

Supplementary Material 1: River gauging stations in the Limpopo River basin that were selected in this research

Station Number	River and station location	Catchment Area [km²]	Latitude	Longitude
A2H006	Pienaars River @ Klipdrift	1028	-25.380	28.317
A2H012	Krokodil River @ Kalkheuwel	2551	-25.811	27.910
A2H013	Magalies River @ Scheerpoort	1171	-25.777	27.761
A2H014	Hennops River @ Skurweberg	1007	-25.798	27.985
A2H021	Pienaars River @ Buffelspoort	7483	-25.129	27.629
A2H023	Jukskei River @ Nietgedacht	686	-25.954	27.963
A2H024	Brandvlei River @ Brandvlei	13	-26.151	27.595
A2H027	Pienaars River @ Baviaanspoort	357	-25.664	28.351
A2H029	Edendale Spruit @ Leeuwfontein	129	-25.647	28.390
A2H030	Roodeplaat Spruit @ Louwsbaken se Loop Roodeplaat	116	-25.603	28.375
A2H032	Selons River @ Moedwil	522	-25.638	27.027
A2H034	Skeerpoort River @ Scheerpoort	150	-25.825	27.772
A2H036	Koster River @ Steenbokfontein	191	-25.726	26.884
A2H039	Waterkloof-Upper @ Rietvallei	4	-25.720	27.186
A2H044	Jukskei River @ Vlakfontein	798	-25.896	27.935
A2H045	Krokodil River @ Vlakfontein	653	-25.893	27.915
A2H047	Little Jukskei River @ Klipfontein	65	-26.068	27.973
A2H048	Krokodil River @ Krokodilpoort	4691	-25.573	27.754
A2H049	Bloubank Spruit @ Riet Spruit Swartkop	371	-25.977	27.836
A2H050	Krokodil River @ Swartkop	148	-25.991	27.842
A2H051	Krokodil River @ Van Wyks Restant	109	-26.033	27.843
A2H053	Sterkstroom @ Grootfontein	88	-25.809	27.476
A2H055	Moretele River @ Derdepoort Pretoria	106	-25.692	28.293
A2H056	Steenoord Spruit @ Belle Ombre Sta.	10	-25.735	28.179
A2H058	Swart Spruit @ Rietfontein	107	-25.748	27.910
A2H059	Krokodil River @ Vaalkop	12674	-25.206	27.558
A2H060	Krokodil River @ Nooitgedacht	20627	-25.063	27.520
A2H061	Apies River @ Rondavel	625	-25.471	28.264

A2H062	Walker Spruit @ Sunnyside Pretoria	8.1	-25.759	28.220
A2H063	Wonderboom Spruit @ Mayville Pretoria	30	-25.701	28.192
A2H099	Buffels Spruit @ Roodepoort	137	-24.861	28.253
A4H002	Mokolo River @ Zandrivier	1777	-24.286	28.096
A4H004	Matlabas River @ Haarlem East	1046	-24.161	27.480
A4H005	Mokolo River @ Dwaalhoek	3786	-24.081	27.773
A4H007	Tambotie River @ Blakeney	398	-23.764	27.909
A5H004	Palala River @ Muisvogelkraal	629	-23.982	28.400
A5H006	Limpopo River @ Botswana	98240	-22.935	28.004
A6H006	Little Nyl River @ Nylstroom	168	-24.699	28.407
A6H010	Badseloop River @ Vischgat	70	-24.574	28.640
A6H011	Great-Nyl River @ Modderpoort	73	-24.762	28.344
A6H012	Olifant Spruit @ Olifantspoort	120	-24.665	28.476
A6H018	Rasloop River @ Sussensvale	12	-24.771	28.349
A6H019	Hessie se Water @ Rietspruit	16	-24.660	28.451
A6H020	Middelfontein Spruit @ Middelfontein	43	-24.671	28.561
A6H021	De Wet Spruit @ Groenvaley	16	-24.633	28.597
A6H024	Kootjie se Loop Spruit @ Waterval	23	-24.317	28.916
A9H003	Tshinane River @ Chibase	62	-22.898	30.524
A9H006	Livhungwa River @ Barotta	16	-23.036	30.277
B1H002	Spookspruit @ Elandspruit	252	-25.819	29.338
B1H004	Klipspruit @ Zaaihoek	376	-25.674	29.173
B1H005	Olifants River @ Wolwekrans	3256	-26.007	29.254
B1H012	Little Olifants River @ Rondebosch	1503	-25.809	29.586
B2H003	Bronkhorstspruit @ Bronkhorstspruit	1574	-25.799	28.736
B2H004	Osspruit @ Boschkop	123	-25.925	28.586
B3H007	Moses River @ Uitspanning	971	-25.272	29.181
B4H003	Steelpoort River @ Buffelskloof	2240	-25.029	29.856
B4H005	Waterval River @ Modderspruit	188	-25.036	30.219
B4H007	Klein-Spekboom River @ Potloodspruit	151	-25.009	30.500
B4H009	Dwars River @ Dwars River	448	-24.912	30.103
B4H010	Dorps River @ Lydenburg Nat Res	526	-25.075	30.439

B6H001	Blyde River @ Willemsoord	518	-24.680	30.802
B6H003	Treur River @ Willemsoord	92	-24.687	30.814
B6H004	Blyde River @ Chester	2241	-24.459	30.827
B6H005	Blyde River @ Driehoek	2204	-24.518	30.832
B7H010	Ngwabitsi River @ Harmony	318	-24.035	30.434
B7H013	Mohlapitse River @ Mafefes Location	263	-24.173	30.103
B7H014	Selati River @ Calais	84	-24.124	30.356
B8H009	Great-Letaba River @ The Junction	851	-23.879	30.367
B8H010	Letsitele River @ Mohlabas Location	477	-23.893	30.358
B8H011	TSENDE	441	-23.527	31.403
B8H014	Great-Letaba River @ Grysappel	294	-23.880	30.080
B8H017	Great-Letaba River @ Prieska	2619	-23.647	30.718
B9H001	Shisha River @ Vlakteplaas Kruger National Park	648	-22.839	31.237
B9H003	Shingwidzi River @ Kanniedood Kruger National Park	4540	-23.143	31.463
E35	Chokwe	342000	-24.508	33.008

Supplementary Material 2: Reported flood events identified in the Limpopo basin between 1979 and 2012, with the year of occurrence and the region affected (see Figure 1 for the definition of the regions)

No.	Year	Duration [days]	BW	MZ	ZW	ZA1	ZA2	ZA3	ZA4
1	1981	26		TRUE					
2	1984	8		TRUE				TRUE	TRUE
3	1985	7		TRUE					TRUE
4	1985	1					TRUE		
5	1987	1							TRUE
6	1988	1	TRUE		TRUE	TRUE		TRUE	TRUE
7	1988	5	TRUE	TRUE	TRUE			TRUE	TRUE
8	1991	5							TRUE
9	1992	1		TRUE					
10	1992	2			TRUE				
11	1992	3			TRUE				
12	1995	2							TRUE
13	1995	1					TRUE		
14	1995	6	TRUE						
15	1995	6					TRUE		
16	1996	1					TRUE		
17	1996	3		TRUE					
18	1996	5							TRUE
19	1996	6				TRUE	TRUE	TRUE	
20	1996	17		TRUE					
21	1997	1					TRUE		
22	1998	1			TRUE				
23	1999	8		TRUE					
24	2000	45	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
25	2000	3						TRUE	
26	2001	31		TRUE					
27	2001	1					TRUE		
28	2001	10			TRUE			TRUE	

29	2002	2						TRUE	TRUE
30	2003	1		TRUE					
31	2003	12		TRUE	TRUE				
32	2005	51		TRUE					
33	2005	4					TRUE		
34	2006	3					TRUE		
35	2006	7	TRUE				TRUE		
36	2006	3					TRUE		
37	2007	48			TRUE				
38	2008	9						TRUE	TRUE
39	2009	7		TRUE					
40	2009	13	TRUE						
41	2009	1					TRUE		
42	2009	58	TRUE		TRUE				
43	2009	4	TRUE						
44	2009	1	TRUE						
45	2010	3				TRUE	TRUE		
46	2010	48		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
47	2011	1		TRUE					
48	2012	29		TRUE					TRUE