5 - 15	24067825	23394325	2.8
		15 - 25	10870700	10172250	6.4
		25 - 35	6535975	5344200	18.2
		35 - 60	1334125	1164100	12.7
		> 60	8550	12950	-51.5
3	Distance to Lineament	0 - 125 m	15822475	12017400	24.0
		125 - 250 m	14905675	12488850	16.2
		250 - 500 m	22728450	22965275	-1.0
		500 - 1000 m	27350800	32268100	-18.0
		> 1000 m	41406625	40478800	2.2
4	Distance to Road	0 - 25 m	56041950	55610700	0.8
		25 - 50 m	26024250	25310500	2.7
		50 - 75 m	12741100	12164750	4.5
		75 - 100 m	7531800	7342000	2.5
		100 - 125 m	4638325	4724700	-1.9
		125 - 150 m	3075350	3251500	-5.7
		> 150 m	12161250	11814275	2.9
5	Surface Geology	Alluvium	30052050	28537825	5.0
		Residual Soil -KH	31937425	29305225	8.2
		Mined-out	21613575	24057575	-11.3
		Residual Soil-HS	4651700	4989475	-7.3
		Residual Soil-Gr	28768175	27670425	3.8
		Residual Soil -DS	2592300	2875375	-10.9
		Water body	2006500	2432575	-21.2
		Landfill	592300	349950	40.9
6	Elevation	0 - 50 m	58997375	61312700	-3.9
		50 - 100 m	51851050	50178125	3.2
		100 - 150 m	7257550	6721350	7.4
		150 - 200 m	2615550	1543475	41.0
		>200 m	1492500	462775	69.0
7	Surface Roughness	Low	28494125	28742950	-0.9
		Moderate	60856975	59347075	2.5
		High	32862925	32128400	2.2