

Supplementary of

Redefining dangerous glacial lakes in Bhutan by integrating hydrodynamic flood mapping and downstream exposure data

Sonam Rinzin et al.

Correspondence to: Sonam Rinzin (s.zinzin2@newcastle.ac.uk)

This supplementary information contains:

Supplementary figure: Figures S1 to S4

Supplementary table: Tables S1 to S2

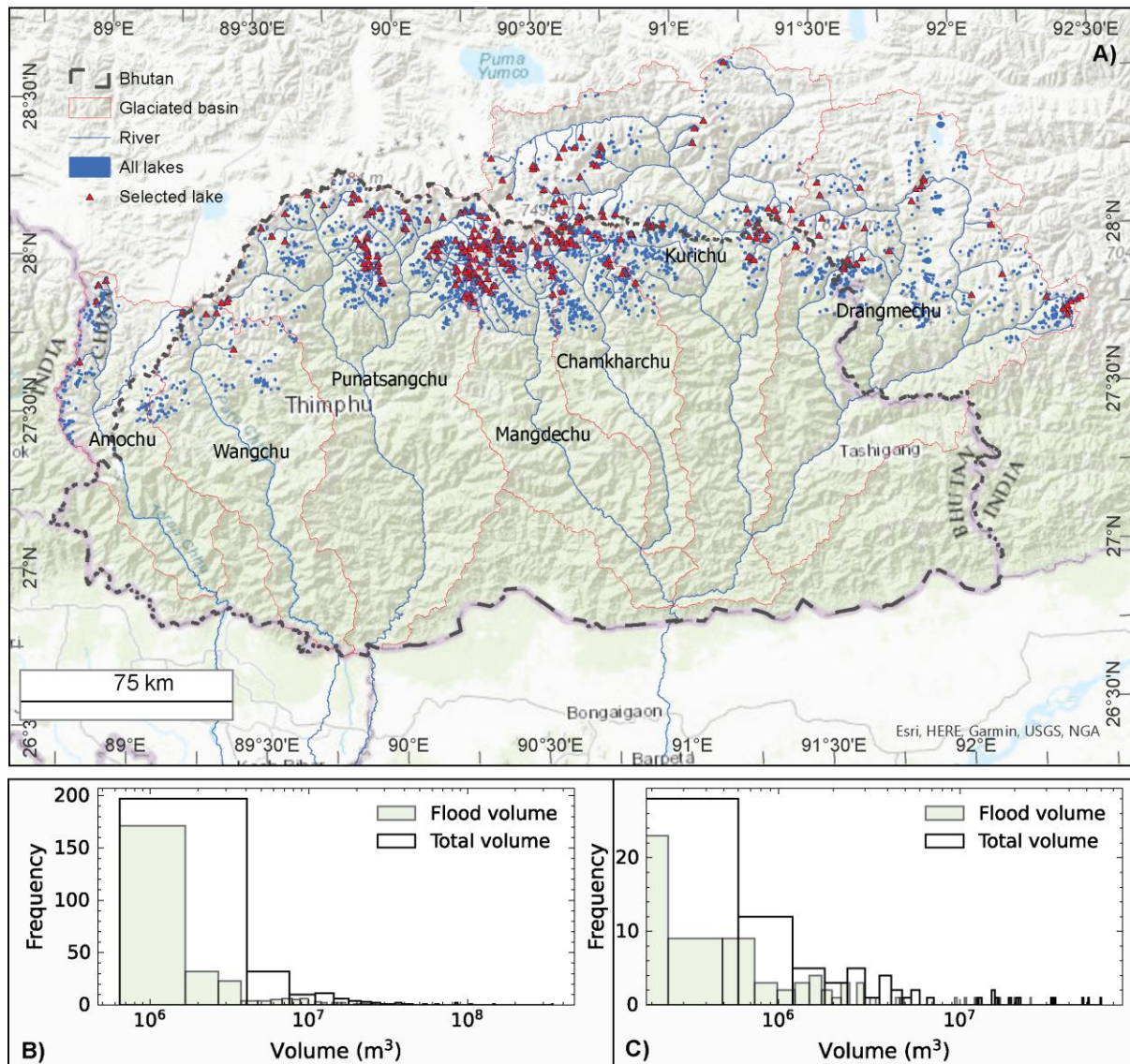


Figure S1. Map (A) shows the distribution of glacial lakes in Bhutan and glacial lakes (with size $> 0.05 \text{ km}^2$ and $< 1000 \text{ m}$ to glacier terminus) selected for GLOF modelling in this study. The histograms depict the distribution of the (B) known volume of the lake and drainage volume of historical GLOF record in HMA and (C) the volume of the lake and drainage volume calculated for this modelling. The lake ID on the x-tick labels correspond to the ID on the map.

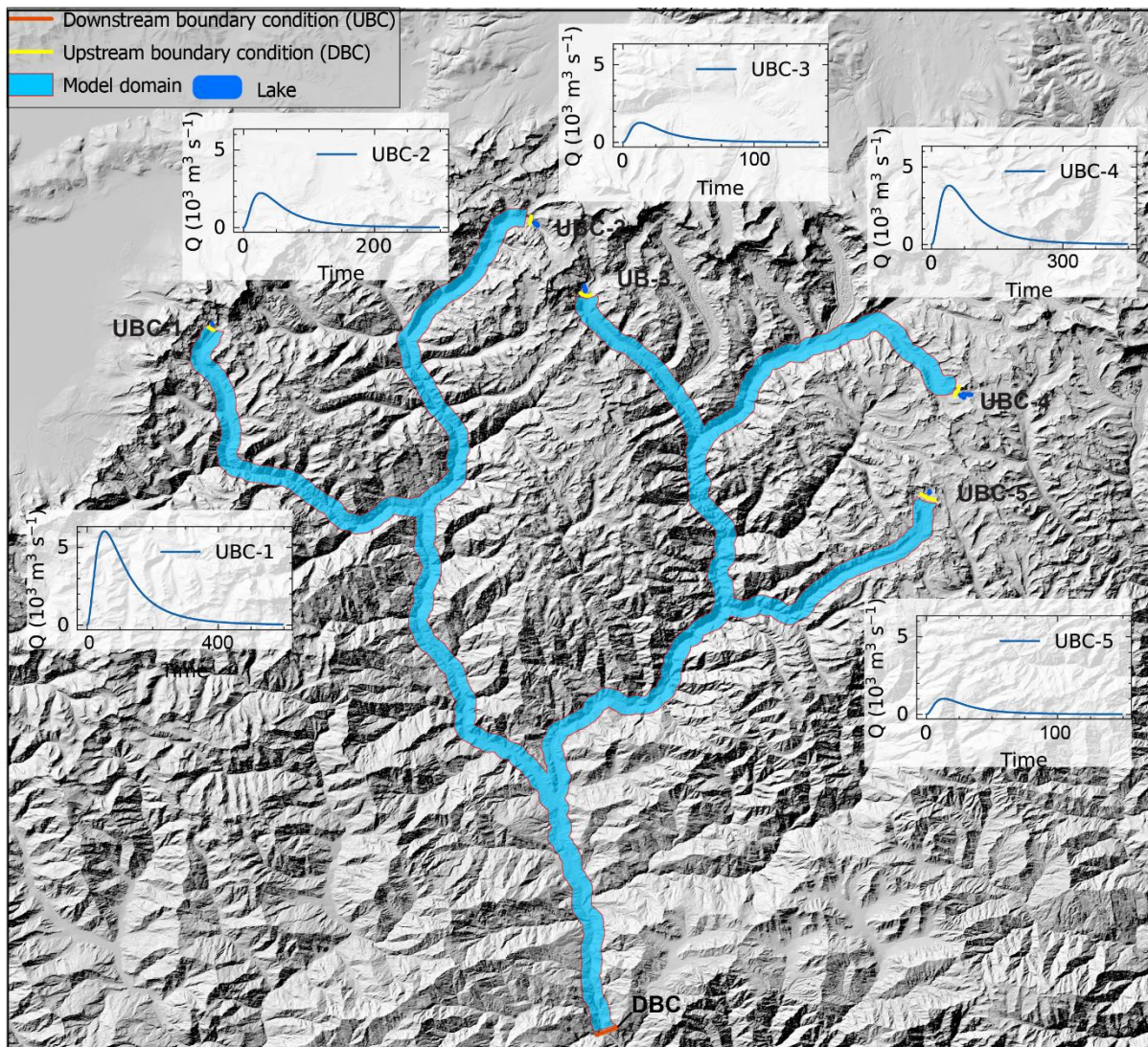


Figure S2. The sample of multiple model setup for a basin showing the sample model domain, upstream boundary conditions, downstream boundary conditions, and hydrograph.

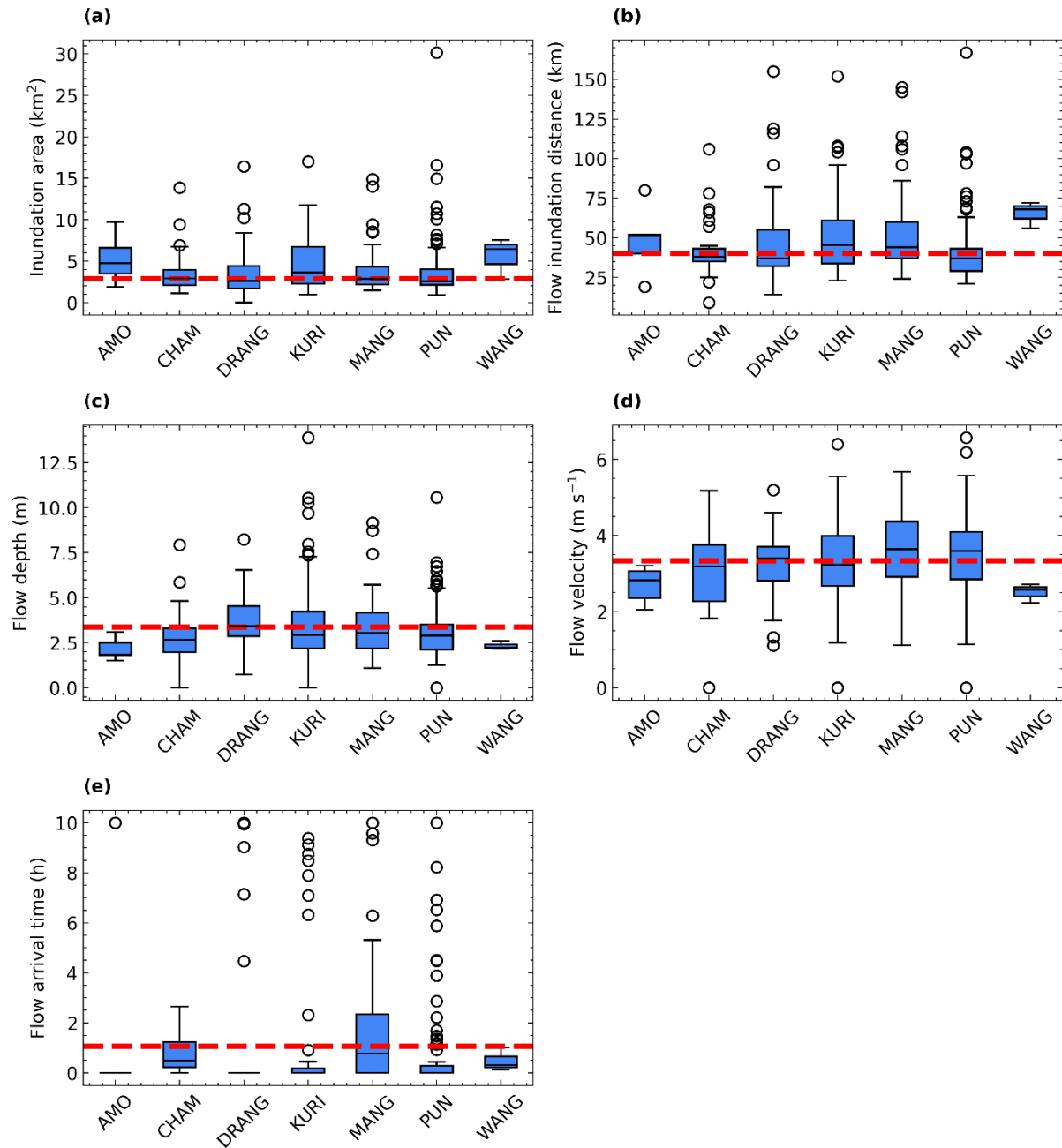


Figure S3. Distribution of (a) inundation area, (b) inundation distance, (c) flow depth, (d) flow velocity, and (e) flow arrival time of modelled GLOF for glacial lakes across various basins in Bhutan: including Amochu (AMO), Chamkharchu (CHAM), Drangmechu (DRANG), Kurichu (KURI), Mangdechu (MANG), Punatsangchu (PUN) and Wangchu (WANG). Red dashed line in each panel represents the mean values across all basins.

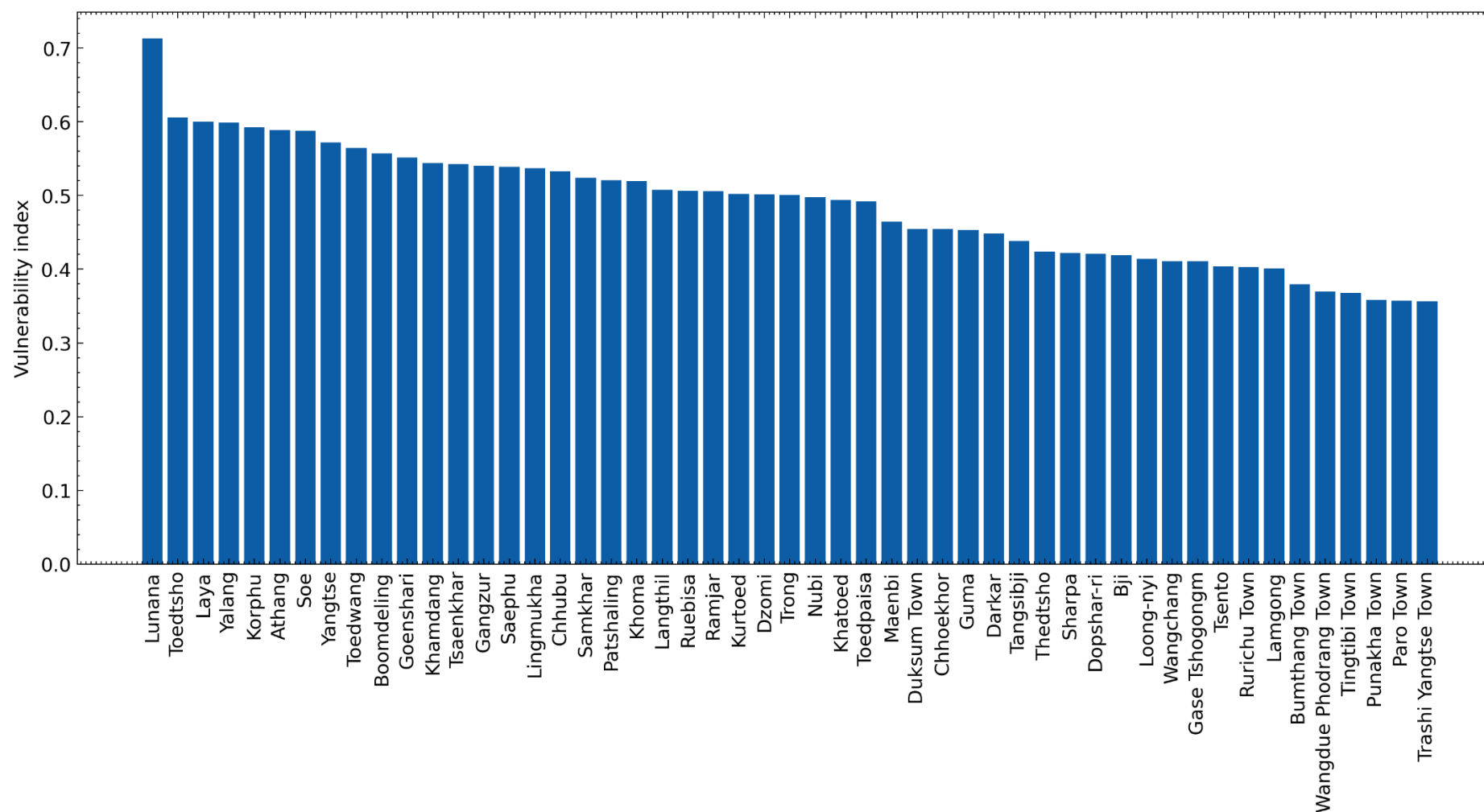


Figure S4. Vulnerability index for each local administrative unit (LGU) computed using Bhutan 2017 population and housing census data for this study.

Table S1. Area, total volume (T Vol.), drainage volume (D Vol.), peak discharge (Qp) and GLOF exposed elements for each glacial lake employed for GLOF modelling in this study. The glacial lakes are arranged in descending order based on their danger index.

ID	Long	Lat	Elevation	Area	Basin	T Vol (10 ⁶ m ³)	D Vol (10 ⁶ m ³)	QP (m ³ s ⁻¹)	Building (Count)	Road (km)	Farmland (km ²)	Bridge (Count)	Danger index	Danger level
lake130	90.264	28.104	4457.8	4.38	Punatsangchu	344.1	103.2	24085.4	1119	71.49	4.21	70.00	1.00	VH
lake276	90.710	28.023	4888.3	1.60	Chamkharchu	83.6	25.1	11379.7	410	38.16	1.01	28.00	0.32	H
lake262	89.930	27.941	5015.2	0.74	Punatsangchu	28.2	16.9	6396.2	339	32.07	2.04	46.00	0.22	H
lake278	89.409	27.687	4787.2	0.18	Wangchu	3.9	2.3	2228.5	636	38.63	2.05	60.00	0.20	H
lake251	89.350	27.804	4343.4	0.16	Wangchu	3.1	1.9	1992.4	390	32.15	1.62	52.00	0.19	H
lake93	90.535	27.939	5049.3	0.60	Chamkharchu	21.1	12.6	5481.8	168	32.55	0.65	26.00	0.14	H
lake18	90.302	28.093	4531.4	1.64	Punatsangchu	86.1	25.8	11558.8	184	23.30	0.80	18.00	0.09	M
lake148	90.374	28.014	5193.3	0.93	Mangdechu	39.1	23.4	7601.4	78	19.06	0.53	28.00	0.08	M
lake31	90.364	28.037	5217.7	0.85	Mangdechu	34.2	20.5	7089.7	65	18.17	0.49	26.00	0.07	M
lake274	90.540	28.003	4701.3	0.30	Chamkharchu	7.9	4.7	3262.2	70	19.72	0.21	20.00	0.06	M
lake76	91.596	27.887	4604.7	0.17	Drangmechu	3.7	2.2	2173.3	46	0.47	0.71	16.00	0.06	M
lake94	90.555	27.925	4777.8	0.29	Chamkharchu	7.6	4.5	3184.0	63	17.58	0.19	18.00	0.06	M
lake275	90.816	27.897	4717.2	0.45	Chamkharchu	14.0	8.4	4411.4	85	14.88	0.47	20.00	0.05	M
lake128	90.247	28.107	4381.2	1.34	Punatsangchu	65.1	19.5	9969.7	83	16.47	0.57	18.00	0.04	M
lake44	90.290	27.891	5079.3	1.16	Mangdechu	52.8	15.9	8923.4	26	8.07	0.25	20.00	0.04	M
lake228	92.437	27.770	5173.0	0.88	Drangmechu	35.8	21.5	7254.2	34	5.41	0.34	14.00	0.04	M
lake99	89.313	27.800	4380.5	0.06	Wangchu	0.7	0.7	934.4	82	7.61	0.23	30.00	0.04	M
lake267	90.418	27.991	5182.5	0.44	Mangdechu	13.7	8.2	4358.2	27	2.85	0.21	22.00	0.04	M
lake71	91.269	27.931	4737.4	0.40	Kurichu	11.7	7.0	4007.5	51	13.67	0.05	26.00	0.03	M
lake78	92.425	27.763	5098.0	0.20	Drangmechu	4.5	2.7	2429.0	26	3.02	0.23	10.00	0.03	M
lake186	90.786	28.086	5194.8	2.38	Kurichu	145.5	43.7	15265.2	48	29.04	0.24	30.00	0.03	M
lake229	92.401	27.756	4965.7	0.14	Drangmechu	2.8	1.7	1864.0	21	2.47	0.20	8.00	0.03	M
lake82	90.625	28.035	5178.3	0.32	Chamkharchu	8.6	5.2	3412.9	29	13.31	0.06	22.00	0.03	M
lake167	90.355	28.047	5266.1	0.50	Mangdechu	16.3	9.8	4781.0	21	12.43	0.20	14.00	0.03	M
lake161	90.303	27.873	5048.0	0.43	Mangdechu	13.0	7.8	4249.6	19	6.00	0.18	14.00	0.02	M
lake28	89.896	27.982	5149.9	0.36	Punatsangchu	10.3	6.2	3742.4	25	2.84	0.12	12.00	0.02	M
lake22	89.848	28.172	4510.2	0.24	Punatsangchu	5.7	3.4	2750.9	25	8.78	0.00	16.00	0.02	M
lake201	91.287	27.996	4514.0	0.25	Kurichu	6.2	3.7	2856.0	26	7.27	0.02	12.00	0.02	L
lake234	90.537	28.041	5000.8	0.19	Chamkharchu	4.1	2.5	2302.2	14	12.91	0.00	12.00	0.02	L

lake81	90.546	28.038	5004.3	0.18	Chamkharchu	3.9	2.3	2242.4	12	12.57	0.00	12.00	0.01	L
lake170	91.079	28.351	4801.0	0.99	Kurichu	42.6	25.5	7955.2	12	10.50	0.14	12.00	0.01	L
lake238	90.572	28.006	5157.2	0.15	Chamkharchu	3.0	1.8	1936.9	12	11.42	0.00	10.00	0.01	L
lake37	90.412	27.968	5213.4	0.25	Mangdechu	5.9	3.6	2800.1	17	1.27	0.04	12.00	0.01	L
lake270	90.437	27.984	5108.1	0.27	Mangdechu	6.9	4.1	3033.7	17	1.23	0.04	12.00	0.01	L
lake95	90.559	27.916	4932.1	0.11	Chamkharchu	1.9	1.1	1535.2	13	9.08	0.00	6.00	0.01	L
lake26	89.884	28.010	5020.8	0.24	Punatsangchu	5.9	3.5	2781.0	20	1.56	0.00	2.00	0.01	L
lake129	90.231	28.103	4353.4	0.47	Punatsangchu	14.9	9.0	4568.4	12	7.50	0.00	6.00	0.01	L
lake142	89.896	27.974	5135.4	0.25	Punatsangchu	6.0	3.6	2828.4	20	1.18	0.00	2.00	0.01	L
lake92	90.756	27.942	5025.4	0.18	Chamkharchu	3.8	2.3	2197.9	5	9.48	0.00	14.00	0.01	L
lake86	90.628	28.006	5061.6	0.09	Chamkharchu	1.4	1.4	1326.2	3	7.83	0.00	12.00	0.01	L
lake88	90.624	27.995	5094.8	0.07	Chamkharchu	1.0	1.0	1101.0	3	7.37	0.00	10.00	0.01	L
lake89	90.644	27.992	4854.3	0.08	Chamkharchu	1.3	1.3	1248.0	3	7.83	0.00	12.00	0.01	L
lake34	90.328	28.005	5369.6	0.36	Mangdechu	10.3	6.2	3750.4	13	12.90	0.04	8.00	0.01	L
lake57	90.724	28.242	4662.1	0.91	Kurichu	37.7	22.6	7459.8	9	7.93	0.11	10.00	0.01	L
lake237	90.620	28.007	5145.9	0.07	Chamkharchu	1.0	1.0	1103.1	2	6.65	0.00	10.00	0.01	L
lake11	89.930	27.973	5068.0	0.66	Punatsangchu	24.0	14.4	5870.0	24	3.39	0.32	10.00	0.01	L
lake27	89.892	27.988	5132.6	0.13	Punatsangchu	2.5	1.5	1769.3	20	1.11	0.00	2.00	0.01	L
lake160	90.551	27.895	4974.0	0.24	Mangdechu	5.7	3.4	2735.5	11	0.68	0.01	8.00	0.01	L
lake245	90.553	27.913	4982.0	0.06	Chamkharchu	0.9	0.9	1030.4	9	7.84	0.00	6.00	0.01	L
lake90	90.505	27.988	5199.2	0.19	Chamkharchu	4.2	2.5	2344.3	9	10.85	0.00	12.00	0.01	L
lake10	90.233	27.978	5085.8	0.69	Punatsangchu	25.4	15.2	6046.0	17	3.86	0.32	10.00	0.01	L
lake83	90.684	28.034	4797.1	0.06	Chamkharchu	0.8	0.8	970.9	5	5.98	0.00	10.00	0.01	L
lake134	89.841	28.144	5118.3	0.13	Punatsangchu	2.4	1.5	1749.6	25	5.23	0.00	14.00	0.01	L
lake235	90.558	28.027	5121.2	0.08	Chamkharchu	1.3	1.3	1261.7	7	8.85	0.00	8.00	0.01	L
lake23	89.853	28.167	4549.3	0.11	Punatsangchu	1.8	1.1	1498.6	19	6.52	0.00	14.00	0.01	L
lake246	90.812	27.907	4804.8	0.36	Chamkharchu	10.2	6.1	3730.7	16	6.71	0.01	12.00	0.01	L
lake54	90.736	28.274	4504.4	1.89	Kurichu	105.2	31.6	12854.0	7	7.07	0.11	10.00	0.01	L
lake91	90.593	27.983	5035.4	0.13	Chamkharchu	2.4	1.4	1722.5	9	8.82	0.00	8.00	0.01	L
lake250	88.930	27.900	5104.3	0.17	Amochu	3.7	2.2	2175.1	17	1.34	0.00	0.00	0.01	L
lake21	89.685	28.172	4780.4	0.10	Punatsangchu	1.7	1.0	1460.3	16	1.95	0.00	14.00	0.01	L
lake36	90.331	27.970	5322.7	0.25	Mangdechu	6.1	3.6	2831.3	9	10.21	0.01	6.00	0.01	L
lake135	89.742	28.139	4858.8	0.12	Punatsangchu	2.1	1.3	1626.3	19	2.28	0.00	10.00	0.01	L
lake156	90.397	27.940	5207.0	0.20	Mangdechu	4.4	2.6	2379.8	7	0.36	0.01	6.00	0.01	L

lake239	90.801	28.006	5078.8	0.06	Chamkharchu	0.9	0.9	1022.7	2	6.09	0.00	10.00	0.01	L
lake243	90.748	27.931	4980.4	0.07	Chamkharchu	1.1	1.1	1124.7	2	6.10	0.00	10.00	0.01	L
lake51	90.272	27.819	4905.2	0.22	Mangdechu	5.0	3.0	2544.5	8	3.88	0.01	4.00	0.00	L
lake136	89.602	28.115	4162.9	0.07	Punatsangchu	1.1	1.1	1123.3	16	2.13	0.00	10.00	0.00	L
lake144	89.884	27.937	4890.9	0.09	Punatsangchu	1.5	1.5	1334.8	20	1.00	0.00	2.00	0.00	L
lake158	90.408	27.919	5140.7	0.18	Mangdechu	3.9	2.3	2227.2	7	0.36	0.01	6.00	0.00	L
lake241	90.505	27.993	5201.9	0.09	Chamkharchu	1.4	1.4	1320.7	7	7.41	0.00	8.00	0.00	L
lake195	91.292	28.012	4624.3	0.12	Kurichu	2.1	1.2	1598.2	8	0.33	0.00	0.00	0.00	L
lake197	91.317	27.990	4760.7	0.06	Kurichu	0.8	0.8	996.3	7	0.00	0.00	0.00	0.00	L
lake202	91.325	28.002	4792.0	0.06	Kurichu	0.8	0.8	962.2	5	0.02	0.00	0.00	0.00	L
lake85	90.728	28.012	5157.9	0.05	Chamkharchu	0.7	0.7	883.7	2	2.80	0.00	8.00	0.00	L
lake137	89.600	28.027	4988.5	0.13	Punatsangchu	2.4	1.4	1714.6	15	2.56	0.00	8.00	0.00	L
lake138	89.855	28.030	4761.9	0.08	Punatsangchu	1.3	1.3	1250.2	20	0.99	0.00	2.00	0.00	L
lake139	89.868	28.012	4906.9	0.08	Punatsangchu	1.3	1.3	1249.9	20	0.98	0.00	2.00	0.00	L
lake140	89.885	28.008	5022.0	0.06	Punatsangchu	0.8	0.8	992.9	14	0.84	0.00	2.00	0.00	L
lake141	89.890	28.001	5086.7	0.09	Punatsangchu	1.4	1.4	1289.9	20	0.98	0.00	2.00	0.00	L
lake266	89.881	27.952	4955.7	0.07	Punatsangchu	1.0	1.0	1087.8	15	0.98	0.00	2.00	0.00	L
lake69	91.307	28.018	4963.2	0.09	Kurichu	1.5	1.5	1335.0	3	0.00	0.00	0.00	0.00	L
lake84	90.571	28.018	5191.7	0.08	Chamkharchu	1.3	1.3	1231.1	7	5.51	0.00	8.00	0.00	L
lake164	90.554	27.837	4796.9	0.12	Mangdechu	2.1	1.2	1594.5	0	0.19	0.01	2.00	0.00	L
lake273	90.903	28.059	4764.3	0.54	Kurichu	18.3	11.0	5081.9	6	4.43	0.09	8.00	0.00	L
lake40	90.503	27.933	5057.4	0.09	Mangdechu	1.4	1.4	1279.0	3	0.06	0.00	2.00	0.00	L
lake153	90.405	27.967	5267.0	0.08	Mangdechu	1.2	1.2	1215.6	3	0.07	0.00	2.00	0.00	L
lake166	90.400	27.918	5211.8	0.08	Mangdechu	1.2	1.2	1221.2	3	0.07	0.00	2.00	0.00	L
lake199	91.257	27.936	4848.8	0.07	Kurichu	1.1	1.1	1128.7	2	0.00	0.00	0.00	0.00	L
lake200	90.850	27.866	4585.6	0.10	Kurichu	1.6	1.6	1386.3	3	0.47	0.00	2.00	0.00	L
lake205	91.276	27.926	4853.9	0.07	Kurichu	1.0	1.0	1109.3	2	0.00	0.00	0.00	0.00	L
lake133	89.868	28.156	5058.7	0.05	Punatsangchu	0.7	0.7	900.7	5	4.91	0.00	12.00	0.00	L
lake254	90.113	28.084	4133.8	0.10	Punatsangchu	1.7	1.0	1437.4	3	2.18	0.00	2.00	0.00	L
lake7	90.289	27.996	5333.0	0.49	Punatsangchu	15.6	9.4	4678.3	2	10.68	0.00	4.00	0.00	L
lake32	90.407	28.012	5286.3	0.08	Mangdechu	1.3	1.3	1252.5	3	0.06	0.00	2.00	0.00	L
lake33	90.485	28.008	5017.7	0.07	Mangdechu	1.1	1.1	1127.4	3	0.06	0.00	2.00	0.00	L
lake41	90.414	27.928	5016.2	0.07	Mangdechu	1.0	1.0	1080.5	3	0.06	0.00	2.00	0.00	L
lake42	90.276	27.907	5158.5	0.23	Mangdechu	5.5	3.3	2695.6	2	4.97	0.01	2.00	0.00	L

lake62	91.257	28.088	4630.5	0.61	Kurichu	21.3	12.8	5518.2	3	1.89	0.09	6.00	0.00	L
lake66	90.953	28.049	4642.3	0.39	Kurichu	11.3	6.8	3947.2	3	1.89	0.08	6.00	0.00	L
lake87	90.593	27.997	5114.9	0.15	Chamkharchu	2.9	1.7	1917.4	6	5.34	0.00	8.00	0.00	L
lake104	90.270	28.029	5208.2	0.26	Punatsangchu	6.3	3.8	2892.0	1	6.09	0.00	4.00	0.00	L
lake105	90.211	28.016	5132.2	0.57	Punatsangchu	19.4	11.7	5253.0	1	4.27	0.14	12.00	0.00	L
lake150	90.452	27.998	5003.1	0.09	Mangdechu	1.5	1.5	1344.6	3	0.06	0.00	2.00	0.00	L
lake152	90.381	27.981	5237.3	0.22	Mangdechu	5.0	3.0	2560.0	2	8.43	0.01	2.00	0.00	L
lake162	90.333	27.849	5037.3	0.14	Mangdechu	2.6	1.6	1820.5	2	0.21	0.01	2.00	0.00	L
lake198	91.426	27.963	4855.9	0.14	Kurichu	2.7	1.6	1830.6	3	0.56	0.00	0.00	0.00	L
lake236	90.592	28.010	5146.8	0.05	Chamkharchu	0.7	0.7	894.7	6	4.73	0.00	8.00	0.00	L
lake240	90.607	27.996	5238.2	0.06	Chamkharchu	0.8	0.8	939.6	6	5.16	0.00	8.00	0.00	L
lake244	90.763	27.921	4952.0	0.08	Chamkharchu	1.2	1.2	1226.3	3	1.86	0.00	4.00	0.00	L
lake35	90.380	27.987	5245.9	0.16	Mangdechu	3.1	1.9	1999.7	1	7.24	0.01	2.00	0.00	L
lake147	90.353	28.014	5288.5	0.18	Mangdechu	3.8	2.3	2212.7	1	7.37	0.01	2.00	0.00	L
lake151	90.398	27.997	5344.3	0.05	Mangdechu	0.7	0.7	912.8	1	0.04	0.00	0.00	0.00	L
lake1	89.945	28.124	4755.8	0.07	Punatsangchu	1.0	1.0	1110.4	0	3.99	0.00	6.00	0.00	L
lake2	90.042	28.092	5041.5	0.09	Punatsangchu	1.5	1.5	1370.9	0	0.08	0.00	2.00	0.00	L
lake3	89.893	28.029	5037.2	0.11	Punatsangchu	1.9	1.2	1550.4	0	2.34	0.00	6.00	0.00	L
lake4	90.161	28.010	5042.5	0.08	Punatsangchu	1.3	1.3	1242.2	0	0.00	0.00	0.00	0.00	L
lake5	90.277	28.008	5287.4	0.14	Punatsangchu	2.8	1.7	1870.4	0	5.96	0.00	4.00	0.00	L
lake6	90.139	28.002	5065.1	0.17	Punatsangchu	3.4	2.0	2089.1	0	0.00	0.00	0.00	0.00	L
lake8	90.261	27.996	5134.0	0.21	Punatsangchu	4.9	2.9	2526.7	0	6.54	0.00	4.00	0.00	L
lake9	90.300	27.992	5346.1	0.16	Punatsangchu	3.3	2.0	2045.4	0	5.93	0.00	4.00	0.00	L
lake12	89.933	27.924	4849.4	0.07	Punatsangchu	1.1	1.1	1128.3	0	4.26	0.00	4.00	0.00	L
lake13	90.244	27.922	5117.3	0.06	Punatsangchu	0.8	0.8	979.7	0	0.29	0.00	0.00	0.00	L
lake14	90.209	27.917	4902.5	0.08	Punatsangchu	1.3	1.3	1246.2	0	0.00	0.00	0.00	0.00	L
lake15	89.943	27.893	4854.5	0.10	Punatsangchu	1.6	1.6	1409.2	0	0.00	0.00	0.00	0.00	L
lake16	90.219	27.893	4980.2	0.18	Punatsangchu	3.7	2.2	2183.0	0	0.00	0.00	0.00	0.00	L
lake17	89.949	27.886	4564.6	0.06	Punatsangchu	0.8	0.8	985.7	0	0.00	0.00	0.00	0.00	L
lake19	90.327	28.086	4698.5	0.06	Punatsangchu	0.7	0.7	919.0	0	2.04	0.00	4.00	0.00	L
lake20	90.313	28.059	5104.1	0.08	Punatsangchu	1.3	1.3	1269.8	0	3.18	0.00	4.00	0.00	L
lake24	89.516	28.070	4770.3	0.07	Punatsangchu	1.1	1.1	1152.4	0	0.56	0.00	4.00	0.00	L
lake25	89.554	28.044	4881.6	0.05	Punatsangchu	0.6	0.6	867.3	0	4.46	0.00	8.00	0.00	L
lake29	89.393	27.849	4211.7	0.08	Punatsangchu	1.3	1.3	1262.6	0	0.35	0.00	4.00	0.00	L

lake30	89.389	27.839	4328.4	0.18	Punatsangchu	3.8	2.3	2202.4	0	0.42	0.00	4.00	0.00	L
lake38	90.366	27.957	5262.0	0.06	Mangdechu	0.8	0.8	936.9	0	4.29	0.00	0.00	0.00	L
lake39	90.377	27.941	5215.2	0.09	Mangdechu	1.4	1.4	1312.7	0	4.81	0.00	0.00	0.00	L
lake43	90.322	27.893	5109.1	0.08	Mangdechu	1.2	1.2	1211.8	0	2.67	0.00	0.00	0.00	L
lake45	90.293	27.883	5112.8	0.09	Mangdechu	1.5	1.5	1374.7	0	2.27	0.00	0.00	0.00	L
lake46	90.298	27.884	5123.5	0.16	Mangdechu	3.2	1.9	2016.2	0	2.54	0.00	2.00	0.00	L
lake47	90.342	27.870	5081.6	0.07	Mangdechu	1.1	1.1	1154.1	0	2.45	0.00	0.00	0.00	L
lake48	90.349	27.869	5068.5	0.08	Mangdechu	1.2	1.2	1200.2	0	2.61	0.00	0.00	0.00	L
lake49	90.311	27.859	4965.9	0.11	Mangdechu	1.9	1.2	1548.2	0	2.39	0.00	0.00	0.00	L
lake50	90.318	27.858	5071.0	0.06	Mangdechu	0.9	0.9	1002.8	0	2.07	0.00	0.00	0.00	L
lake52	90.674	28.334	4636.5	0.12	Kurichu	2.1	1.2	1603.5	0	0.00	0.00	0.00	0.00	L
lake53	90.745	28.296	4727.8	0.13	Kurichu	2.4	1.4	1715.1	0	1.43	0.00	0.00	0.00	L
lake55	90.712	28.247	4685.1	0.20	Kurichu	4.3	2.6	2361.3	0	0.00	0.00	0.00	0.00	L
lake56	90.506	28.241	5469.5	0.22	Kurichu	5.1	3.0	2574.6	0	0.00	0.00	0.00	0.00	L
lake58	90.409	28.152	4843.9	0.09	Kurichu	1.4	1.4	1299.4	0	0.00	0.00	0.00	0.00	L
lake59	90.667	28.115	5158.2	0.07	Kurichu	1.0	1.0	1064.8	0	0.20	0.00	0.00	0.00	L
lake60	90.738	28.096	5021.6	0.73	Kurichu	27.4	16.4	6298.4	0	1.14	0.00	0.00	0.00	L
lake61	90.584	28.078	5311.3	0.11	Kurichu	2.0	1.2	1554.1	0	3.14	0.00	0.00	0.00	L
lake63	90.656	28.072	5027.3	0.44	Kurichu	13.3	8.0	4296.8	0	6.93	0.00	0.00	0.00	L
lake64	90.601	28.059	4889.6	0.44	Kurichu	13.5	8.1	4329.1	0	6.28	0.00	0.00	0.00	L
lake65	90.597	28.049	5010.4	0.34	Kurichu	9.5	5.7	3599.7	0	4.58	0.00	0.00	0.00	L
lake67	91.294	28.043	4777.7	0.14	Kurichu	2.6	1.6	1812.2	0	2.73	0.00	0.00	0.00	L
lake68	90.843	28.019	4979.9	0.19	Kurichu	4.2	2.5	2337.5	0	0.06	0.04	2.00	0.00	L
lake70	91.430	27.967	4824.9	0.07	Kurichu	1.1	1.1	1142.1	0	0.02	0.00	0.00	0.00	L
lake72	90.907	28.041	4911.8	0.12	Kurichu	2.1	1.3	1622.6	0	0.92	0.00	0.00	0.00	L
lake73	90.346	28.274	5610.8	0.05	Kurichu	0.7	0.7	883.7	0	0.00	0.00	0.00	0.00	L
lake74	91.451	28.037	4742.3	0.56	Drangmechu	19.2	11.5	5213.9	0	0.00	0.00	0.00	0.00	L
lake75	91.592	27.894	4742.2	0.05	Drangmechu	0.7	0.7	895.1	0	6.45	0.00	0.00	0.00	L
lake77	92.315	27.774	4876.4	0.13	Drangmechu	2.4	1.5	1749.9	0	0.00	0.00	0.00	0.00	L
lake79	92.375	27.738	5044.5	0.08	Drangmechu	1.1	1.1	1162.8	0	0.00	0.00	0.00	0.00	L
lake80	92.374	27.733	5083.4	0.08	Drangmechu	1.1	1.1	1161.8	0	0.00	0.00	0.00	0.00	L
lake96	88.922	27.847	4629.6	0.06	Amochu	0.9	0.9	1010.8	0	0.00	0.00	0.00	0.00	L
lake97	88.858	27.654	4746.9	0.11	Amochu	2.0	1.2	1589.4	0	0.00	0.00	0.00	0.00	L
lake98	90.319	27.943	5230.1	0.05	Mangdechu	0.7	0.7	884.2	0	2.86	0.00	0.00	0.00	L

lake100	90.028	28.113	4689.5	0.37	Punatsangchu	10.6	6.3	3801.1	0	0.36	0.00	6.00	0.00	L
lake101	90.043	28.096	5116.3	0.07	Punatsangchu	1.0	1.0	1080.6	0	0.06	0.00	2.00	0.00	L
lake102	89.894	28.036	5189.0	0.06	Punatsangchu	0.8	0.8	993.8	0	1.98	0.00	6.00	0.00	L
lake103	90.295	28.030	5315.9	0.09	Punatsangchu	1.4	1.4	1287.5	0	0.00	0.00	4.00	0.00	L
lake106	90.280	28.013	5291.1	0.18	Punatsangchu	3.7	2.2	2179.1	0	6.48	0.00	4.00	0.00	L
lake107	90.149	28.009	5027.3	0.07	Punatsangchu	1.0	1.0	1115.4	0	0.00	0.00	0.00	0.00	L
lake108	90.139	28.007	5056.0	0.10	Punatsangchu	1.6	1.6	1382.6	0	0.00	0.00	0.00	0.00	L
lake109	90.231	28.005	5078.3	0.06	Punatsangchu	0.8	0.8	987.4	0	0.97	0.00	0.00	0.00	L
lake110	90.234	27.997	4986.3	0.12	Punatsangchu	2.2	1.3	1670.0	0	1.18	0.00	0.00	0.00	L
lake111	90.263	27.988	5160.1	0.10	Punatsangchu	1.7	1.0	1464.5	0	5.31	0.00	2.00	0.00	L
lake112	90.245	27.983	5101.8	0.19	Punatsangchu	4.1	2.5	2304.5	0	0.12	0.00	0.00	0.00	L
lake113	90.114	27.969	5003.9	0.11	Punatsangchu	2.0	1.2	1573.7	0	0.00	0.00	0.00	0.00	L
lake114	90.260	27.964	5221.0	0.47	Punatsangchu	14.8	8.9	4549.6	0	0.30	0.00	2.00	0.00	L
lake115	89.933	27.950	5048.7	0.07	Punatsangchu	1.1	1.1	1142.2	0	3.80	0.00	4.00	0.00	L
lake116	89.906	27.941	5023.6	0.14	Punatsangchu	2.8	1.7	1863.9	0	4.42	0.02	6.00	0.00	L
lake117	90.257	27.943	5194.9	0.07	Punatsangchu	1.0	1.0	1095.5	0	0.63	0.00	0.00	0.00	L
lake118	90.209	27.932	4993.6	0.12	Punatsangchu	2.3	1.4	1681.5	0	0.00	0.00	0.00	0.00	L
lake119	90.216	27.922	5190.5	0.08	Punatsangchu	1.1	1.1	1159.1	0	0.00	0.00	0.00	0.00	L
lake120	90.263	27.920	5147.1	0.24	Punatsangchu	5.8	3.5	2754.1	0	0.50	0.00	0.00	0.00	L
lake121	90.244	27.915	5169.2	0.23	Punatsangchu	5.3	3.2	2637.0	0	0.43	0.00	0.00	0.00	L
lake122	89.946	27.896	4865.7	0.09	Punatsangchu	1.3	1.3	1274.2	0	0.00	0.00	0.00	0.00	L
lake123	90.252	27.897	5154.5	0.09	Punatsangchu	1.5	1.5	1362.7	0	0.00	0.00	0.00	0.00	L
lake124	90.207	27.876	4911.0	0.41	Punatsangchu	12.2	7.3	4105.0	0	0.00	0.00	0.00	0.00	L
lake125	90.259	27.843	5023.9	0.09	Punatsangchu	1.3	1.3	1275.9	0	0.00	0.00	0.00	0.00	L
lake126	90.253	27.841	4997.0	0.10	Punatsangchu	1.6	1.6	1412.5	0	0.00	0.00	0.00	0.00	L
lake127	90.237	27.837	4772.2	0.08	Punatsangchu	1.2	1.2	1200.8	0	0.00	0.00	0.00	0.00	L
lake131	90.280	28.050	5059.5	0.05	Punatsangchu	0.7	0.7	899.0	0	2.19	0.00	4.00	0.00	L
lake132	90.167	28.091	4221.3	0.05	Punatsangchu	0.7	0.7	917.2	0	0.85	0.00	0.00	0.00	L
lake143	89.897	27.958	5092.5	0.10	Punatsangchu	1.7	1.0	1459.6	0	0.00	0.00	0.00	0.00	L
lake145	89.369	27.836	4423.6	0.05	Punatsangchu	0.6	0.6	863.2	0	0.27	0.00	2.00	0.00	L
lake146	90.357	28.025	5331.1	0.06	Mangdechu	0.9	0.9	1016.9	0	3.14	0.00	0.00	0.00	L
lake149	90.311	28.003	5455.3	0.11	Mangdechu	2.0	1.2	1559.3	0	7.32	0.00	0.00	0.00	L
lake154	90.282	27.956	5224.9	0.05	Mangdechu	0.7	0.7	871.9	0	1.07	0.00	0.00	0.00	L
lake155	90.378	27.946	5266.3	0.16	Mangdechu	3.1	1.9	1990.8	1	5.67	0.01	2.00	0.00	L

lake157	90.295	27.932	5191.4	0.10	Mangdechu	1.6	1.6	1415.9	0	2.68	0.00	0.00	0.00	L
lake159	90.268	27.909	5180.9	0.09	Mangdechu	1.4	1.4	1325.9	0	4.26	0.00	0.00	0.00	L
lake163	90.255	27.831	5062.2	0.05	Mangdechu	0.7	0.7	912.7	0	2.11	0.00	0.00	0.00	L
lake165	90.317	27.914	5195.2	0.10	Mangdechu	1.6	1.6	1389.1	0	3.65	0.00	0.00	0.00	L
lake168	90.275	27.913	5182.6	0.07	Mangdechu	1.0	1.0	1090.5	0	3.53	0.00	0.00	0.00	L
lake169	91.191	28.557	5342.6	0.10	Kurichu	1.7	1.0	1442.7	0	0.00	0.00	0.00	0.00	L
lake171	90.741	28.304	4772.3	0.11	Kurichu	1.9	1.1	1523.9	0	0.00	0.00	0.00	0.00	L
lake172	90.608	28.300	5358.9	0.17	Kurichu	3.5	2.1	2116.1	0	0.00	0.00	0.00	0.00	L
lake173	91.069	28.305	4729.4	0.19	Kurichu	4.0	2.4	2277.2	0	0.00	0.00	0.00	0.00	L
lake174	90.647	28.301	5472.6	0.32	Kurichu	8.5	5.1	3393.0	0	0.00	0.00	0.00	0.00	L
lake175	90.589	28.272	5424.2	0.48	Kurichu	15.1	9.1	4597.7	0	0.00	0.00	0.00	0.00	L
lake176	90.496	28.238	5620.5	0.23	Kurichu	5.4	3.2	2652.9	0	0.00	0.00	0.00	0.00	L
lake177	90.663	28.207	5074.6	0.08	Kurichu	1.3	1.3	1263.6	0	0.00	0.00	0.00	0.00	L
lake178	90.576	28.167	5402.2	0.06	Kurichu	0.8	0.8	939.5	0	0.00	0.00	0.00	0.00	L
lake179	90.587	28.136	5359.0	0.06	Kurichu	0.8	0.8	947.1	0	0.00	0.00	0.00	0.00	L
lake180	90.605	28.129	5198.4	0.10	Kurichu	1.7	1.0	1450.6	0	0.00	0.00	0.00	0.00	L
lake181	90.605	28.086	5203.6	0.35	Kurichu	9.8	5.9	3651.8	0	4.62	0.00	0.00	0.00	L
lake182	90.661	28.078	5085.4	0.13	Kurichu	2.5	1.5	1762.0	0	4.20	0.00	0.00	0.00	L
lake183	91.334	28.088	5146.0	0.06	Kurichu	0.8	0.8	944.1	0	0.00	0.00	0.00	0.00	L
lake184	90.743	28.078	5157.8	0.24	Kurichu	5.7	3.4	2753.8	0	0.00	0.00	0.00	0.00	L
lake185	91.357	28.082	4870.3	0.06	Kurichu	0.9	0.9	1016.9	0	0.03	0.00	0.00	0.00	L
lake187	91.415	28.081	5376.3	0.07	Kurichu	0.9	0.9	1048.6	0	0.00	0.00	0.00	0.00	L
lake188	90.648	28.065	5115.2	0.25	Kurichu	6.0	3.6	2820.6	0	4.90	0.00	0.00	0.00	L
lake189	91.364	28.062	4629.2	0.08	Kurichu	1.2	1.2	1222.7	0	0.42	0.00	0.00	0.00	L
lake190	90.898	28.053	4769.0	0.08	Kurichu	1.1	1.1	1158.4	0	0.91	0.00	0.00	0.00	L
lake191	90.587	28.048	5153.2	0.09	Kurichu	1.5	1.5	1329.8	0	3.44	0.00	0.00	0.00	L
lake192	90.919	28.047	4928.8	0.18	Kurichu	3.8	2.3	2203.5	0	1.02	0.00	0.00	0.00	L
lake193	91.261	28.045	4583.0	0.12	Kurichu	2.2	1.3	1663.2	0	1.86	0.00	0.00	0.00	L
lake194	90.840	28.022	4992.1	0.22	Kurichu	5.1	3.0	2579.6	0	0.09	0.04	2.00	0.00	L
lake196	91.262	28.001	4475.7	0.18	Kurichu	4.0	2.4	2265.1	0	1.19	0.00	0.00	0.00	L
lake203	90.566	28.123	5183.3	0.67	Kurichu	24.5	14.7	5931.4	0	1.13	0.00	0.00	0.00	L
lake204	90.496	28.248	5654.9	0.06	Kurichu	0.7	0.7	927.3	0	0.00	0.00	0.00	0.00	L
lake206	90.385	28.204	5439.5	0.42	Kurichu	12.8	7.7	4211.5	0	0.00	0.00	0.00	0.00	L
lake207	91.112	28.374	5308.5	0.05	Kurichu	0.6	0.6	862.7	0	0.00	0.00	0.00	0.00	L

lake208	91.510	28.164	5228.1	0.13	Drangmechu	2.5	1.5	1759.0	0	0.00	0.00	0.00	0.00	L
lake209	91.893	28.165	5209.9	0.05	Drangmechu	0.7	0.7	908.7	0	0.00	0.00	0.00	0.00	L
lake210	91.895	28.159	5210.7	0.05	Drangmechu	0.7	0.7	875.8	0	0.00	0.00	0.00	0.00	L
lake211	91.664	28.143	5148.1	0.21	Drangmechu	4.8	2.9	2510.9	0	0.00	0.00	0.00	0.00	L
lake212	91.887	28.141	5247.8	0.10	Drangmechu	1.8	1.1	1467.6	0	0.00	0.00	0.00	0.00	L
lake213	91.864	28.132	5410.4	0.08	Drangmechu	1.3	1.3	1240.6	0	0.00	0.00	0.00	0.00	L
lake214	91.520	28.124	5179.7	0.06	Drangmechu	0.7	0.7	935.1	0	0.00	0.00	0.00	0.00	L
lake215	91.847	28.094	5170.9	0.07	Drangmechu	1.0	1.0	1062.2	0	0.00	0.00	0.00	0.00	L
lake216	91.597	28.023	4830.3	0.39	Drangmechu	11.4	6.9	3967.2	0	0.00	0.00	0.00	0.00	L
lake217	91.676	28.014	4421.6	0.13	Drangmechu	2.5	1.5	1776.6	0	0.00	0.00	0.00	0.00	L
lake218	92.128	28.010	5031.9	0.07	Drangmechu	1.0	1.0	1112.7	0	0.00	0.00	0.00	0.00	L
lake219	91.511	27.996	5335.5	0.18	Drangmechu	3.8	2.3	2220.3	0	0.00	0.00	0.00	0.00	L
lake220	91.760	27.939	4510.0	0.07	Drangmechu	1.1	1.1	1129.2	0	0.00	0.00	0.00	0.00	L
lake221	91.662	27.919	4721.9	0.06	Drangmechu	0.7	0.7	928.6	0	2.32	0.00	0.00	0.00	L
lake222	91.610	27.918	4637.0	0.10	Drangmechu	1.8	1.1	1475.0	0	0.00	0.00	0.00	0.00	L
lake223	91.642	27.901	4990.1	0.06	Drangmechu	0.7	0.7	927.1	0	0.00	0.00	0.00	0.00	L
lake224	91.619	27.901	4938.4	0.14	Drangmechu	2.8	1.7	1870.9	0	0.00	0.00	0.00	0.00	L
lake225	91.596	27.896	4755.4	0.05	Drangmechu	0.7	0.7	916.6	0	0.17	0.00	0.00	0.00	L
lake226	92.161	27.851	4824.6	0.16	Drangmechu	3.2	1.9	2024.1	0	0.00	0.00	0.00	0.00	L
lake227	92.048	27.789	4954.0	0.12	Drangmechu	2.1	1.2	1604.5	0	0.00	0.00	0.00	0.00	L
lake230	92.388	27.744	5091.9	0.09	Drangmechu	1.5	1.5	1334.0	0	0.00	0.00	0.00	0.00	L
lake231	92.393	27.725	5234.4	0.05	Drangmechu	0.7	0.7	904.1	1	0.26	0.00	2.00	0.00	L
lake232	92.386	27.715	5104.5	0.13	Drangmechu	2.4	1.4	1735.5	0	0.00	0.00	0.00	0.00	L
lake233	91.525	28.050	5091.4	0.11	Drangmechu	1.9	1.1	1521.6	0	0.00	0.00	0.00	0.00	L
lake242	90.599	27.984	5030.5	0.08	Chamkharchu	1.2	1.2	1201.6	0	13.95	0.00	14.00	0.00	L
lake247	90.587	27.845	5132.5	0.10	Chamkharchu	1.6	1.6	1413.4	0	0.96	0.00	4.00	0.00	L
lake248	88.956	27.913	4812.3	0.07	Amochu	1.0	1.0	1064.4	0	0.00	0.00	0.00	0.00	L
lake249	89.229	27.809	5137.2	0.48	Amochu	15.2	9.1	4602.9	0	0.00	0.00	0.00	0.00	L
lake252	89.909	28.114	4364.8	0.46	Punatsangchu	14.3	8.6	4459.4	0	7.59	0.00	8.00	0.00	L
lake253	89.899	28.106	4268.8	0.25	Punatsangchu	6.2	3.7	2870.1	0	6.35	0.00	6.00	0.00	L
lake255	90.030	28.060	4381.6	0.08	Punatsangchu	1.1	1.1	1161.9	0	0.34	0.00	6.00	0.00	L
lake256	90.035	28.058	4372.4	0.09	Punatsangchu	1.3	1.3	1270.3	0	0.34	0.00	6.00	0.00	L
lake257	90.150	28.004	5003.1	0.15	Punatsangchu	3.0	1.8	1962.1	0	0.00	0.00	0.00	0.00	L
lake258	90.142	27.992	4969.0	0.11	Punatsangchu	1.8	1.1	1506.0	0	0.00	0.00	0.00	0.00	L

lake259	90.131	27.988	5049.9	0.20	Punatsangchu	4.6	2.7	2437.9	0	0.00	0.00	0.00	0.00	L
lake260	90.149	27.986	4907.1	0.18	Punatsangchu	3.8	2.3	2204.8	0	0.00	0.00	0.00	0.00	L
lake261	90.147	27.964	4878.2	0.24	Punatsangchu	5.6	3.4	2718.8	0	0.00	0.00	0.00	0.00	L
lake263	90.259	27.925	5129.4	0.12	Punatsangchu	2.3	1.4	1689.3	0	0.40	0.00	0.00	0.00	L
lake264	90.246	27.848	4800.3	0.11	Punatsangchu	2.0	1.2	1575.1	0	0.00	0.00	0.00	0.00	L
lake265	89.917	28.116	4440.1	0.06	Punatsangchu	0.8	0.8	987.3	0	3.77	0.00	6.00	0.00	L
lake268	90.320	27.985	5303.3	0.07	Mangdechu	1.0	1.0	1108.2	0	7.15	0.00	0.00	0.00	L
lake269	90.329	27.985	5274.3	0.08	Mangdechu	1.1	1.1	1169.9	0	7.49	0.00	0.00	0.00	L
lake271	90.533	28.170	5605.0	0.07	Kurichu	0.9	0.9	1040.7	0	0.00	0.00	0.00	0.00	L
lake272	90.652	28.082	4999.9	0.21	Kurichu	4.7	2.8	2466.5	0	4.96	0.00	0.00	0.00	L
lake277	90.803	27.895	5039.1	0.05	Chamkharchu	0.7	0.7	906.4	0	1.57	0.00	4.00	0.00	L

Table S2. Distribution of GLOF exposed elements across local administrative unit in Bhutan.

Gewog/Town	District	Area (km ²)	Inun. Area (km ²)	People (count)	Building (count)	Road (km)	Bridge (count)	Farmland (km ²)	V index	D Index	D Level
Chhoekhor	Bumthang	1521.170	114.475	297	1.000	41.694	36.000	0.275	0.535	1.000	V High
Bumthang Town	Bumthang	9.170	8.431	5740	1.000	13.268	2.000	2.319	0.460	0.583	V High
Punakha Town	Punakha	2.770	2.172	4911	1.000	10.835	4.000	1.141	0.439	0.576	V High
Lunana	Gasa	1731.240	212.258	86	0.000	39.970	30.000	0.000	0.793	0.457	V High
Toedwang	Punakha	415.662	27.202	86	0.000	4.974	8.000	1.078	0.645	0.445	V High
Nubi	Trongsa	556.423	40.107	229	0.000	1.950	8.000	0.303	0.578	0.373	High
Thedtsho	Wangduephodrang	18.023	2.856	535	0.000	3.591	6.000	0.899	0.504	0.334	High
Dzomi	Punakha	21.681	5.657	560	0.000	6.216	6.000	1.216	0.582	0.267	High
Paro Town	Paro	5.268	2.547	5535	0.000	13.227	12.000	1.144	0.438	0.257	High
Wangdue Phodrang Town	Wangduephodrang	1.993	0.304	1365	0.000	1.190	0.000	0.253	0.450	0.246	High
Lamgong	Paro	48.98550034	2.535	303	0.000	7.864	6.000	0.849	0.481	0.236	High
Lingmukha	Punakha	33.796	1.361	41	0.000	5.739	2.000	0.194	0.618	0.183	High
Khoma	Lhuentse	653.674	21.254	49	0.000	6.676	8.000	0.037	0.600	0.176	High
Khatoed	Gasa	286.036	2.648	3	0.000	0.416	4.000	0.005	0.574	0.141	High
Athang	Wangduephodrang	778.409	2.567	3	0.000	2.039	10.000	0.417	0.669	0.132	Moderate
Darkar	Wangduephodrang	346.631	1.225	21	0.000	3.223	16.000	0.315	0.529	0.115	Moderate
Yalang	Yangtse	89.767	5.251	80	0.000	0.907	6.000	0.457	0.679	0.115	Moderate
Langthil	Trongsa	508.169	5.901	44	0.000	1.261	8.000	0.817	0.588	0.102	Moderate
Saephu	Wangduephodrang	1107.980	103.843	162	0.000	14.211	4.000	0.000	0.619	0.101	Moderate
Sharpa	Paro	80.19830322	2.266	168	0.000	3.752	8.000	0.943	0.502	0.083	Moderate
Guma	Punakha	34.836	2.707	214	0.000	2.371	2.000	0.528	0.534	0.082	Moderate
Ruebisa	Wangduephodrang	158.703	1.944	27	0.000	2.819	18.000	0.520	0.587	0.076	Moderate
Toedtsho	Yangtse	48.967	0.331	11	0.000	0.388	0.000	0.086	0.686	0.075	Moderate
Soe	Thimphu	177.8659973	2.136	2	0.000	4.818	6.000	0.000	0.668	0.074	Moderate
Tangsibji	Trongsa	372.166	4.908	34	0.000	0.452	4.000	0.392	0.519	0.074	Moderate
Gangzur	Lhuentse	533.715	6.884	29	0.000	13.470	8.000	0.046	0.620	0.073	Moderate
Gase Tshogongm	Wangduephodrang	29.009	0.632	86	0.000	3.758	8.000	0.263	0.491	0.067	Moderate
Kurtoed	Lhuentse	961.390	39.823	31	0.000	1.276	8.000	0.829	0.583	0.059	Moderate

Tingtibi Town	Zhemgang	0.550	0.126	122	0.000	0.092	2.000	0.010	0.448	0.057	Moderate
Laya	Gasa	966.983	27.026	30	0.000	12.425	28.000	0.000	0.680	0.053	Moderate
Tsento	Paro	579.5390015	5.790	59	0.000	9.015	30.000	0.141	0.484	0.053	Moderate
Wangchang	Paro	16.12639999	0.772	65	0.000	0.412	2.000	0.399	0.491	0.045	Moderate
Toedpaista	Punakha	24.498	1.673	166	0.000	3.065	0.000	0.582	0.572	0.044	Moderate
Trashy Yangtse Town	Yangtse	2.855	0.135	151	0.000	1.202	4.000	0.046	0.437	0.039	Moderate
Dopshar-ri	Paro	33.73109818	0.465	46	0.000	2.786	2.000	0.277	0.501	0.037	Moderate
Khamdang	Yangtse	44.953	0.542	40	0.000	0.733	4.000	0.026	0.624	0.031	Moderate
Duksum Town	Yangtse	0.419	0.013	11	0.000	0.048	2.000	0.000	0.535	0.029	Moderate
Ramjar	Yangtse	22.428	1.879	102	0.000	0.141	0.000	0.056	0.586	0.027	Moderate
Korphu	Trongsa	290.209	1.116	3	0.000	0.262	2.000	0.022	0.673	0.024	Moderate
Trong	Zhemgang	357.476	2.161	18	0.000	0.353	4.000	0.269	0.581	0.019	Low
Samkhar	Trashigang	87.784	0.711	17	0.000	0.779	4.000	0.013	0.604	0.018	Low
Boomdeling	Yangtse	850.630	8.177	21	0.000	3.283	8.000	0.547	0.637	0.015	Low
Chhubu	Punakha	90.939	4.913	89	0.000	4.473	12.000	0.951	0.613	0.015	Low
Yangtse	Yangtse	272.288	0.693	3	0.000	0.635	2.000	0.069	0.652	0.014	Low
Bji	Haa	748.6939697	0.206	1	0.000	0.324	0.000	0.000	0.499	0.011	Low
Loong-nyi	Paro	75.64779663	0.148	9	0.000	0.317	0.000	0.085	0.494	0.011	Low
Maenbi	Lhuentse	88.832	2.567	68	0.000	7.675	4.000	0.043	0.545	0.006	Low
Goenshari	Punakha	88.389	0.662	5	0.000	0.370	4.000	0.010	0.632	0.005	Low
Tsaenkhar	Lhuentse	124.059	1.052	16	0.000	3.035	8.000	0.028	0.623	0.004	Low
Rurichu Town	Wangduephodrang	0.236	0.074	67	0.000	0.090	0.000	0.015	0.483	0.003	Low
Patshaling	Tsirang	136.447	0.988	8	0.000	0.819	4.000	0.079	0.601	0.003	Low

