

## Supplementary Material

Table 1: Descriptive Statistics for Rainfall Data at Olaria

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Rainfall $\leq 1$ mm			
Min	0.00	0.00	0.00
Max	1.00	1.00	1.00
Mean	0.02	0.02	0.02
Kurtosis	63.65	46.91	61.04
Skewness	7.46	6.44	7.31
SD	0.09	0.10	0.09
Rainfall $\leq 5$ mm			
Min	1.20	1.20	1.20
Max	5.00	5.00	5.00
Mean	2.17	2.15	2.16
Kurtosis	0.09	0.37	0.16
Skewness	1.01	1.23	1.06
SD	0.98	1.04	1.00
Rainfall $\leq 10$ mm			
Min	5.20	5.60	5.20
Max	10.00	9.40	10.00
Mean	7.21	6.56	7.11
Kurtosis	-0.76	1.28	-0.67
Skewness	0.50	1.59	0.63
SD	1.40	1.22	1.39
Rainfall $\leq 20$ mm			
Min	10.20	12.00	10.20
Max	18.20	16.80	18.20
Mean	11.82	13.85	12.40
Kurtosis	3.18	-0.84	0.75
Skewness	2.12	0.83	1.38
SD	2.41	2.06	2.43
Rainfall $> 20$ mm			
Min	20.40	-	20.40
Max	20.40	-	20.40
Mean	20.40	-	20.40
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-

Table 2: Descriptive Statistics for Water Level Data at Olaria

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Water level $\leq 1.5$ m			
Min	0.49	0.54	0.49
Max	1.50	1.49	1.50
Mean	0.69	0.66	0.68
Kurtosis	3.87	12.89	4.52
Skewness	1.58	2.97	1.71
SD	0.13	0.11	0.12
Water level $\leq 2.5$ m			
Min	1.51	1.51	1.51
Max	2.18	1.85	2.18
Mean	1.74	1.63	1.70
Kurtosis	-0.45	-0.93	0.25
Skewness	0.74	0.59	0.99
SD	0.20	0.11	0.18
Water level $\leq 3.5$ m			
Min	-	-	-
Max	-	-	-
Mean	-	-	-
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-
Water level $> 3.5$ m			
Min	-	-	-
Max	-	-	-
Mean	-	-	-
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-

Table 3: Descriptive Statistics for Rainfall Data at Suspiro

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Rainfall $\leq 1$ mm			
Min	0.00	0.00	0.00
Max	1.00	1.00	1.00
Mean	0.01	0.02	0.01
Kurtosis	77.34	47.46	71.89
Skewness	8.25	6.49	7.96
SD	0.08	0.10	0.09
Rainfall $\leq 5$ mm			
Min	1.20	1.20	1.20
Max	5.00	4.80	5.00
Mean	2.06	2.01	2.05
Kurtosis	1.17	1.52	1.24
Skewness	1.31	1.40	1.33
SD	0.89	0.91	0.90
Rainfall $\leq 10$ mm			
Min	5.20	5.20	5.20
Max	10.00	9.80	10.00
Mean	7.18	7.90	7.31
Kurtosis	-1.22	-0.76	-1.29
Skewness	0.35	-0.46	0.19
SD	1.55	1.45	1.54
Rainfall $\leq 20$ mm			
Min	10.20	-	10.20
Max	16.60	-	16.60
Mean	12.73	-	12.73
Kurtosis	-0.89	-	-0.89
Skewness	0.46	-	0.46
SD	2.10	-	2.10
Rainfall $> 20$ mm			
Min	41.40	-	41.40
Max	41.40	-	41.40
Mean	41.40	-	41.40
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-

Table 4: Descriptive Statistics for Water Level Data at Suspiro

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Water level $\leq 1.5$ m			
Min	0.53	0.43	0.43
Max	1.50	1.50	1.50
Mean	0.82	0.65	0.80
Kurtosis	0.33	0.58	0.33
Skewness	0.92	0.90	0.78
SD	0.20	0.21	0.21
Water level $\leq 2.5$ m			
Min	1.51	1.51	1.51
Max	2.50	2.46	2.50
Mean	1.85	1.76	1.85
Kurtosis	-0.78	2.48	-0.64
Skewness	0.67	1.55	0.74
SD	0.28	0.21	0.28
Water level $\leq 3.5$ m			
Min	2.51	2.52	2.51
Max	3.44	3.48	3.48
Mean	2.83	2.98	2.87
Kurtosis	-0.06	-0.30	-0.47
Skewness	0.88	0.16	0.60
SD	0.25	0.23	0.25
Water level $> 3.5$ m			
Min	3.55	3.55	3.55
Max	4.54	4.06	4.54
Mean	3.86	3.79	3.84
Kurtosis	0.16	-0.97	0.82
Skewness	0.88	0.04	0.99
SD	0.27	0.16	0.24

Table 5: Descriptive Statistics for Rainfall Data at Conselheiro Paulino

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Rainfall $\leq 1$ mm			
Min	0.00	0.00	0.00
Max	1.00	1.00	1.00
Mean	0.01	0.02	0.02
Kurtosis	67.53	42.29	63.08
Skewness	7.75	6.15	7.49
SD	0.09	0.10	0.09
Rainfall $\leq 5$ mm			
Min	1.20	1.20	1.20
Max	5.00	5.00	5.00
Mean	2.13	2.24	2.16
Kurtosis	0.59	0.43	0.54
Skewness	1.25	1.01	1.20
SD	1.00	0.93	0.99
Rainfall $\leq 10$ mm			
Min	5.20	5.20	5.20
Max	10.00	9.80	10.00
Mean	6.67	6.42	6.63
Kurtosis	-0.21	0.50	-0.13
Skewness	0.95	1.39	1.01
SD	1.38	1.55	1.40
Rainfall $\leq 20$ mm			
Min	10.20	11.20	10.20
Max	20.00	20.00	20.00
Mean	13.53	13.83	13.62
Kurtosis	-0.77	-0.07	-0.55
Skewness	0.68	1.03	0.78
SD	3.10	3.20	3.06
Rainfall $> 20$ mm			
Min	20.60	21.60	20.60
Max	21.60	21.60	21.60
Mean	21.07	21.60	21.20
Kurtosis	-1.50	-	-1.59
Skewness	0.24	-	-0.31
SD	0.50	-	0.49

Table 6: Descriptive Statistics for Water Level Data at Conselheiro Paulino

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Water level $\leq 1.5$ m			
Min	1.42	-	1.42
Max	1.50	-	1.50
Mean	1.48	-	1.48
Kurtosis	0.20	-	0.20
Skewness	-0.74	-	-0.74
SD	0.02	-	0.02
Water level $\leq 2.5$ m			
Min	1.51	1.62	1.51
Max	2.50	2.44	2.50
Mean	1.60	1.71	1.62
Kurtosis	15.73	16.07	12.20
Skewness	3.49	3.58	2.94
SD	0.12	0.10	0.13
Water level $\leq 3.5$ m			
Min	2.51	2.51	2.51
Max	3.50	2.62	3.50
Mean	2.77	2.56	2.76
Kurtosis	1.07	-1.41	1.11
Skewness	1.30	0.43	1.31
SD	0.23	0.05	0.23
Water level $> 3.5$ m			
Min	-	-	-
Max	-	-	-
Mean	-	-	-
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-

Table 7: Descriptive Statistics for Rainfall Data at Venda das Pedras

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Rainfall $\leq 1$ mm			
Min	0.00	0.00	0.00
Max	1.00	1.00	1.00
Mean	0.01	0.02	0.02
Kurtosis	69.35	41.49	64.18
Skewness	7.80	6.04	7.50
SD	0.08	0.11	0.09
Rainfall $\leq 5$ mm			
Min	1.20	1.20	1.20
Max	5.00	5.00	5.00
Mean	2.13	2.27	2.16
Kurtosis	0.15	-0.35	0.07
Skewness	1.08	0.95	1.07
SD	0.99	1.12	1.02
Rainfall $\leq 10$ mm			
Min	5.20	6.00	5.20
Max	9.80	9.60	9.80
Mean	6.79	7.87	6.90
Kurtosis	-0.51	-1.28	-0.76
Skewness	0.72	-0.21	0.61
SD	1.30	1.36	1.34
Rainfall $\leq 20$ mm			
Min	10.20	11.00	10.20
Max	18.40	19.60	19.60
Mean	13.42	14.87	13.83
Kurtosis	-1.20	-1.41	-1.25
Skewness	0.49	0.07	0.39
SD	2.90	3.45	3.05
Rainfall $> 20$ mm			
Min	-	64.20	64.20
Max	-	64.20	64.20
Mean	-	64.20	64.20
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-

Table 8: Descriptive Statistics for Water Level Data at Venda das Pedras

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Water level $\leq 1.5$ m			
Min	0.49	0.60	0.49
Max	1.50	1.50	1.50
Mean	0.65	0.73	0.66
Kurtosis	5.30	6.81	5.02
Skewness	2.05	2.28	1.96
SD	0.15	0.13	0.15
Water level $\leq 2.5$ m			
Min	1.51	1.53	1.51
Max	2.30	2.05	2.30
Mean	1.76	1.76	1.76
Kurtosis	-0.27	-1.52	-0.32
Skewness	0.97	0.33	0.92
SD	0.23	0.19	0.23
Water level $\leq 3.5$ m			
Min	-	-	-
Max	-	-	-
Mean	-	-	-
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-
Water level $> 3.5$ m			
Min	-	-	-
Max	-	-	-
Mean	-	-	-
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-



Table 9: Descriptive Statistics for Rainfall Data at Ypu

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Rainfall $\leq 1$ mm			
Min	0.00	0.00	0.00
Max	1.00	1.00	1.00
Mean	0.01	0.02	0.02
Kurtosis	66.19	44.22	62.46
Skewness	7.62	6.27	7.41
SD	0.09	0.10	0.09
Rainfall $\leq 5$ mm			
Min	1.20	1.20	1.20
Max	5.00	5.00	5.00
Mean	2.13	2.13	2.13
Kurtosis	0.66	0.34	0.61
Skewness	1.23	1.06	1.20
SD	1.00	0.94	0.98
Rainfall $\leq 10$ mm			
Min	5.20	5.40	5.20
Max	9.80	9.80	9.80
Mean	7.04	7.32	7.09
Kurtosis	-0.85	-1.08	-0.77
Skewness	0.28	0.56	0.39
SD	1.28	1.63	1.33
Rainfall $\leq 20$ mm			
Min	10.60	15.20	10.60
Max	18.00	16.80	18.00
Mean	13.78	16.00	14.08
Kurtosis	-1.36	-2.00	-1.45
Skewness	0.34	0.00	0.09
SD	2.66	1.13	2.60
Rainfall $> 20$ mm			
Min	-	22.00	22.00
Max	-	22.00	22.00
Mean	-	22.00	22.00
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-

Table 10: Descriptive Statistics for Water Level Data at Ypu

Statistical parameters	CV30x10 dataset (40,320)	Holdout dataset (5,760)	Total dataset (46,080)
Water level $\leq 1.5$ m			
Min	0.31	0.49	0.31
Max	1.50	1.49	1.50
Mean	0.61	0.62	0.61
Kurtosis	4.84	13.75	5.45
Skewness	1.82	3.23	1.92
SD	0.16	0.13	0.15
Water level $\leq 2.5$ m			
Min	1.51	1.51	1.51
Max	2.49	2.33	2.49
Mean	1.79	1.83	1.80
Kurtosis	-0.19	-1.17	-0.43
Skewness	0.94	0.51	0.85
SD	0.26	0.27	0.26
Water level $\leq 3.5$ m			
Min	2.52	-	2.52
Max	2.55	-	2.55
Mean	2.54	-	2.54
Kurtosis	-2.00	-	-2.00
Skewness	-0.00	-	-0.00
SD	0.02	-	0.02
Water level $> 3.5$ m			
Min	-	-	-
Max	-	-	-
Mean	-	-	-
Kurtosis	-	-	-
Skewness	-	-	-
SD	-	-	-