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LAMPIRAN

Lampiran 1. Tabel sampling uji akurasi hasil inventarisasi kejadian longsor serta, hasil *ground truth* di Sub DAS Bonehau yang berjumlah 77 titik.

Name	Longitude	Latitude	Keterangan	Thn	KECAMATAN	DESA/KELUR
L002	742965.6047	742965.6047	Longsor	2019	TABULAHAN	TAMPAK KURRA
L003	743095.9122	743095.9122	Longsor	2019	TABULAHAN	TAMPAK KURRA
L006	743225.8229	743225.8229	Longsor	2019	TABULAHAN	TAMPAK KURRA
L007	743621.7466	743621.7466	Longsor	2018	TABULAHAN	TAMPAK KURRA
L009	744004.5461	744004.5461	Longsor	2019	TABULAHAN	TAMPAK KURRA
L001	742531.8635	742531.8635	Longsor	2019	TABULAHAN	TALOPAK
L004	743086.1226	743086.1226	Longsor	2019	TABULAHAN	TAMPAK KURRA
L005	743159.1478	743159.1478	Longsor	2019	TABULAHAN	TAMPAK KURRA
L008	744935.6167	744935.6167	Longsor	2019	TABULAHAN	TAMPAK KURRA
L010	743633.9964	743633.9964	Longsor	2019	TABULAHAN	TALOPAK
L011	743869.1806	743869.1806	Longsor	2019	TABULAHAN	TAMPAK KURRA
L012	743653.2802	743653.2802	Longsor	2019	TABULAHAN	TALOPAK
L015	750155.0518	750155.0518	Longsor	2019	TABULAHAN	TALOPAK
L016	750154.4367	750154.4367	Longsor	2019	TABULAHAN	SALULEANG
L017	750173.2883	750173.2883	Longsor	2019	TABULAHAN	SALULEANG
L018	750175.2241	750175.2241	Longsor	2018	TABULAHAN	SALULEANG
L019	750192.2898	750192.2898	Longsor	2017	TABULAHAN	SALULEANG
L014	749906.2239	749906.2239	Longsor	2019	TABULAHAN	SALULEANG
L020	750247.8524	750247.8524	Longsor	2018	TABULAHAN	SALULEANG
L022	750278.7375	750278.7375	Longsor	2018	TABULAHAN	SALULEANG
L034	750887.1864	750887.1864	Longsor	2019	TABULAHAN	SALULEANG
L036	750835.5925	750835.5925	Longsor	2019	TABULAHAN	SALULEANG
L041	750370.1542	750370.1542	Longsor	2019	TABULAHAN	SALULEANG
L044	750203.141	750203.141	Longsor	2019	TABULAHAN	SALULEANG
L046	750191.3987	750191.3987	Longsor	2018	TABULAHAN	SALULEANG
L049	749825.5859	749825.5859	Longsor	2017	TABULAHAN	SALULEANG
L050	750054.1016	750054.1016	Longsor	2019	TABULAHAN	PEU'
L051	750111.9936	750111.9936	Longsor	2019	TABULAHAN	PEU'
L054	749937.0904	749937.0904	Unlongsor	2014	TABULAHAN	PEU'
L058	749546.6528	749546.6528	Longsor	2019	TABULAHAN	PEU'
L064	748362.8054	748362.8054	Longsor	2019	TABULAHAN	PEU'
L065	747742.698	747742.698	Longsor	2019	TABULAHAN	TABULAHAN
L066	747667.0799	747667.0799	Longsor	2019	TABULAHAN	TABULAHAN
L068	747427.3418	747427.3418	Longsor	2019	TABULAHAN	TABULAHAN
L070	747490.1055	747490.1055	Unlongsor	2019	TABULAHAN	TABULAHAN
L071	747243.9054	747243.9054	Longsor	2019	TABULAHAN	PERIANGAN
L072	747171.1148	747171.1148	Longsor	2019	TABULAHAN	PERIANGAN
L073	746274.6214	746274.6214	Longsor	2019	TABULAHAN	PERIANGAN
L074	745268.2326	745268.2326	Longsor	2019	TABULAHAN	PERIANGAN
L075	745219.5756	745219.5756	Longsor	2019	TABULAHAN	PERIANGAN
L076	744478.4982	744478.4982	Longsor	2019	TABULAHAN	PERIANGAN

Name	Longitude	Latitude	Keterangan	Thn	KECAMATAN	DESA/KELUR
L079	755448.6615	755448.6615	Longsor	2018	TABULAHAN	TALOPAK
L081	757159.5348	757159.5348	Longsor	2019	BONEHAU	HINUA
L082	754405.6783	754405.6783	Longsor	2018	BONEHAU	BONEHAU
L083	754940.3986	754940.3986	Longsor	2015	BONEHAU	BONEHAU
L084	754860.2095	754860.2095	Longsor	2015	BONEHAU	BONEHAU
L085	754173.2716	754173.2716	Longsor	2015	BONEHAU	BONEHAU
L086	754594.7008	754594.7008	Longsor	2015	BONEHAU	BONEHAU
L087	754460.8213	754460.8213	Longsor	2015	BONEHAU	BONEHAU
L088	754201.3087	754201.3087	Longsor	2015	BONEHAU	BONEHAU
L089	754123.019	754123.019	Longsor	2015	BONEHAU	BONEHAU
L090	753611.6791	753611.6791	Longsor	2015	BONEHAU	BONEHAU
L091	753366.2489	753366.2489	Longsor	2015	BONEHAU	BONEHAU
L092	753782.1196	753782.1196	Longsor	2015	BONEHAU	BONEHAU
L093	753130.5554	753130.5554	Longsor	2015	BONEHAU	BONEHAU
L094	752956.9223	752956.9223	Longsor	2015	BONEHAU	BONEHAU
L095	753210.2723	753210.2723	Longsor	2015	BONEHAU	BONEHAU
L096	752675.5827	752675.5827	Longsor	2015	BONEHAU	BONEHAU
L097	752748.3058	752748.3058	Longsor	2015	BONEHAU	BONEHAU
L099	752672.5441	752672.5441	Longsor	2015	BONEHAU	BONEHAU
L100	752634.108	752634.108	Longsor	2015	BONEHAU	BONEHAU
L101	752459.9612	752459.9612	Longsor	2019	BONEHAU	BONEHAU
L102	752638.5223	752638.5223	Longsor	2015	BONEHAU	BONEHAU
L103	752546.4471	752546.4471	Longsor	2015	BONEHAU	BONEHAU
L104	752419.4997	752419.4997	Longsor	2015	BONEHAU	BONEHAU
L105	752312.5152	752312.5152	Longsor	2015	BONEHAU	BONEHAU
L106	752316.8809	752316.8809	Longsor	2015	BONEHAU	BONEHAU
L107	755636.0215	755636.0215	Longsor	2018	BONEHAU	BONEHAU
L109	755907.6181	755907.6181	Longsor	2018	BONEHAU	BONEHAU
L110	755892.2502	755892.2502	Longsor	2018	BONEHAU	BONEHAU
L111	756487.8488	756487.8488	Longsor	2018	BONEHAU	BONEHAU
L112	758825.984	758825.984	Longsor	2019	BONEHAU	BONEHAU
L113	740678.3088	740678.3088	Unlongsor	2014	TABULAHAN	TAMPAK KURRA
L114	740607.0255	740607.0255	Unlongsor	2014	TABULAHAN	TAMPAK KURRA
L115	762178.2541	762178.2541	Longsor	2015	BONEHAU	SALUTIWO
L047	750606.184	750606.184	Longsor	2019	TABULAHAN	PEU'
L055	749322.9082	749322.9082	Longsor	2019	TABULAHAN	PEU'

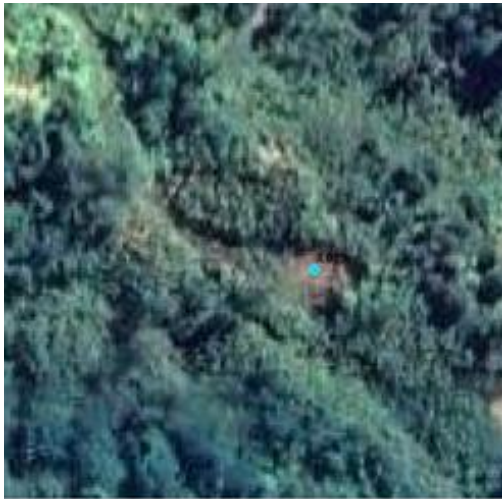
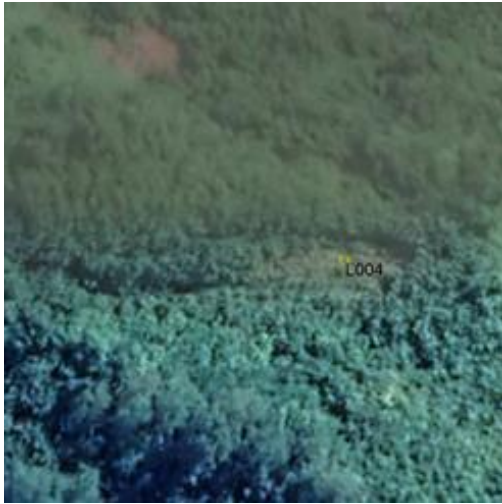
Lampiran 2. Gambar hasil inventarisasi kejadian longsor pada citra Google Earth, disertai foto kejadian hasil survey.





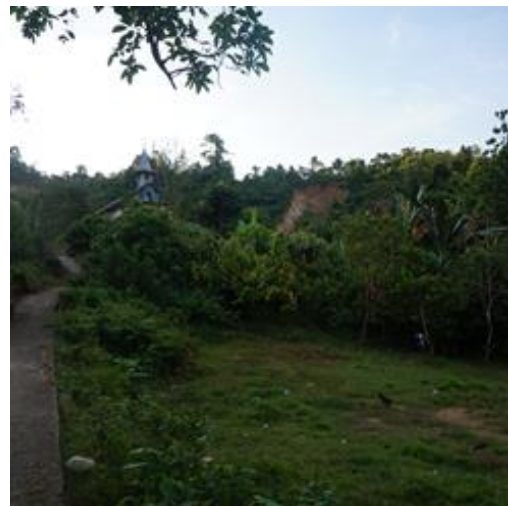
Kejadian longsor di sekitar jaringan jalan, yang terus terjadi di lokasi yang sama dengan luasan yang bertambah di tiap tahunnya. Frekuensi dan volume kejadian longsor di sekitar jaringan jalan signifikan terhadap intensitas curah hujan, terlebih lagi saat angin musim barat mulai bertiup.







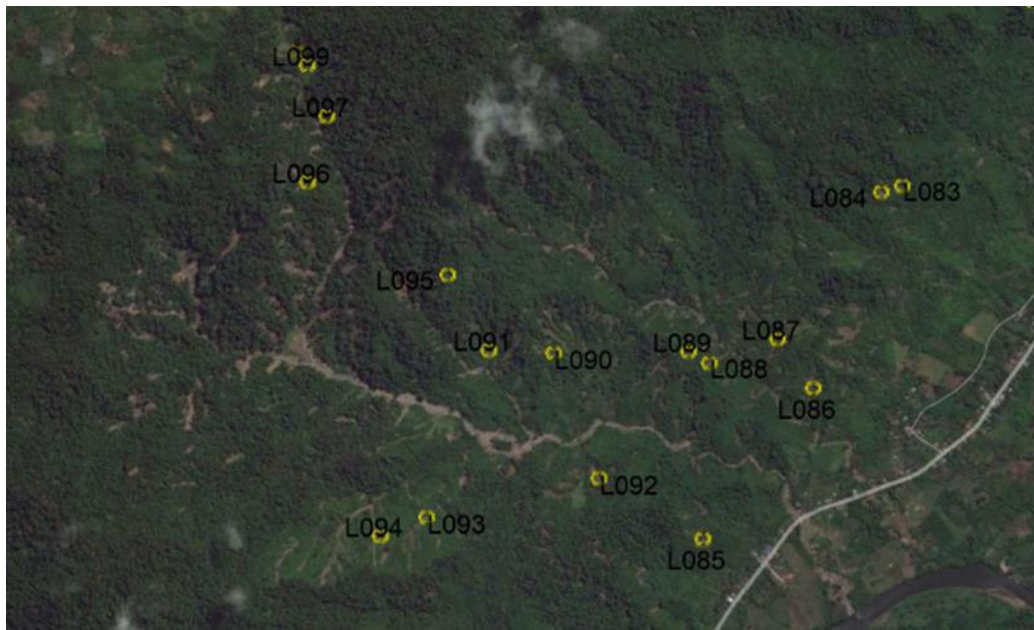
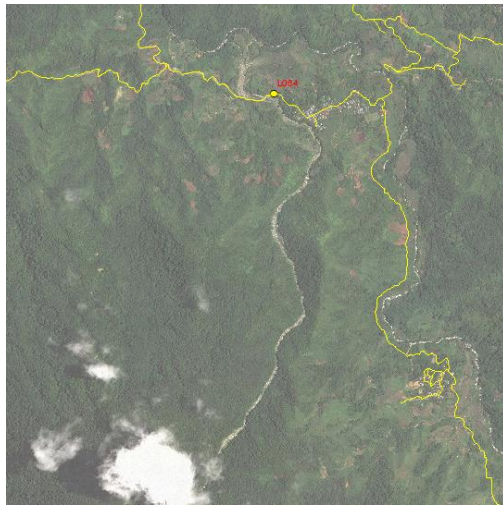
Kejadian longsor pada lokasi pertanian-persawahan terjadi pada daerah dengan kelerengn $> 10\%$, terlebih lagi empat dari foto yang terlampir berdiri di atas batuan terobosan. Kejadian terbesar pada gambar urutan tiga, tanah persawahan yang ambruk saat malam penentuan presiden terpilih 2019, setelah sehari penuh hujan tak pernah berhenti. Keretangan “Adi Gamba”.





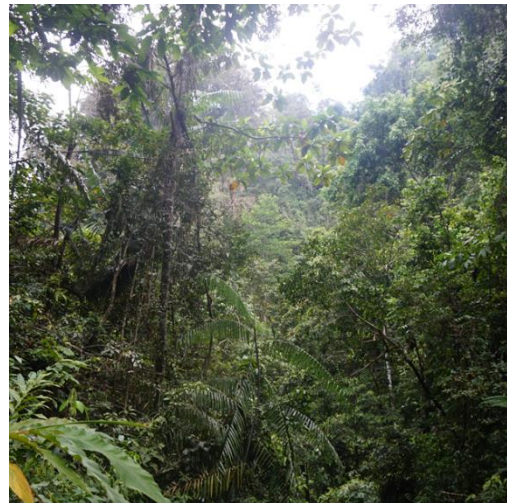
Kejadian longsor di sekitar area permukiman yang terjadi pada tahun 2019. Foto urutan pertama merupakan kejadian di Desa Tampak Kurra, satu rumah tertimbun. Longsoran terus berlangsung hingga sekarang meski dengan volume yang kecil, butuh perhatian lebih, apa lagi bangunan terakhir yang dekat dengan lokasi longsor merupakan sarana ibadah (gereja). Gambar urutan dua dan tiga berada pada Desa Peu, berdasarkan keterangan sekretaris desanya, longsoran terjadi pada malam Natal setelah sebelumnya hujan berkepanjangan selama 2 hari.





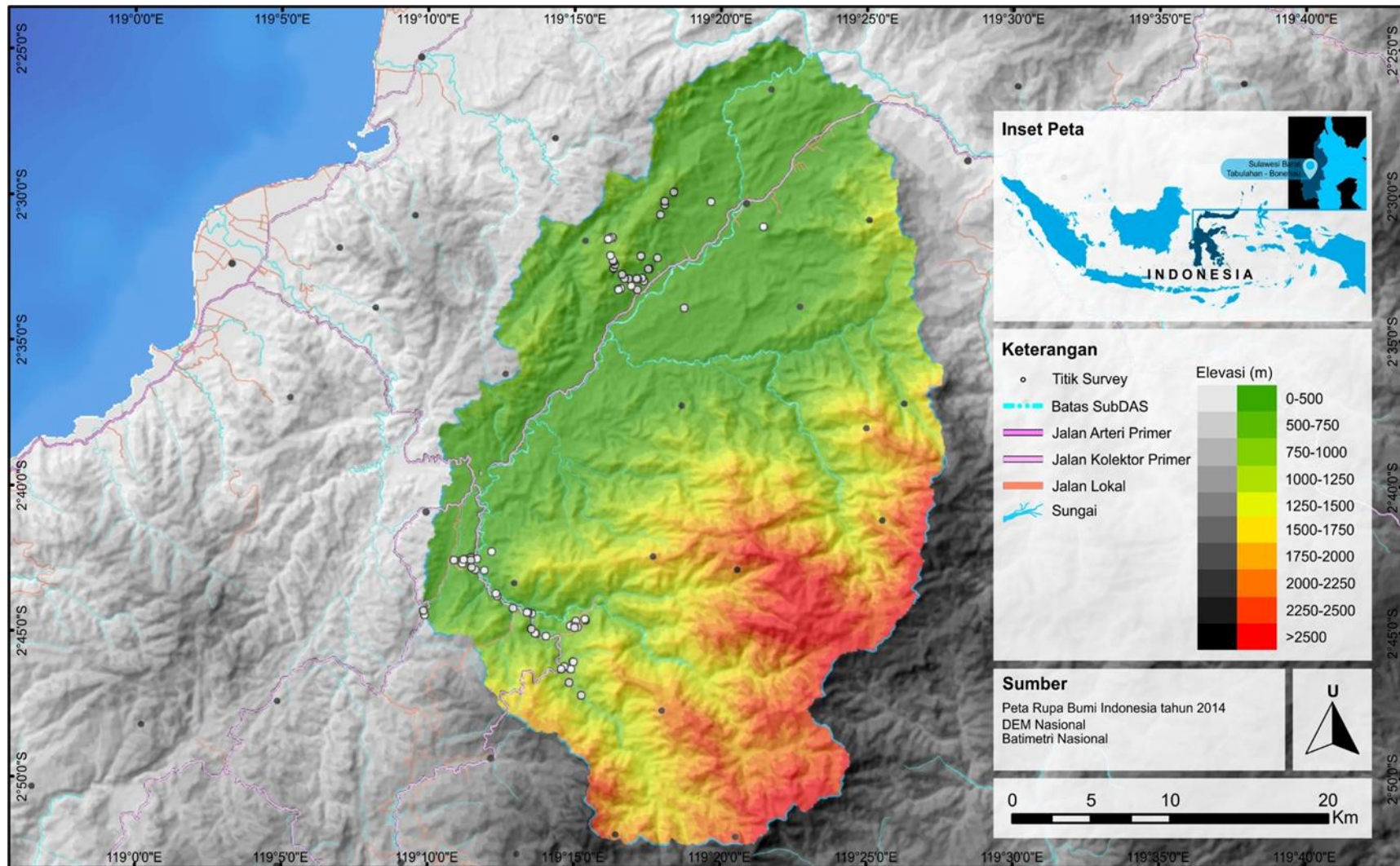
Kejadian longsor di sekitar jaringan sungai pada daerah pergunungan dan perbukitan. Gambar urutan dua memperlihatkan aliran debris, pada sungai talopak, yang terjadi pada tahun 2018. Kejadian longsor dengan volume runtuhuan yang telah mengubah bentuk sungai. Berdasarkan keterangan Kepala Desa Tabulahan, kejadian terjadi pada malam hari setelah sebelumnya terjadi getaran dan gemuru disertai hujan yang telah berlangsung lama. Perubahan pola pertanian yang awalnya semi perkebunan ke pertanian nilam mejadi indikasi utama kerusakan hulu, perluasan lahan pertanian, terlebih lagi kebutuhan akan kayu sebagai bahan bakar penyuling nilam.

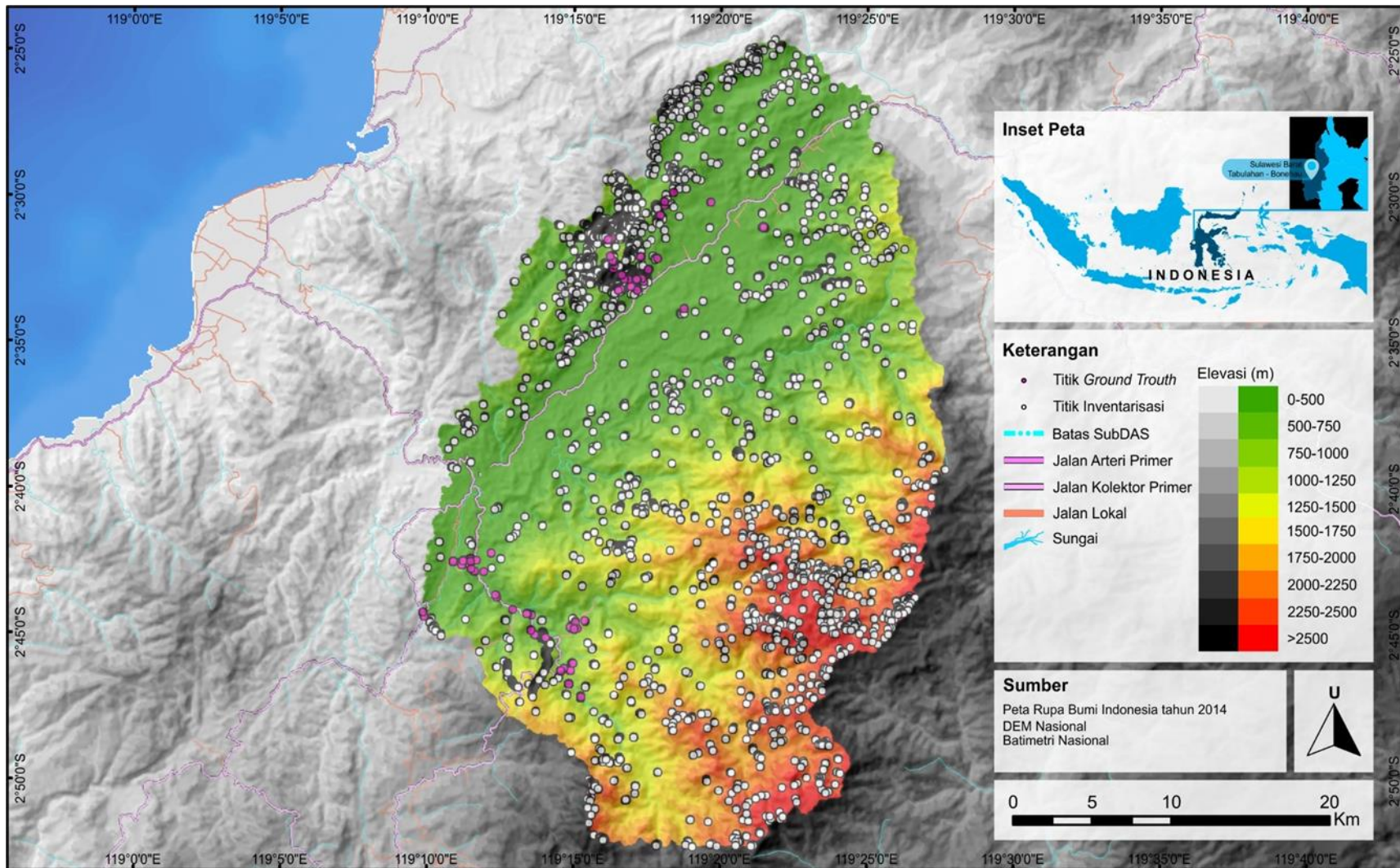




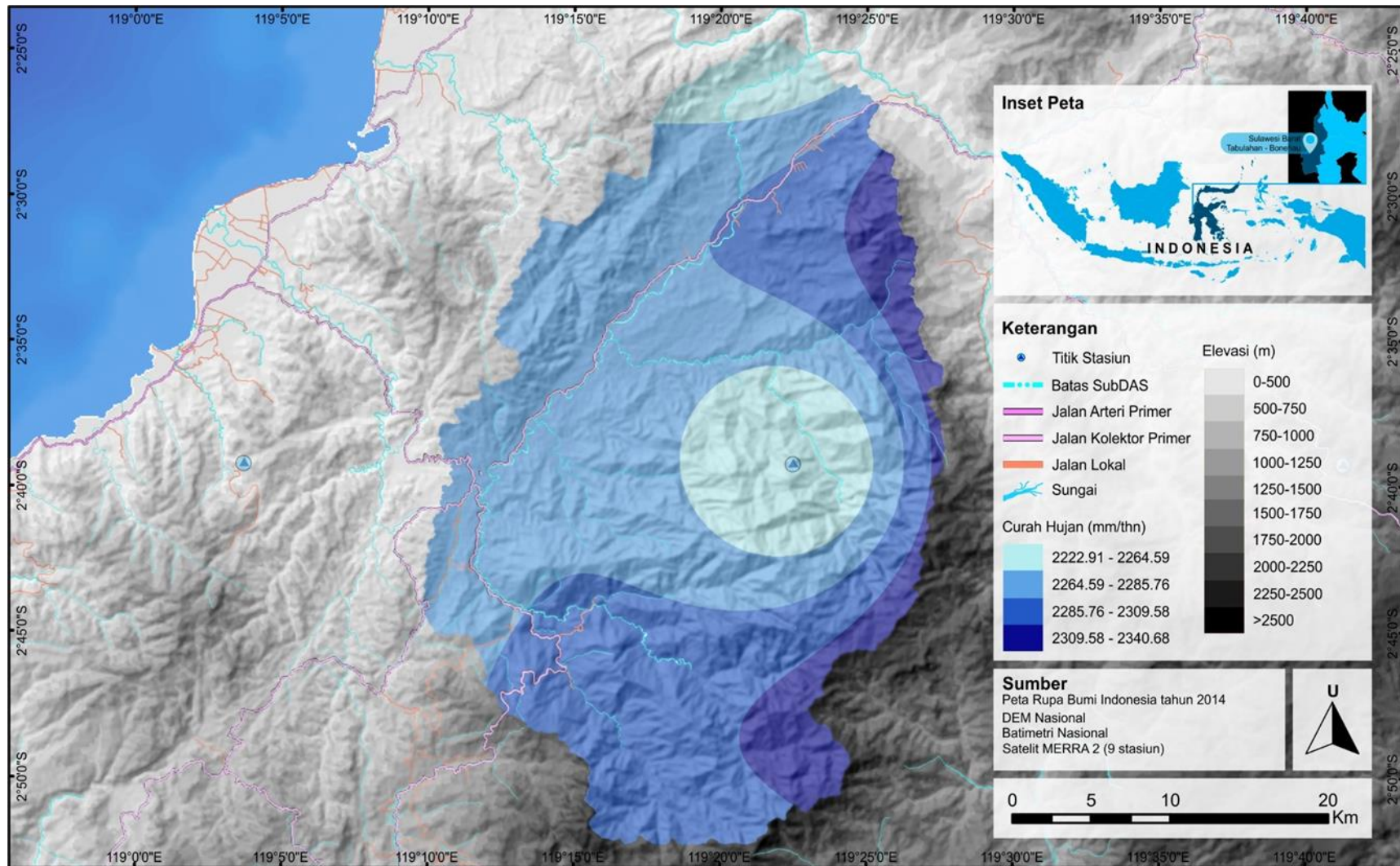
Kejadian longsor di daerah pegunungan dan perbukitan, secara masif terjadi pada tahun 2015. Berdasarkan klasifikasi Varnes rata-rata kejadian longsor masuk dalam kelas pergerakan *flow* dan *slope deformation*, dengan *soil type debris flow*, *debris avalanche*, dan *soil slope deformation*. Indikasi penyebab berupa kejadian gempa yang episentrumnya berada pada sisi utara Sub DAS Bonehau, selain itu urbanisasi/transmigrasi yang memberikan intervensi lebih terhadap perubahan penutupan lahan.

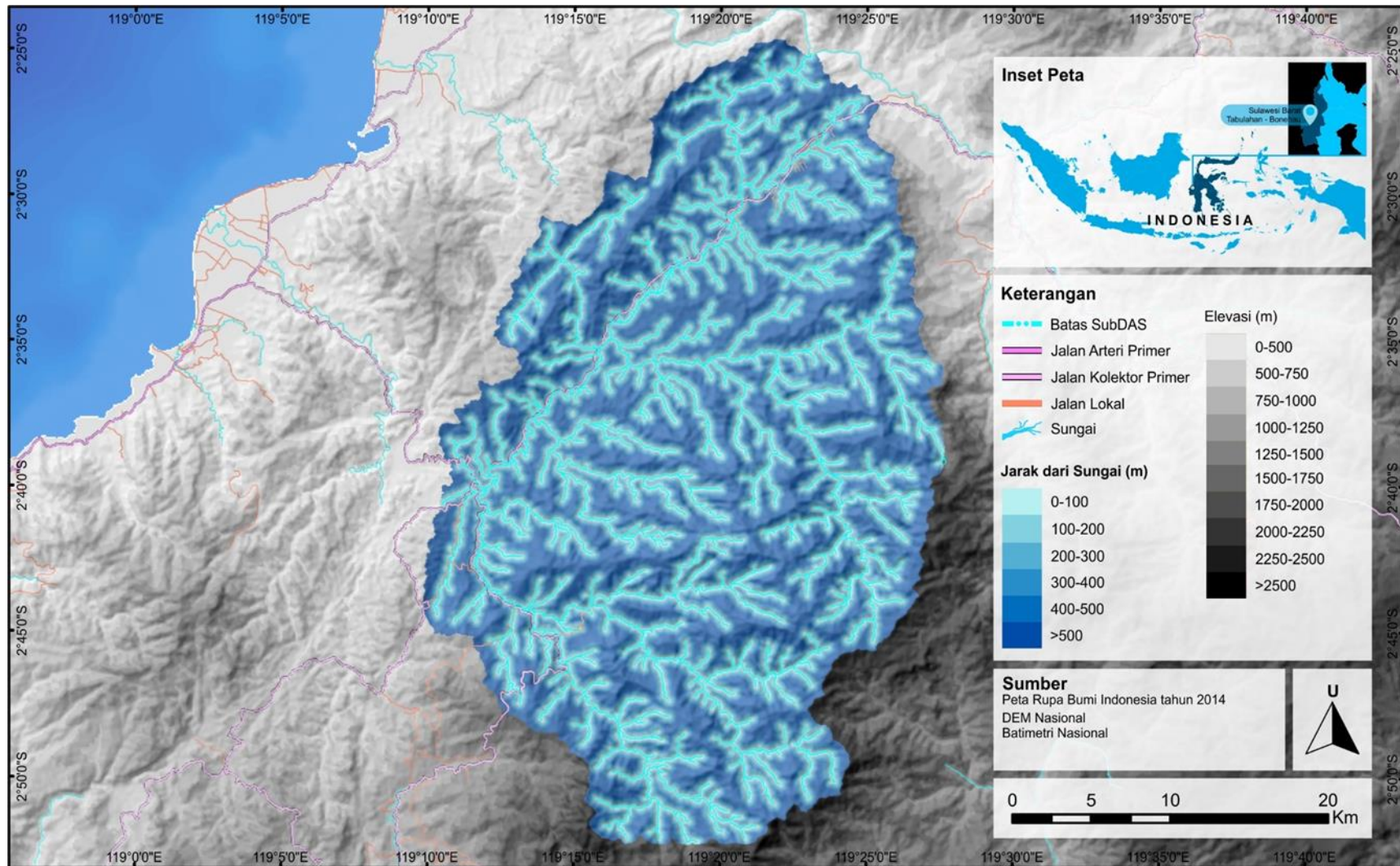
Lampiran 3. Peta inventarisasi kejadian longsor periode 2011-2020 dan peta survei kejadian longsor (*ground truth*) di Sub DAS Bonehau pertanggal 23 april 2021 s.d. 7 mei 2021.

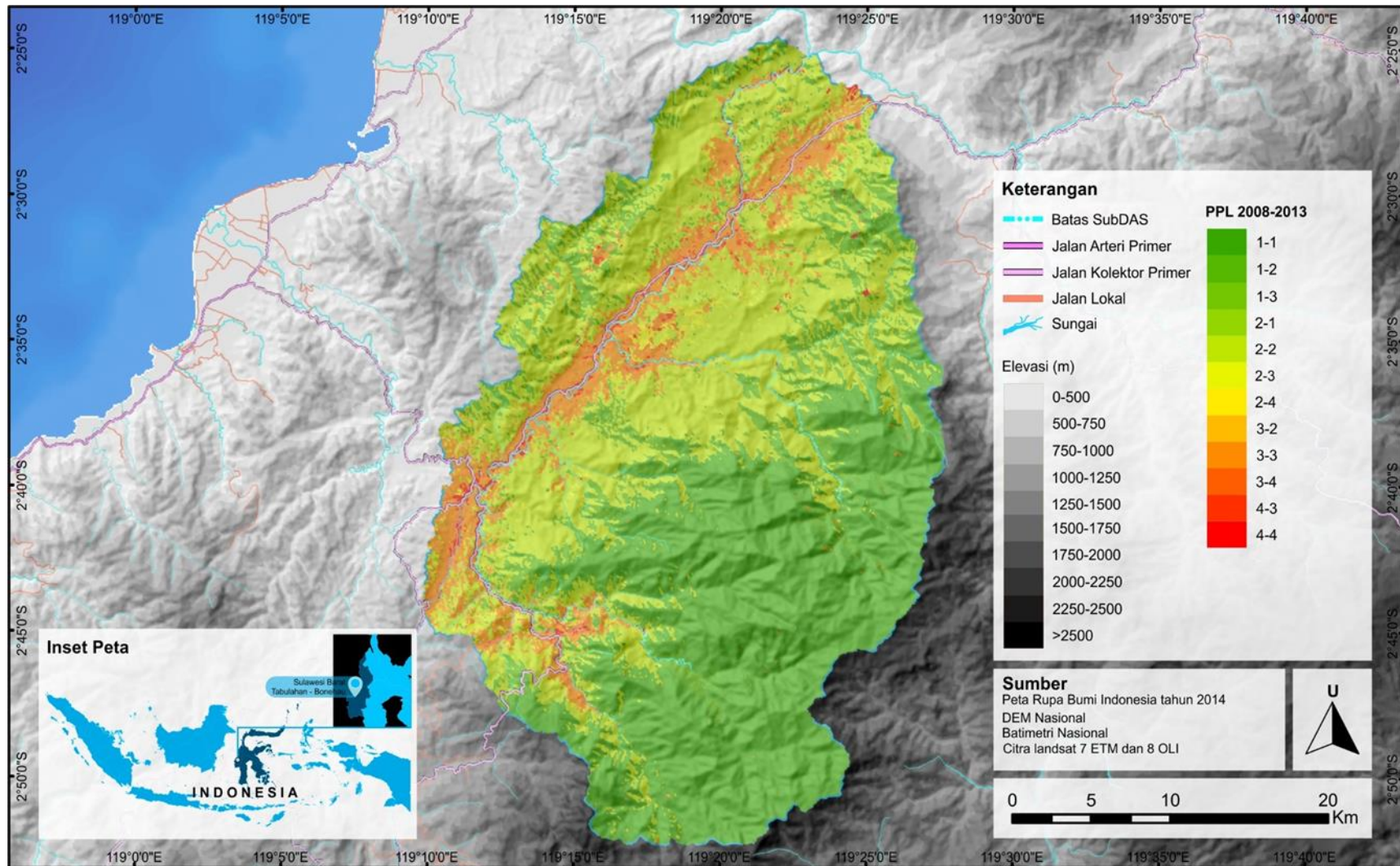


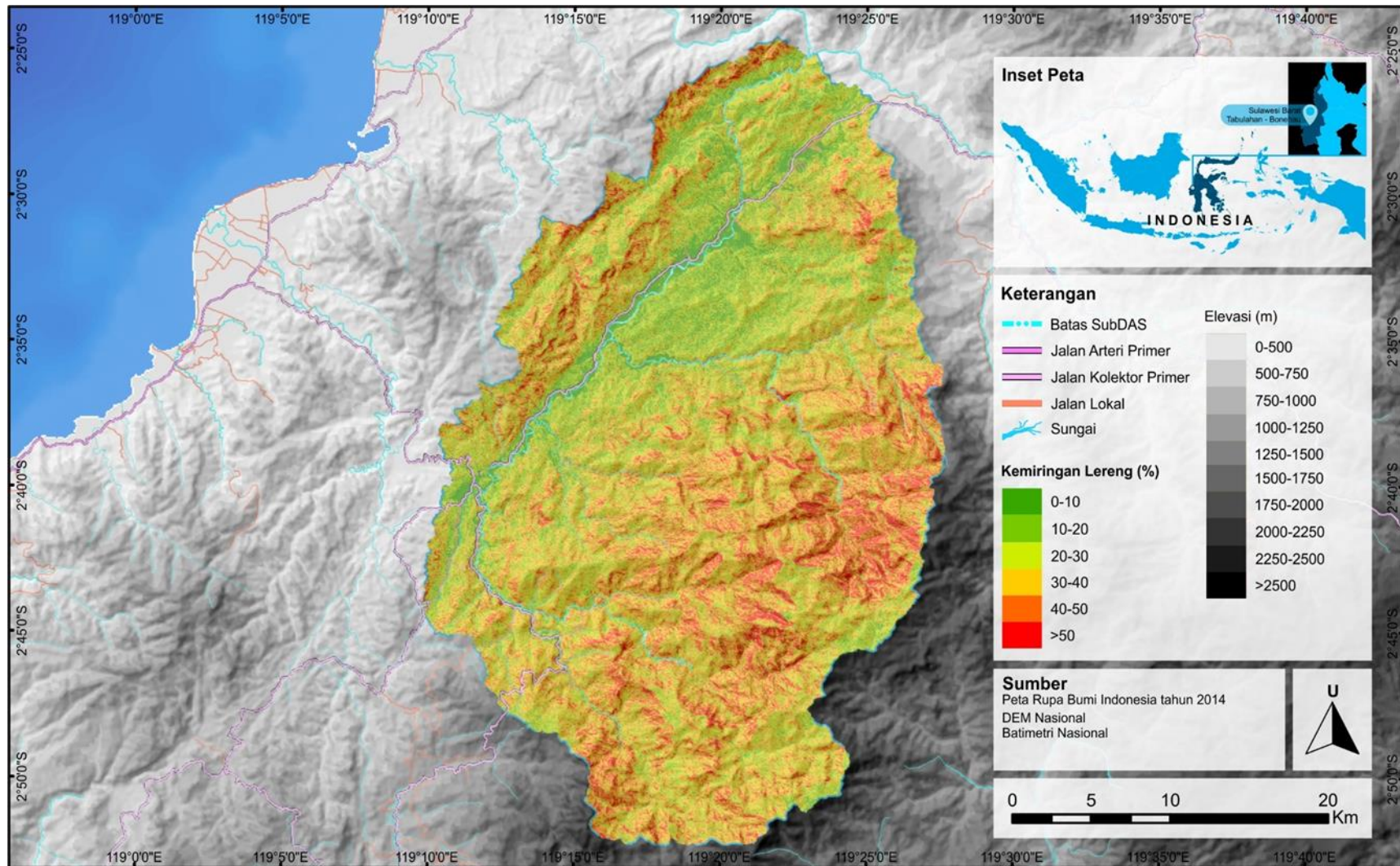


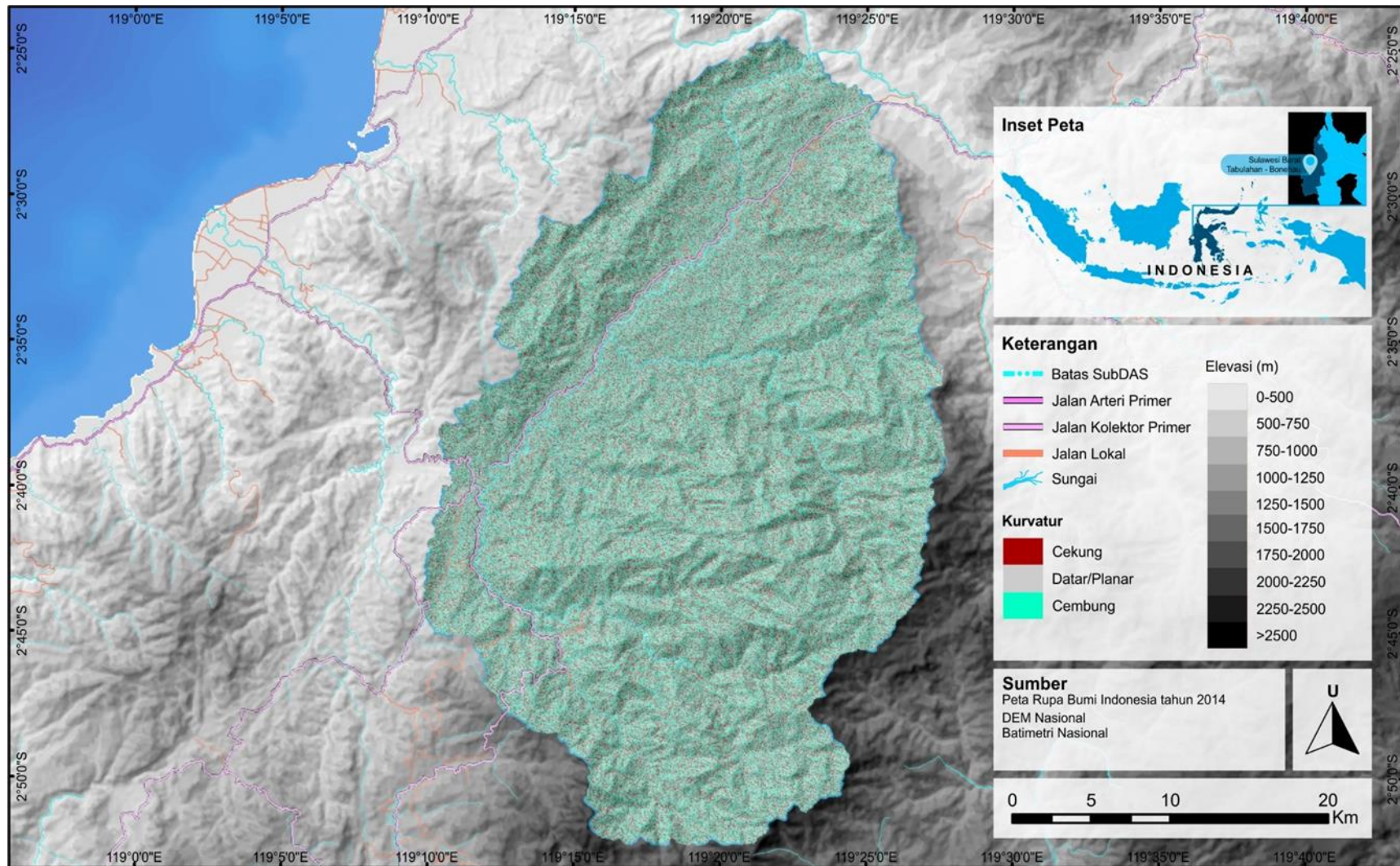
Lampiran 4. Peta faktor kausatif kejadian longsor yang terdiri dari peta curah hujan, perubahan penutupan lahan, kemiringan lereng, elevasi, kurvatur, jarak dari sungai, jarak dari jalan, litologi, jarak dari sesar, magnitudo gempa, dan jarak dari episentrum.

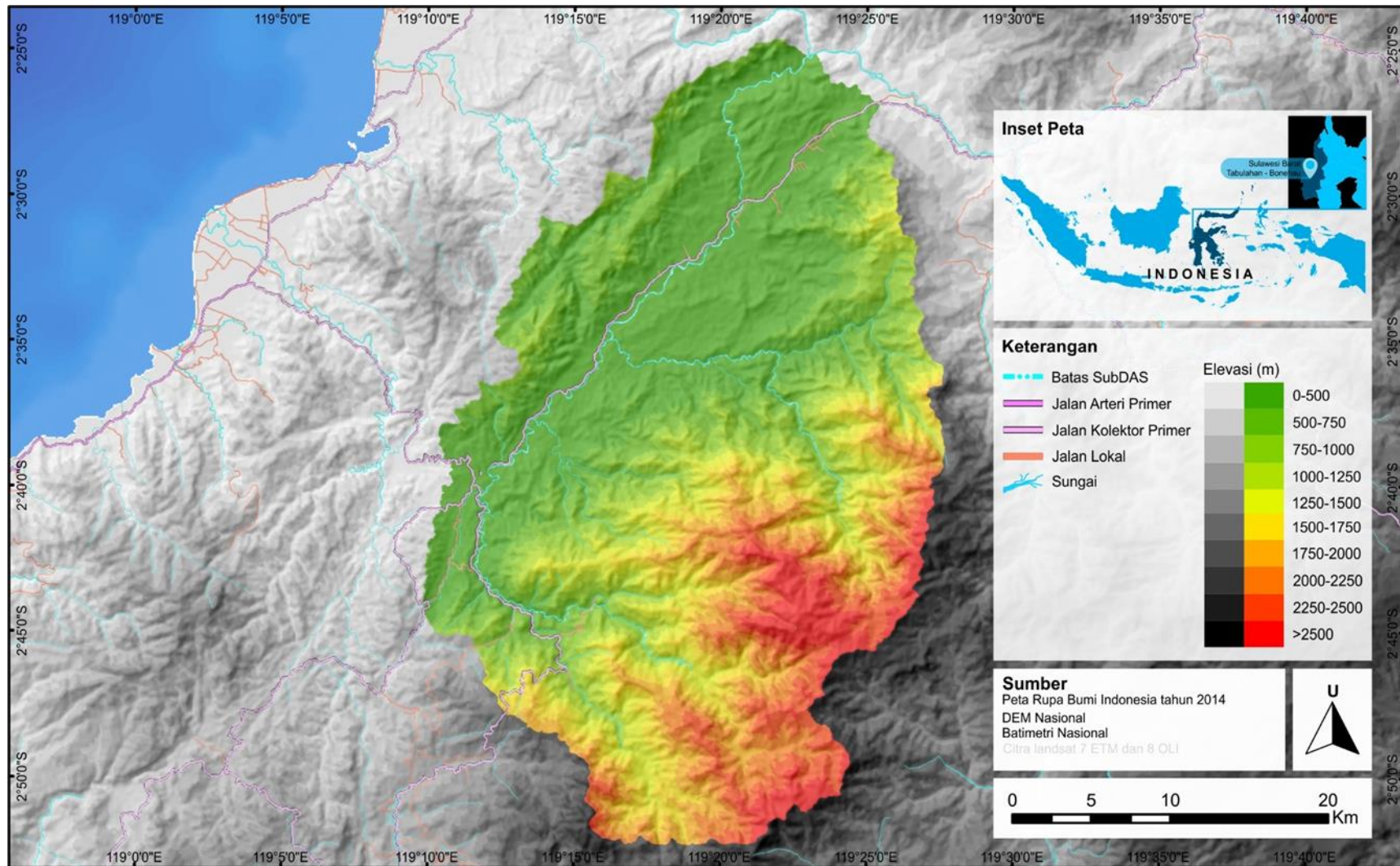


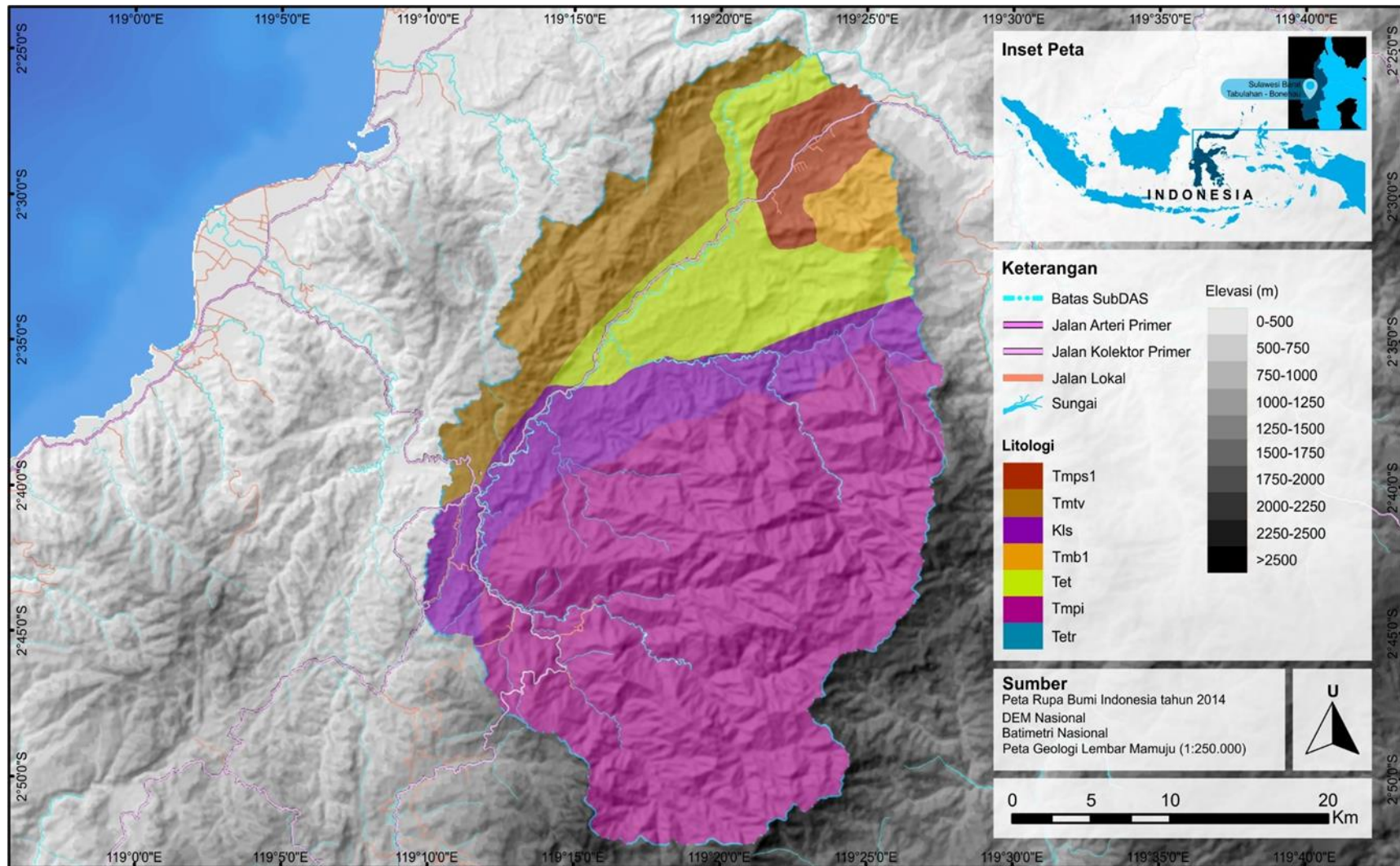


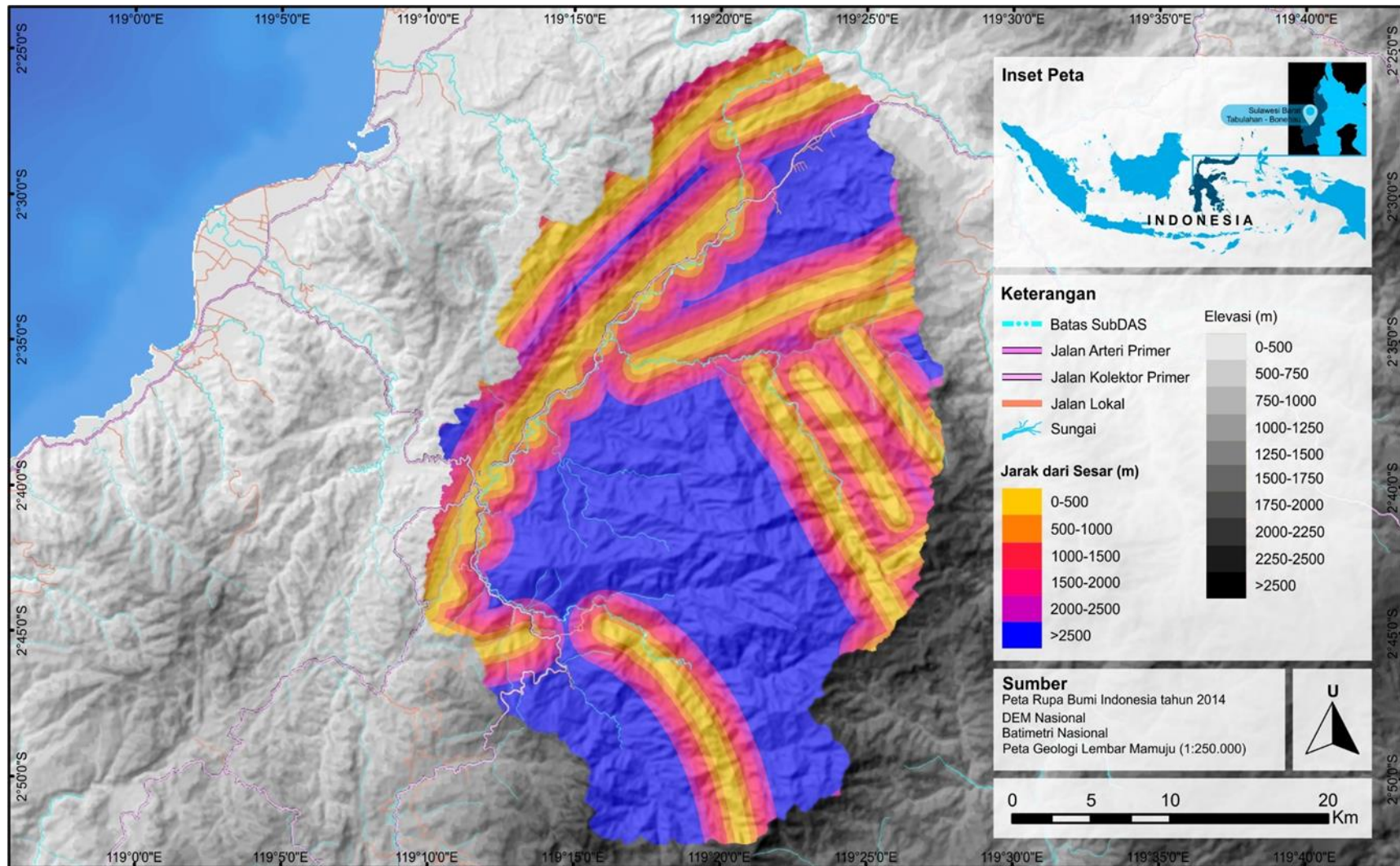


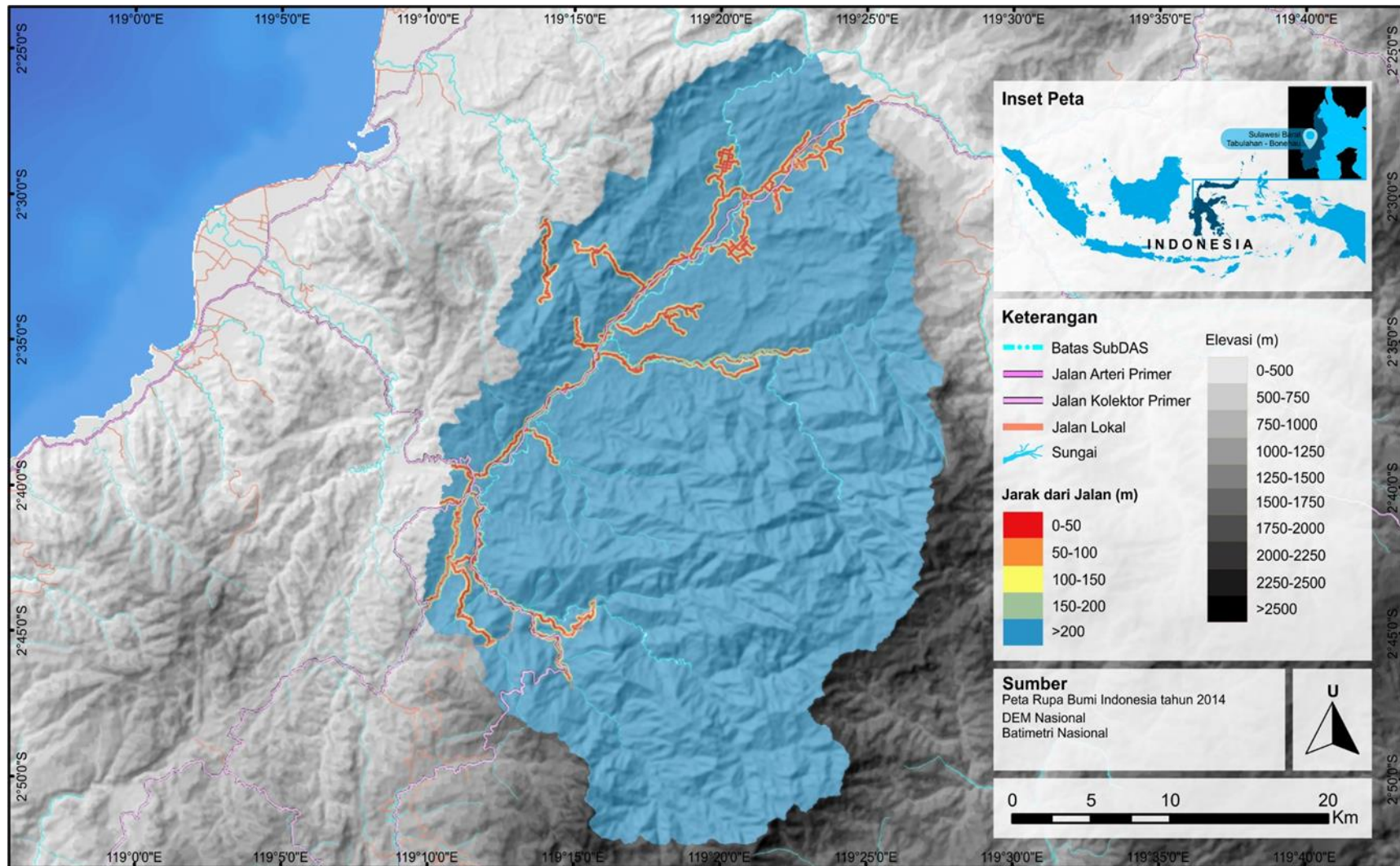


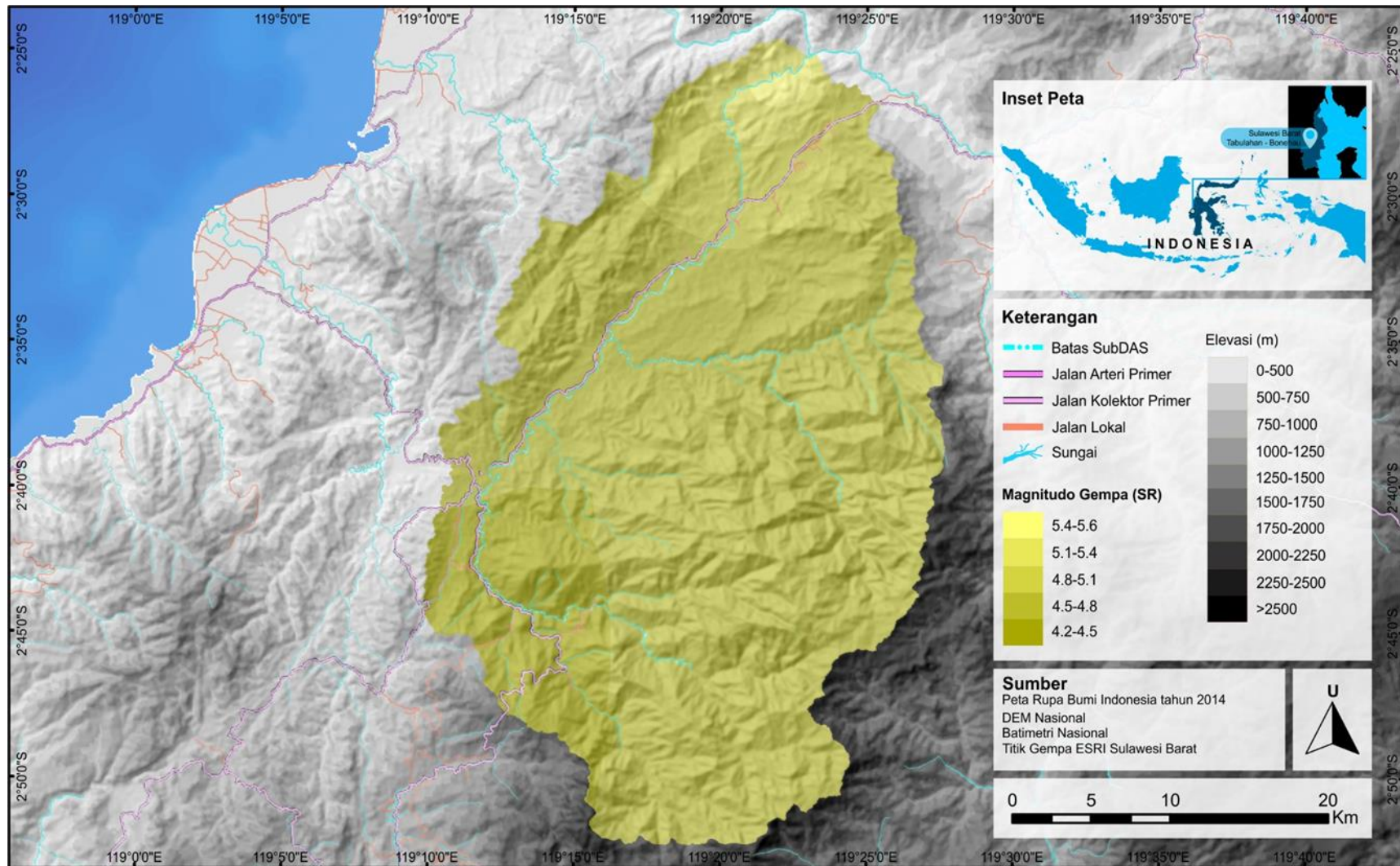


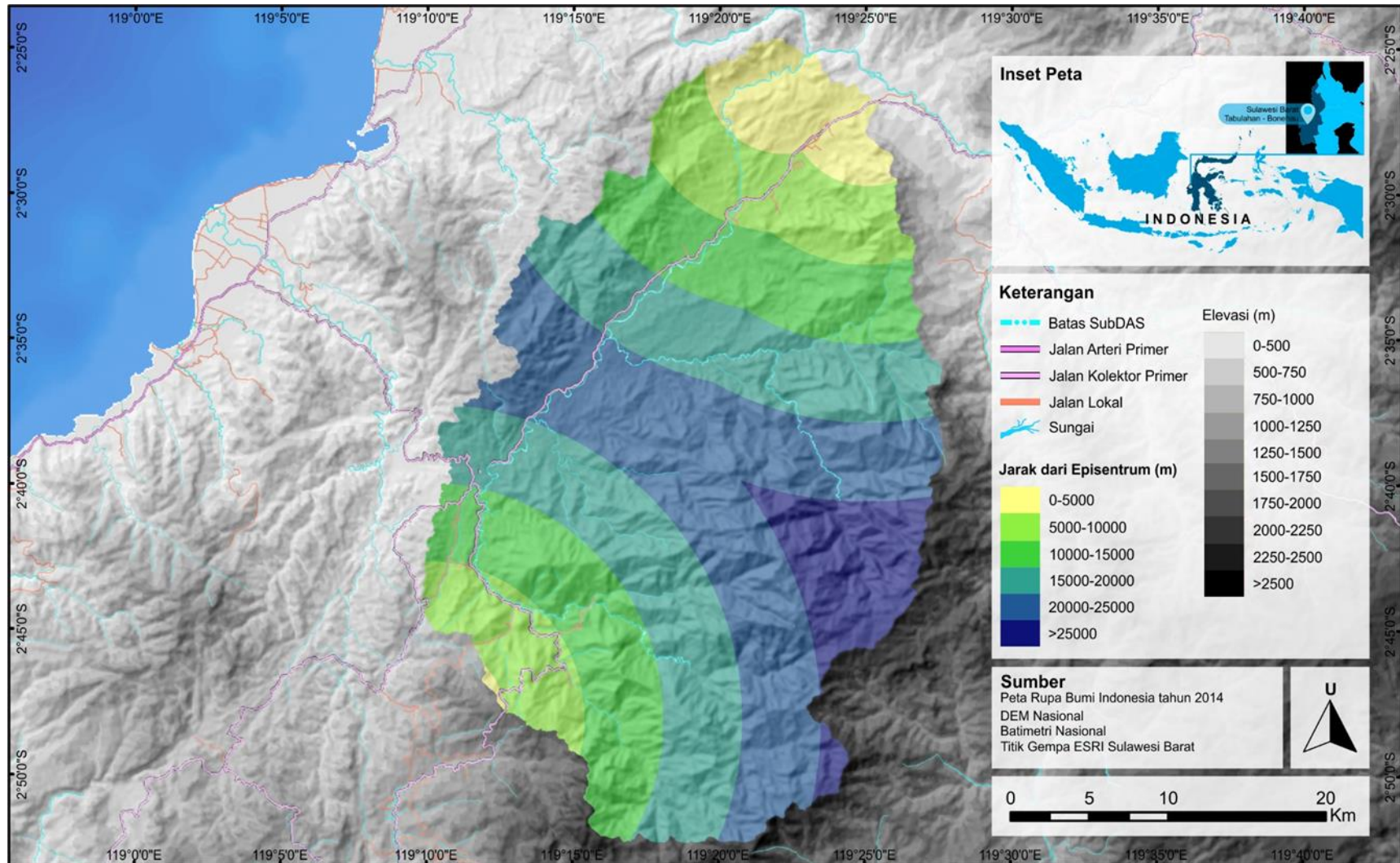












Lampiran 5. Tabel frekuensi rasio faktor kausatif terhadap kejadian longsor di Sub DAS Bonehau. Variabel independen secara keseluruhan berjumlah 11 yang dianggap sebagai variabel yang mampu mewakili faktor fisik dan antropogenik Sub DAS Bonehau.

Faktor	Kelas	Longsor (Piksel)	Longsor (%)	Kelas (Piksel)	Kelas (%)	FR
Curah Hujan (mm/Thn)	2222.91 – 2264.59	1634	8.814	1534505	13.408	0.657
	2264.59 – 2285.76	9907	53.439	5252135	45.892	1.164
	2285.76 – 2309.58	5933	32.003	3637239	31.781	1.007
	2309.58 – 2340.68	1065	5.745	1020785	8.919	0.644
Perubahan Penutupan Lahan 1 (Hutan primer), 2(Hutan sekunder), 3(Semak belukar, Pertanian lahan kering), 4(Sawah, Lahan terbuka, Tubuh air)	1-1	4592	24.769	4239195	37.041	0.669
	1-2	3293	17.763	1407439	12.298	1.444
	1-3	16	0.086	5369	0.047	1.840
	2-1	3	0.016	2173	0.019	0.852
	2-2	7543	40.687	4057571	35.454	1.148
	2-3	1281	6.910	265383	2.319	2.980
	2-4	5	0.027	34721	0.303	0.089
	3-2	14	0.076	18334	0.160	0.471
	3-3	1558	8.404	1158517	10.123	0.830
	3-4	154	0.831	124681	1.089	0.762
	4-3	8	0.043	34496	0.301	0.143
4-4	72	0.388	96785	0.846	0.459	
Kemiringan Lereng (%)	0-10	736	3.970	756684	6.612	0.600
	10-20	2173	11.721	1680488	14.684	0.798
	20-30	3543	19.111	2674243	23.367	0.818
	30-40	4952	26.711	3320087	29.010	0.921
	40-50	4384	23.647	2289240	20.003	1.182
	>50	2751	14.839	723922	6.325	2.346
Elevasi (Mdpl)	0 – 500	6733	36.318	4018490	35.112	1.034
	500 – 750	4342	23.421	1403943	12.267	1.909
	750 – 1000	1184	6.387	983294	8.592	0.743
	1000 – 1250	1029	5.550	777993	6.798	0.817
	1250 – 1500	852	4.596	798020	6.973	0.659
	1500 – 1750	638	3.441	846631	7.398	0.465
	1750 – 2000	848	4.574	787456	6.881	0.665
	2000 - 2250	797	4.299	709963	6.203	0.693
	2250 - 2500	1093	5.896	628466	5.491	1.074
2500 - 3064	1023	5.518	490408	4.285	1.288	
Kurvatur	Cekung	5543	29.899	2619691	22.890	1.306
	Datar	6719	36.243	4178577	36.511	0.993
	Cembung	6277	33.858	4646396	40.599	0.834
Litologi Tmps1 (Formasi Sekala), Tmtv (Batuan Gunungapi Talaya), Kls (Formasi Latimojong), Tmb1 (Tuf Beropa), Tet (Formasi Toraja), Tmpi (Batuan terobosoan), dan Tetr (Anggota Rantepao, Formasi Toraja)	Tmps1	375	2.023	496360	4.337	0.466
	Tmtv	7933	42.791	1511160	13.204	3.241
	Kls	775	4.180	1471082	12.854	0.325
	Tmb1	235	1.268	292533	2.556	0.496
	Tet	1523	8.215	1514882	13.237	0.621
	Tmpi	7698	41.523	6155639	53.786	0.772
	Tetr	0	0.000	3008	0.026	0.000

Faktor	Kelas	Longsor (Piksel)	Longsor (%)	Kelas (Piksel)	Kelas (%)	FR
Jarak Dari Sesar	0-500	2605	14.051	1714513	14.981	0.938
	500-1000	2057	11.096	1603059	14.007	0.792
	1000-1500	3437	18.539	1473886	12.878	1.440
	1500-2000	3124	16.851	1218905	10.650	1.582
	2000-2500	2041	11.009	959448	8.383	1.313
	>2500	5275	28.454	4474853	39.100	0.728
Jarak Dari Sungai (m)	0-100	3931	21.204	1986179	17.355	1.222
	100-200	2791	15.055	1703375	14.884	1.012
	200-300	2070	11.166	1551371	13.555	0.824
	300-400	2125	11.462	1402345	12.253	0.935
	400-500	1937	10.448	1231782	10.763	0.971
	>500	5685	30.665	3569612	31.190	0.983
Jarak Dari Jalan (m)	0-50	576	3.107	216754	1.894	1.640
	50-100	445	2.400	177245	1.549	1.550
	100-150	307	1.656	165833	1.449	1.143
	150-200	334	1.802	158132	1.382	1.304
	>200	16877	91.035	10726700	93.727	0.971
Magnitudo Gempa (SR)	5.4 - 5.6	193	1.041	131347	1.148	0.907
	5.1 - 5.4	343	1.850	259558	2.268	0.816
	4.8 - 5.1	1223	6.597	836504	7.309	0.903
	4.5 - 4.8	13913	75.047	8719642	76.190	0.985
	4.2 - 4.5	2867	15.465	1497613	13.086	1.182
Jarak Dari Episentrum (m)	0-5000	235	1.268	666602	5.825	0.218
	5000-10000	3852	20.778	1514841	13.236	1.570
	10000-15000	4303	23.211	2346739	20.505	1.132
	15000-20000	6070	32.742	3077061	26.886	1.218
	20000-25000	2747	14.817	3005163	26.258	0.564
	>25000	1332	7.185	834258	7.289	0.986

Lampiran 6. Hasil analisis statistik Regresi Logistik (LR) pada 10 kali pengulangan. Berturut-turut dengan penamaan Iterasi 1, Iterasi 2, ..., Iterasi 10, yang selanjutnya dimuat dalam tabel sebagai berikut.

Tabel uji ketepatan klasifikasi

Iterasi 1

Classification Table^a

Observed			Predicted		Percentage Correct
			grid_code		
			0	1	
Step	grid_code	0	22613	3872	85.4
1		1	9981	16504	62.3
Overall Percentage					73.8

a. The cut value is .500

Iterasi 2

Classification Table^a

Observed			Predicted		Percentage Correct
			grid_code		
			0	1	
Step	grid_code	0	22673	3812	85.6
1		1	10169	16316	61.6
Overall Percentage					73.6

a. The cut value is .500

Iterasi 3

Classification Table^a

Observed			Predicted		Percentage Correct
			grid_code		
			0	1	
Step	grid_code	0	22710	3775	85.7
1		1	9985	16500	62.3
Overall Percentage					74.0

a. The cut value is .500

Iterasi 4

Classification Table^a

Observed			Predicted		Percentage Correct
			grid_code		
			0	1	
Step	grid_code	0	22625	3860	85.4
1		1	10051	16434	62.1
Overall Percentage					73.7

a. The cut value is .500

Iterasi 5

Classification Table^a

Observed			Predicted		Percentage Correct
			grid_code		
			0	1	
Step	grid_code	0	22579	3906	85.3
1		1	10005	16480	62.2
Overall Percentage					73.7

a. The cut value is .500

Iterasi 6

Classification Table^a

Observed			Predicted		
			grid_code		Percentage Correct
			0	1	
Step	grid_code	0	22637	3848	85.5
1		1	9977	16508	62.3
Overall Percentage					73.9

a. The cut value is .500

Iterasi 7

Classification Table^a

Observed			Predicted		
			grid_code		Percentage Correct
			0	1	
Step	grid_code	0	22653	3832	85.5
1		1	9965	16520	62.4
Overall Percentage					74.0

a. The cut value is .500

Iterasi 8

Classification Table^a

Observed			Predicted		
			grid_code		Percentage Correct
			0	1	
Step	grid_code	0	22633	3852	85.5
1		1	10013	16472	62.2
Overall Percentage					73.8

a. The cut value is .500

Iterasi 9

Classification Table^a

Observed			Predicted		
			grid_code		Percentage Correct
			0	1	
Step	grid_code	0	22735	3750	85.8
1		1	9956	16529	62.4
Overall Percentage					74.1

a. The cut value is .500

Iterasi 10

Classification Table^a

Observed			Predicted		
			grid_code		Percentage Correct
			0	1	
Step	grid_code	0	22658	3827	85.6
1		1	9919	16566	62.5
Overall Percentage					74.0

a. The cut value is .500

Tabel signifikansi secara parsial. Nilai Koefien B nantinya digunakan untuk membuat persamaan logit Z sebagai data input dalam pembuatan LSI (indeks probabilitas).

Iterasi 1

		Variables in the Equation					95% C.I.for EXP(B)		
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	FRELEV1	.388	.027	199.360	1	.000	1.474	1.396	1.555
	FRLCC1	.411	.022	363.211	1	.000	1.509	1.446	1.574
	FRSLP1	1.023	.023	1898.572	1	0.000	2.780	2.655	2.911
	FRCRV1	.800	.055	208.009	1	.000	2.225	1.996	2.480
	FRDtRo1	1.046	.081	164.958	1	.000	2.845	2.425	3.337
	FRDtR1	1.164	.087	180.770	1	.000	3.202	2.702	3.794
	FRDtF1	.088	.033	7.019	1	.008	1.092	1.023	1.165
	FRLIT1	1.098	.014	5795.335	1	0.000	2.999	2.915	3.085
	FRDtE1	.703	.026	740.631	1	.000	2.020	1.920	2.124
	by FRGEM1 Constant	-	.138	2591.260	1	0.000	.001		
		7.049							

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 2

		Variables in the Equation					95% C.I.for EXP(B)		
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	FRELEV1	.367	.027	181.709	1	.000	1.444	1.369	1.523
	FRLCC1	.405	.022	353.870	1	.000	1.500	1.438	1.564
	FRSLP1	.979	.023	1772.800	1	0.000	2.663	2.544	2.787
	FRCRV1	.847	.056	232.679	1	.000	2.332	2.092	2.600
	FRDtRo1	1.056	.081	171.255	1	.000	2.874	2.453	3.366
	FRDtR1	1.205	.086	194.197	1	.000	3.335	2.815	3.951
	FRDtF1	.058	.033	3.113	1	.078	1.060	.994	1.131
	FRLIT1	1.126	.015	5893.056	1	0.000	3.083	2.995	3.173
	FRDtE1	.642	.026	620.236	1	.000	1.900	1.807	1.999
	by FRGEM1 Constant	-	.138	2594.797	1	0.000	.001		
		7.009							

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 3

		Variables in the Equation					95% C.I.for EXP(B)		
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	FRELEV1	.359	.027	172.243	1	.000	1.432	1.358	1.511
	FRLCC1	.407	.022	357.772	1	.000	1.503	1.441	1.568
	FRSLP1	1.032	.024	1910.647	1	0.000	2.807	2.680	2.940
	FRCRV1	.884	.056	252.355	1	.000	2.420	2.170	2.699
	FRDtRo1	.972	.080	147.034	1	.000	2.642	2.258	3.091
	FRDtR1	1.181	.086	186.429	1	.000	3.258	2.750	3.859
	FRDtF1	.098	.033	8.732	1	.003	1.103	1.034	1.177

	FRLIT1	1.113	.015	5859.525	1	0.000	3.044	2.959	3.132
	FRDtE1	.699	.026	731.684	1	.000	2.012	1.913	2.116
	by FRGEM1								
	Constant	-	.138	2633.304	1	0.000	.001		
		7.075							

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 4

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step	FRELEV1	.366	.027	179.206	1	.000	1.441	1.366	1.520
1 ^a	FRLCC1	.390	.021	330.848	1	.000	1.477	1.416	1.540
	FRSLP1	.989	.023	1807.760	1	0.000	2.688	2.568	2.813
	FRCRV1	.852	.055	237.712	1	.000	2.344	2.103	2.612
	FRDtRo1	.989	.080	152.026	1	.000	2.688	2.297	3.146
	FRDtR1	1.337	.087	237.016	1	.000	3.809	3.212	4.515
	FRDtF1	.055	.033	2.784	1	.095	1.057	.990	1.128
	FRLIT1	1.114	.014	5914.798	1	0.000	3.046	2.961	3.134
	FRDtE1	.698	.026	721.707	1	.000	2.010	1.910	2.115
	by FRGEM1								
	Constant	-	.138	2647.092	1	0.000	.001		
		7.122							

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 5

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step	FRELEV1	.383	.027	198.257	1	.000	1.467	1.391	1.547
1 ^a	FRLCC1	.419	.022	373.031	1	.000	1.521	1.457	1.587
	FRSLP1	1.024	.024	1892.645	1	0.000	2.784	2.658	2.915
	FRCRV1	.812	.055	215.635	1	.000	2.252	2.021	2.510
	FRDtRo1	.961	.080	145.298	1	.000	2.615	2.237	3.057
	FRDtR1	1.233	.086	203.896	1	.000	3.432	2.897	4.065
	FRDtF1	.072	.033	4.715	1	.030	1.074	1.007	1.146
	FRLIT1	1.105	.014	5839.257	1	0.000	3.018	2.934	3.105
	FRDtE1	.680	.026	690.241	1	.000	1.974	1.877	2.077
	by FRGEM1								
	Constant	-	.137	2615.597	1	0.000	.001		
		7.020							

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 6

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step	FRELEV1	.348	.027	164.606	1	.000	1.417	1.343	1.494
1 ^a	FRLCC1	.396	.022	336.130	1	.000	1.485	1.424	1.550
	FRSLP1	.995	.023	1816.385	1	0.000	2.705	2.584	2.832
	FRCRV1	.912	.056	268.215	1	.000	2.489	2.232	2.776
	FRDtRo1	.993	.081	151.600	1	.000	2.699	2.304	3.161

FRDtR1	1.310	.087	226.692	1	.000	3.707	3.126	4.397
FRDtF1	.061	.033	3.322	1	.068	1.062	.995	1.134
FRLIT1	1.130	.015	5921.117	1	0.000	3.094	3.007	3.185
FRDtE1	.710	.026	754.764	1	.000	2.034	1.934	2.140
by FRGEM1 Constant	- 7.183	.138	2695.976	1	0.000	.001		

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 7

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a								
FRELEV1	.393	.027	207.013	1	.000	1.482	1.404	1.563
FRLCC1	.417	.022	368.082	1	.000	1.517	1.454	1.583
FRSLP1	1.030	.024	1909.017	1	0.000	2.801	2.675	2.934
FRCRV1	.851	.055	235.711	1	.000	2.343	2.102	2.612
FRDtRo1	1.011	.081	156.926	1	.000	2.748	2.346	3.219
FRDtR1	1.298	.087	222.876	1	.000	3.663	3.089	4.344
FRDtF1	.085	.033	6.484	1	.011	1.088	1.020	1.162
FRLIT1	1.112	.015	5824.043	1	0.000	3.040	2.955	3.128
FRDtE1	.692	.026	718.021	1	.000	1.998	1.900	2.102
by FRGEM1 Constant	- 7.219	.138	2717.863	1	0.000	.001		

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 8

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a								
FRELEV1	.317	.027	136.909	1	.000	1.373	1.302	1.447
FRLCC1	.397	.021	342.106	1	.000	1.487	1.426	1.551
FRSLP1	1.005	.023	1845.138	1	0.000	2.731	2.608	2.859
FRCRV1	.872	.055	246.922	1	.000	2.391	2.144	2.665
FRDtRo1	1.060	.081	172.629	1	.000	2.887	2.464	3.381
FRDtR1	1.329	.086	235.925	1	.000	3.776	3.187	4.473
FRDtF1	.077	.033	5.406	1	.020	1.080	1.012	1.152
FRLIT1	1.112	.014	5916.106	1	0.000	3.040	2.955	3.127
FRDtE1	.689	.026	709.423	1	.000	1.992	1.893	2.095
by FRGEM1 Constant	- 7.187	.138	2728.077	1	0.000	.001		

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 9

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a								
FRELEV1	.348	.027	164.177	1	.000	1.417	1.343	1.494
FRLCC1	.394	.021	337.448	1	.000	1.483	1.422	1.546
FRSLP1	1.035	.024	1908.488	1	0.000	2.815	2.687	2.949

FRCRV1	.806	.055	211.715	1	.000	2.239	2.008	2.496
FRDtRo1	.943	.080	138.313	1	.000	2.568	2.194	3.005
FRDtR1	1.214	.087	194.321	1	.000	3.367	2.839	3.994
FRDtF1	.056	.033	2.901	1	.089	1.058	.992	1.129
FRLIT1	1.127	.015	5910.999	1	0.000	3.085	2.998	3.175
FRDtE1	.721	.026	772.340	1	.000	2.056	1.955	2.164
by FRGEM1 Constant	- 6.970	.138	2556.103	1	0.000	.001		

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Iterasi 10

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a								
FRELEV1	.355	.027	169.746	1	.000	1.427	1.353	1.505
FRLCC1	.386	.021	323.303	1	.000	1.471	1.411	1.534
FRSLP1	1.032	.024	1911.465	1	0.000	2.805	2.679	2.938
FRCRV1	.808	.055	213.798	1	.000	2.243	2.013	2.500
FRDtRo1	.955	.080	142.379	1	.000	2.599	2.222	3.041
FRDtR1	1.269	.087	213.089	1	.000	3.557	2.999	4.217
FRDtF1	.077	.033	5.382	1	.020	1.080	1.012	1.153
FRLIT1	1.106	.014	5882.775	1	0.000	3.022	2.938	3.109
FRDtE1	.727	.026	783.714	1	.000	2.068	1.966	2.176
by FRGEM1 Constant	- 7.046	.138	2622.519	1	0.000	.001		

a. Variable(s) entered on step 1: FRELEV1, FRLCC1, FRSLP1, FRCRV1, FRDtRo1, FRDtR1, FRDtF1, FRLIT1, FRDtE1 * FRGEM1 .

Lampiran 7. Hasil validasi kurva ROC untuk melihat sensitivitas kesuksesan dan prediksi faktor kausatif (variabel independen) terhadap kejadian longsor (variabel dependen).

Tabel AUC Succes 10 iterasi (code: Numbertest1, Numbertest2, ..., Numbertest10)
Area Under the Curve

Test Result Variable(s)	Area	Std. Error ^a	Asymptotic Sig. ^b	Asymptotic 95% Confidence Interval	
				Lower Bound	Upper Bound
Numbertest1	.731	.002	0.000	.727	.736
Numbertest2	.730	.002	0.000	.725	.734
Numbertest3	.731	.002	0.000	.727	.736
Numbertest4	.730	.002	0.000	.725	.734
Numbertest5	.730	.002	0.000	.726	.735
Numbertest6	.731	.002	0.000	.726	.735
Numbertest7	.731	.002	0.000	.727	.736
Numbertest8	.730	.002	0.000	.725	.735
Numbertest9	.732	.002	0.000	.727	.736
Numbertest10	.731	.002	0.000	.727	.736

The test result variable(s): Numbertest1, Numbertest2, Numbertest3, Numbertest4, Numbertest5, Numbertest6, Numbertest7, Numbertest8, Numbertest9, Numbertest10 has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

- a. Under the nonparametric assumption
- b. Null hypothesis: true area = 0.5

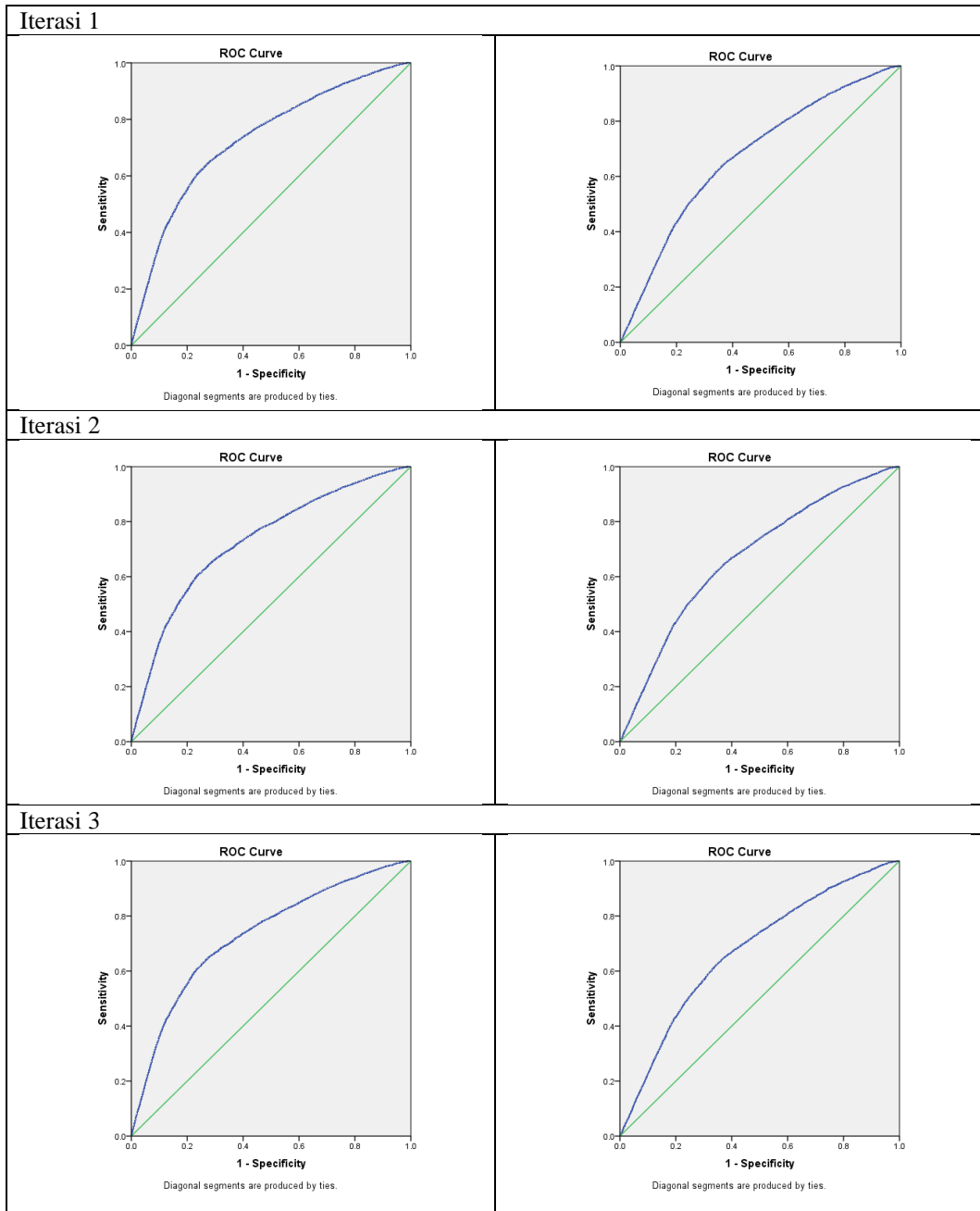
Tabel AUC Predictive 10 iterasi (code: Numbertest1, Numbertest2, ..., Numbertest10)
Area Under the Curve

Test Result Variable(s)	Area	Std. Error ^a	Asymptotic Sig. ^b	Asymptotic 95% Confidence Interval	
				Lower Bound	Upper Bound
Numbertest1	.673	.003	0.000	.667	.680
Numbertest2	.673	.003	0.000	.666	.679
Numbertest3	.673	.003	0.000	.667	.680
Numbertest4	.672	.003	0.000	.666	.678
Numbertest5	.673	.003	0.000	.666	.679
Numbertest6	.673	.003	0.000	.667	.679
Numbertest7	.673	.003	0.000	.667	.680
Numbertest8	.673	.003	0.000	.666	.679
Numbertest9	.674	.003	0.000	.667	.680
Numbertest10	.673	.003	0.000	.667	.680

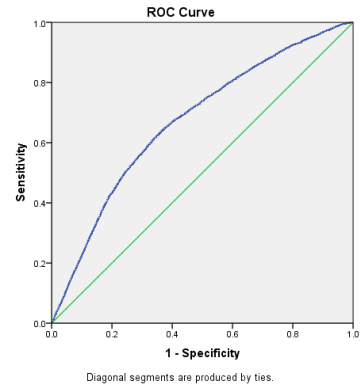
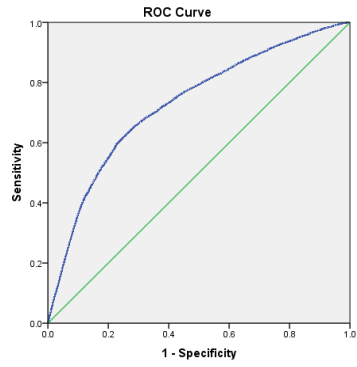
The test result variable(s): Numbertest1, Numbertest2, Numbertest3, Numbertest4, Numbertest5, Numbertest6, Numbertest7, Numbertest8, Numbertest9, Numbertest10 has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

- a. Under the nonparametric assumption
- b. Null hypothesis: true area = 0.5

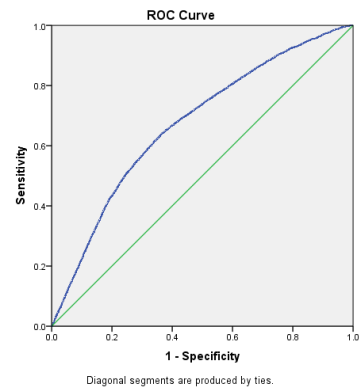
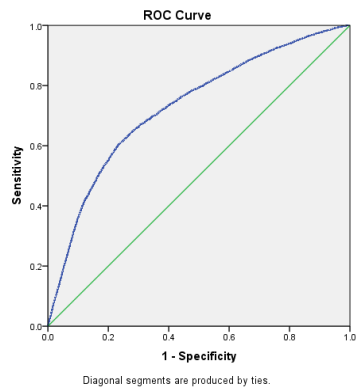
Kurva ROC, AUC Succes (70%) dan AUC predictive (30%)



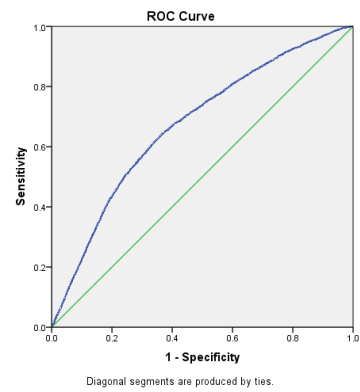
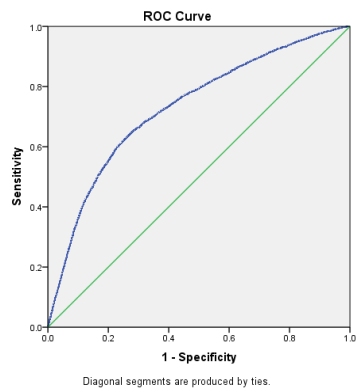
Iterasi 4



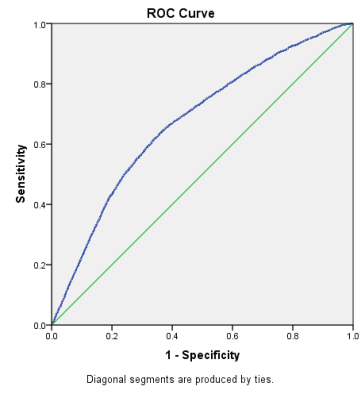
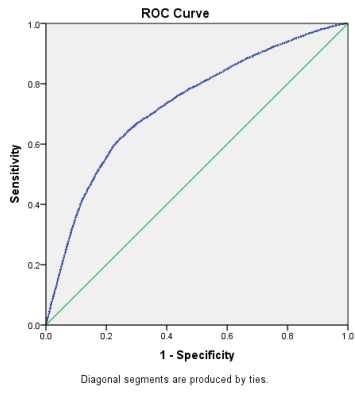
Iterasi 5



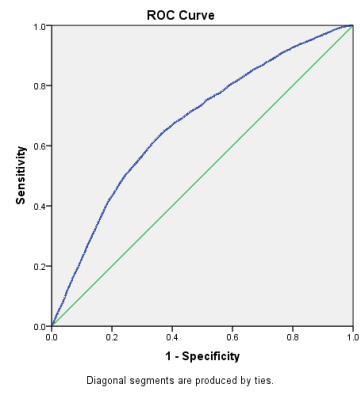
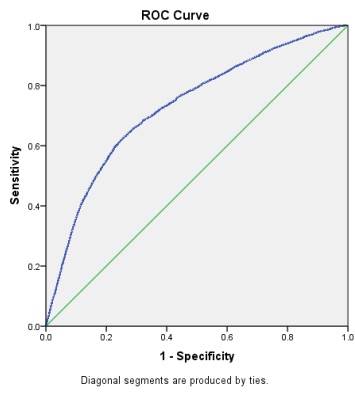
Iterasi 6



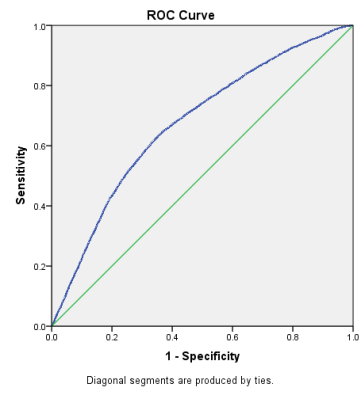
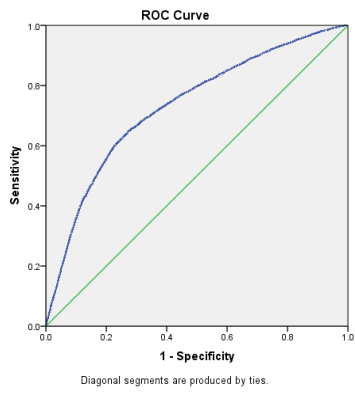
Iterasi 7



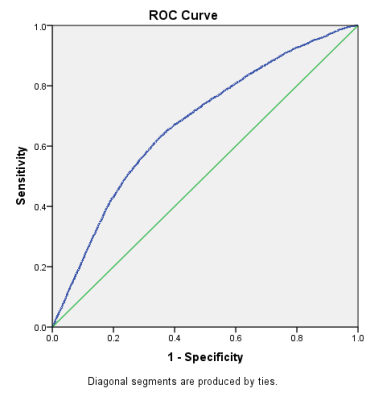
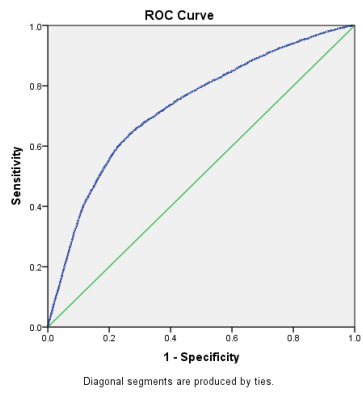
Iterasi 8



Iterasi 9



Iterasi 10



Lampiran 8. Peta kerawanan longsor Iterasi 9 dengan nilai validasi tertinggi dari sepuluh kali pengulangan. Intervensi variabel independen secara berturut-turut didominasi oleh jarak dari sungai, litologi, jarak dari jalan, kemiringan lereng, kurvatur, gempa (magnitudo dan jarak dari episentrum), perubahan penutupan lahan (PPL), dan elevasi

