

Table S1 IDF Curves Developed for Near Future, SSP2-4.5.

Return Period (Years)	Constant	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Region 11
2	a	25.89	17.27	24.09	9.77	31.98	49.11	15.51	24.26	27.99	29.58	23.13
	b	1.38	2.19	1.73	2.52	1.27	0.48	2.59	2.41	1.14	1.02	1.33
	c	-0.54	-0.51	-0.54	-0.48	-0.57	-0.63	-0.48	-0.49	-0.58	-0.59	-0.57
5	a	29.07	25.42	55.63	23.76	94.82	92.36	130.81	42.30	61.70	40.65	30.73
	b	2.95	2.06	1.06	2.46	0.09	0.81	1.00	2.04	0.57	1.48	1.08
	c	-0.49	-0.52	-0.59	-0.49	-0.66	-0.60	-0.59	-0.51	-0.62	-0.55	-0.56
10	a	33.69	30.82	89.50	36.00	148.37	119.89	199.17	53.50	72.98	45.68	33.01
	b	3.47	2.10	0.86	2.70	-0.25	1.16	0.87	1.91	1.18	1.99	1.03
	c	-0.47	-0.52	-0.60	-0.47	-0.68	-0.58	-0.59	-0.52	-0.57	-0.52	-0.54
25	a	43.26	37.38	156.44	56.76	234.15	152.12	281.33	66.76	78.18	51.97	34.32
	b	3.83	2.28	0.75	2.97	-0.52	1.61	0.79	1.82	2.17	2.59	0.95
	c	-0.45	-0.50	-0.60	-0.44	-0.70	-0.55	-0.60	-0.53	-0.50	-0.47	-0.52
50	a	54.32	41.61	232.91	77.22	314.59	174.52	340.70	75.96	79.32	57.20	34.78
	b	3.96	2.51	0.73	3.13	-0.65	1.91	0.76	1.76	2.87	2.99	0.83
	c	-0.45	-0.49	-0.60	-0.43	-0.71	-0.52	-0.60	-0.53	-0.45	-0.44	-0.50
100	a	70.31	44.71	343.11	102.98	412.35	195.86	398.84	84.59	79.73	63.13	35.17
	b	4.01	2.83	0.72	3.26	-0.75	2.19	0.74	1.73	3.49	3.33	0.62
	c	-0.45	-0.46	-0.60	-0.42	-0.72	-0.50	-0.60	-0.54	-0.40	-0.41	-0.48
200	a	93.53	46.07	502.33	135.26	531.59	216.53	456.19	92.71	79.98	69.92	35.72
	b	3.99	3.26	0.73	3.36	-0.82	2.43	0.72	1.70	4.02	3.62	0.28
	c	-0.45	-0.43	-0.60	-0.41	-0.72	-0.49	-0.60	-0.54	-0.36	-0.39	-0.47

Table S2 IDF Curves Developed for Middle Future, SSP2-4.5.

Return Period (Years)	Constant	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Region 11
2	a	25.26	18.74	436.34	730.07	6094.43	3890.37	14.84	111.1903390	25.24	27.36	20.57
	b	1.55	2.03	-13.30	-20.48	-31.68	-34.18	2.94	-6.4862142	2.10	1.97	1.81
	c	-0.54	-0.53	-1.14	-1.33	-1.69	-1.50	-0.45	-0.8124892	-0.51	-0.53	-0.53
5	a	39.96	26.97	1424.88	213622.83	3878.31	186.46	66.24	362.09	40.07	35.51	29.75
	b	1.28	1.95	-16.91	-46.67	-21.29	-3.95	0.90	-11.69	2.15	2.41	1.66
	c	-0.56	-0.53	-1.29	-2.36	-1.49	-0.80	-0.60	-0.98	-0.52	-0.49	-0.54
10	a	52.98	31.97	78824.82	76329680.13	3361239.75	159.32	136.48	6022.83	42.61	39.90	34.99
	b	1.19	2.04	-36.97	-69.05	-50.64	-0.88	-0.03	-27.30	2.86	2.80	1.71
	c	-0.56	-0.52	-2.03	-3.35	-2.75	-0.72	-0.67	-1.51	-0.46	-0.46	-0.54
25	a	75.56	37.27	91535162.7	1665388.5	614765968.43	176.48	268.08	22333498.25	42.16	45.20	40.83
	b	1.13	2.30	-67.25	-44.69	-69.04	0.29	-0.80	-66.62	3.85	3.31	1.84
	c	-0.56	-0.50	-3.25	-2.36	-3.53	-0.71	-0.72	-3.03	-0.37	-0.42	-0.53
50	a	98.92	39.87	1285905235.8	67674.7	2959050.80	206.32	396.78	263101004.93	41.38	49.26	44.70
	b	1.11	2.62	-74.58	-21.83	-40.61	0.45	-1.18	-73.17	4.48	3.69	1.94
	c	-0.56	-0.47	-3.61	-1.45	-2.31	-0.74	-0.74	-3.42	-0.30	-0.39	-0.52
100	a	130.40	40.71	458383.83	802917.67	1681739.64	253.35	550.59	149454346.22	40.81	53.51	48.22
	b	1.12	3.05	-33.18	-27.68	-33.20	0.26	-1.47	-66.33	5.00	4.04	2.03
	c	-0.55	-0.44	-1.90	-1.69	-1.94	-0.78	-0.76	-3.23	-0.25	-0.36	-0.52
200	a	173.57	39.24	3459030.42	2602047.17	1069338.73	331.13	729.40	55824.70	40.53	58.07	51.44
	b	1.13	3.62	-37.03	-25.52	-24.82	-0.25	-1.70	-25.00	5.40	4.38	2.12
	c	-0.54	-0.39	-2.08	-1.67	-1.57	-0.84	-0.78	-1.56	-0.20	-0.33	-0.51

Table S3 IDF Curves Developed for Far Future, SSP2-4.5.

Return Period (Years)	Constant	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Region 11
2	a	23.83	11.87	30.00	15.50	33.78	40.20	15.72	36.49	22.72	24.14	21.08
	b	2.12	4.10	1.82	2.00	0.39	0.91	0.77	0.20	2.55	2.38	1.44
	c	-0.51	-0.43	-0.54	-0.52	-0.60	-0.60	-0.44	-0.57	-0.48	-0.49	-0.55
5	a	39.96	17.48	53.26	24.63	76.06	73.58	74.47	39.47	33.40	32.58	30.39
	b	1.70	4.01	1.30	2.11	0.68	1.19	-0.80	1.38	2.31	2.33	1.46
	c	-0.54	-0.44	-0.57	-0.51	-0.62	-0.58	-0.61	-0.53	-0.50	-0.49	-0.56
10	a	58.42	21.31	73.47	31.24	112.20	96.79	138.11	40.10	41.54	38.95	37.76
	b	1.27	4.02	0.94	2.19	0.55	1.51	-0.06	2.06	2.20	2.24	1.49
	c	-0.58	-0.43	-0.60	-0.51	-0.63	-0.55	-0.66	-0.50	-0.50	-0.49	-0.56
25	a	100.13	26.18	109.48	39.86	169.14	127.27	297.05	44.43	52.36	48.42	47.80
	b	0.54	4.12	0.36	2.26	0.45	1.89	-1.19	2.28	2.10	2.09	1.52
	c	-0.63	-0.42	-0.64	-0.50	-0.63	-0.52	-0.74	-0.49	-0.51	-0.50	-0.56
50	a	156.72	29.59	150.18	46.30	222.11	151.03	466.27	49.08	60.56	56.74	55.47
	b	-0.14	4.24	-0.23	2.31	0.40	2.13	-1.81	2.23	2.04	1.96	1.54
	c	-0.67	-0.40	-0.68	-0.50	-0.64	-0.50	-0.78	-0.50	-0.51	-0.51	-0.57
100	a	255.22	32.47	215.26	52.62	286.24	175.79	680.76	53.45	68.78	66.35	63.08
	b	-0.93	4.42	-1.08	2.34	0.36	2.33	-2.30	2.19	1.99	1.81	1.55
	c	-0.73	-0.38	-0.74	-0.49	-0.64	-0.48	-0.82	-0.50	-0.52	-0.52	-0.57
200	a	433.21	34.43	339.98	58.79	364.27	201.73	942.43	57.56	77.01	77.49	70.54
	b	-1.85	4.65	-2.40	2.37	0.33	2.51	-2.69	2.15	1.96	1.66	1.56
	c	-0.79	-0.35	-0.83	-0.49	-0.64	-0.47	-0.84	-0.50	-0.52	-0.53	-0.57

Table S4 IDF Curves Developed for Near Future, SSP5-8.5.

Return Period (Years)	Constant	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Region 11
2	a	54.185	24.384	29.132	27.020	152.945	20.270	7.715	74.071	36.732	37.636	26.230
	b	1.048	3.558	4.080	3.288	2.856	5.345	5.416	5.085	3.687	4.868	4.615
	c	-0.595	-0.390	-0.349	-0.407	-0.449	-0.227	-0.200	-0.262	-0.372	-0.281	-0.298
5	a	69.018	72.804	86.953	78.487	200.405	50.370	17.950	80.575	152.234	75.652	108.308
	b	1.338	0.601	1.131	0.387	2.113	3.279	3.684	4.918	-0.185	3.218	0.888
	c	-0.570	-0.626	-0.584	-0.636	-0.507	-0.424	-0.384	-0.280	-0.677	-0.432	-0.603
10	a	79.224	78.927	98.242	96.929	198.817	59.160	22.703	77.185	189.890	86.991	135.358
	b	1.535	1.039	1.590	0.299	2.457	3.387	3.744	5.161	-0.108	3.245	1.160
	c	-0.557	-0.597	-0.555	-0.642	-0.482	-0.416	-0.371	-0.254	-0.668	-0.432	-0.585
25	a	93.697	80.887	114.086	123.114	214.305	69.713	30.970	74.074	229.078	97.885	182.404
	b	1.662	1.648	1.997	0.134	2.588	3.478	3.630	5.391	0.166	3.364	1.275
	c	-0.546	-0.550	-0.526	-0.654	-0.475	-0.410	-0.363	-0.227	-0.647	-0.425	-0.575
50	a	102.707	79.949	124.849	139.216	218.169	77.709	40.846	72.576	251.102	101.791	224.800
	b	1.828	2.079	2.251	0.147	2.880	3.484	3.139	5.511	0.432	3.539	1.359
	c	-0.535	-0.513	-0.509	-0.654	-0.452	-0.410	-0.373	-0.211	-0.628	-0.411	-0.569
100	a	109.676	76.925	132.178	157.671	228.878	84.832	55.758	71.352	262.558	100.378	276.466
	b	2.001	2.587	2.434	0.085	3.082	3.515	2.198	5.607	0.730	3.821	1.423
	c	-0.522	-0.475	-0.496	-0.657	-0.437	-0.410	-0.393	-0.197	-0.604	-0.388	-0.564
200	a	111.703	79.468	135.674	176.530	243.636	91.853	87.365	70.246	257.459	93.033	339.245
	b	2.254	2.839	2.333	0.033	3.263	3.517	-0.273	5.688	1.110	4.233	1.473
	c	-0.506	-0.459	-0.499	-0.660	-0.423	-0.410	-0.445	-0.184	-0.572	-0.353	-0.561

Table S5 IDF Curves Developed for Middle Future, SSP5-8.5.

Return Period (Years)	Constant	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Region 11
2	a	47.79	25.74	23.95	24.41	155.75	19.49	24.83	75.15	33.84	41.08	25.19
	b	1.60	3.17	4.70	3.89	2.66	5.39	3.39	4.93	4.20	4.48	4.68
	c	-0.55	-0.40	-0.29	-0.36	-0.46	-0.22	-0.40	-0.27	-0.33	-0.32	-0.29
5	a	60.84	50.37	68.32	47.61	210.15	48.07	200.90	84.69	137.55	80.02	97.38
	b	2.03	2.16	2.08	2.79	1.86	3.37	-2.58	4.41	0.39	2.82	1.17
	c	-0.52	-0.55	-0.52	-0.50	-0.52	-0.41	-0.84	-0.30	-0.63	-0.46	-0.59
10	a	68.73	50.87	81.66	50.41	208.19	56.10	332.00	82.46	171.08	101.08	126.84
	b	2.32	3.06	2.36	3.36	2.24	3.51	-3.29	4.51	0.54	2.50	1.21
	c	-0.50	-0.50	-0.50	-0.48	-0.49	-0.40	-0.89	-0.28	-0.63	-0.49	-0.58
25	a	79.61	55.10	102.90	55.55	216.77	64.59	585.61	80.43	213.97	135.36	168.50
	b	2.63	3.74	2.55	3.75	2.56	3.70	-4.14	4.60	0.66	2.06	1.39
	c	-0.48	-0.47	-0.48	-0.46	-0.47	-0.39	-0.95	-0.25	-0.62	-0.52	-0.57
50	a	87.82	60.34	115.55	59.52	230.77	70.87	875.17	79.41	243.54	167.44	210.32
	b	2.82	4.05	2.80	3.96	2.71	3.77	-4.87	4.65	0.77	1.73	1.40
	c	-0.46	-0.45	-0.46	-0.45	-0.46	-0.38	-1.00	-0.24	-0.61	-0.55	-0.57
100	a	93.86	67.10	120.63	62.77	252.44	75.59	1258.05	78.56	262.75	207.66	260.49
	b	3.06	4.25	3.13	4.16	2.78	3.91	-5.26	4.70	0.95	1.37	1.42
	c	-0.44	-0.44	-0.44	-0.44	-0.46	-0.37	-1.05	-0.23	-0.60	-0.58	-0.57
200	a	80.58	75.34	105.07	67.04	278.46	80.45	1500.17	77.92	265.77	256.62	319.97
	b	3.84	4.37	3.80	4.27	2.85	3.99	-5.25	4.73	1.20	1.00	1.46
	c	-0.40	-0.44	-0.38	-0.43	-0.45	-0.37	-1.05	-0.21	-0.58	-0.60	-0.56

Table S6 IDF Curves Developed for Far Future, SSP5-8.5.

Return Period (Years)	Constant	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Region 11
2	a	37.00	20.19	23.88	26.91	128.62	25.17	19.05	80.30	39.37	40.64	24.72
	b	2.69	4.06	4.72	3.82	3.66	4.65	3.76	4.72	3.94	4.87	4.91
	c	-0.50	-0.35	-0.29	-0.37	-0.39	-0.30	-0.37	-0.30	-0.36	-0.28	-0.27
5	a	48.00	53.24	70.32	64.66	168.59	54.85	229.85	90.57	201.45	67.00	83.22
	b	2.92	1.56	2.00	1.49	2.93	2.72	-3.46	4.46	-0.56	3.73	1.89
	c	-0.48	-0.56	-0.52	-0.56	-0.45	-0.47	-0.90	-0.32	-0.71	-0.39	-0.53
10	a	54.89	64.50	85.53	75.70	162.38	58.94	524.99	89.41	265.57	67.60	102.33
	b	3.12	1.61	2.25	1.55	3.39	2.97	-5.22	4.64	-0.56	4.08	2.15
	c	-0.46	-0.55	-0.51	-0.56	-0.41	-0.45	-1.01	-0.31	-0.71	-0.36	-0.51
25	a	64.45	81.61	107.60	90.45	174.27	60.27	1251.51	88.66	342.67	66.57	132.13
	b	3.31	1.65	2.53	1.55	3.52	3.33	-7.04	4.81	-0.34	4.54	2.39
	c	-0.45	-0.55	-0.49	-0.56	-0.39	-0.42	-1.12	-0.29	-0.69	-0.32	-0.50
50	a	71.73	95.87	121.24	101.25	185.74	59.08	2194.27	88.09	400.15	65.13	160.65
	b	3.43	1.70	2.81	1.56	3.62	3.68	-8.20	4.93	-0.16	4.84	2.50
	c	-0.44	-0.55	-0.47	-0.56	-0.39	-0.40	-1.19	-0.28	-0.68	-0.29	-0.49
100	a	77.36	115.12	125.43	111.06	201.35	58.26	3546.77	88.06	449.27	63.06	193.66
	b	3.61	1.56	3.22	1.61	3.68	3.91	-9.17	5.01	0.11	5.12	2.63
	c	-0.42	-0.56	-0.43	-0.55	-0.38	-0.38	-1.25	-0.27	-0.66	-0.26	-0.48
200	a	80.58	135.82	109.31	122.86	219.96	56.42	5523.67	88.05	485.62	60.50	235.17
	b	3.84	1.47	3.93	1.57	3.75	4.17	-10.09	5.08	0.45	5.38	2.69
	c	-0.40	-0.56	-0.37	-0.56	-0.37	-0.36	-1.31	-0.26	-0.64	-0.23	-0.47