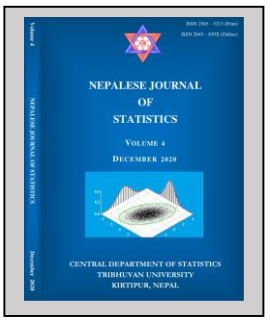
Supplementary Material

Drought or Wet Assessment of Daily Rainfall Pattern of the Budhi Gandaki River Basin, Nepal: Standardized Precipitation Index Approach Using Probabilistic Model



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SUPPLEMENTARY MATERIAL

Supplementary A

Johnson SB Probability Distribution (Johnson, 1949)

Parameters

Υ – Continuous shape parameter

δ – Continuous shape parameter $(\delta > 0)$

λ – Continuous scale parameter $(\lambda > 0)$

ξ – Continuous location parameter *(xi)*

Domain: $\xi \leq x \leq \xi + \lambda$

Probability Density Function

$$f(x) = \frac{\delta}{\lambda\sqrt{2\pi}(1-z)}\exp(-\frac{1}{2}(\gamma + \delta \ln\left(\frac{z}{1-z}\right))^2)$$

Cumulative Distribution Function

$F(x) = \Phi(\gamma + \delta \ln(\frac{z}{1-z}))$ **=NORMSDIST (Υ+δ*LN (Z/ (1-Z)))**

Where $z \equiv \frac{x-\xi}{\lambda}$ and $\Phi(.)$is cumulative distribution function of standard normal distribution.

Inverse Gaussian Distribution

Parameters

λ - continuous parameter $(\lambda > 0)$

μ - continuous parameter $(\mu > 0)$

Υ - continuous location parameter ($\Upsilon = 0$ yields the two-parameter Inverse Gaussian distribution)

Domain

$\gamma < x < \infty$

Two-Parameter Inverse Gaussian Distribution

Probability Density Function

$f(x) = \sqrt{\frac{\lambda}{2\pi x^3}} \exp(-\frac{\lambda(x-\mu)^2}{2\mu^2 x})$ for x > 0

Cumulative Distribution Function

$$F(x) = \Phi(\sqrt{\frac{\lambda}{x}}\left(\frac{x}{\mu} - 1\right) + \Phi\left(-\sqrt{\frac{\lambda}{x}}\left(\frac{x}{\mu} + 1\right)\right) exp(2\,\lambda/\mu)$$

$$= NORMSDIST(\sqrt{\frac{\lambda}{x}}\left(\frac{x}{\mu} - 1\right) + NORMSDIST\left(-\sqrt{\frac{\lambda}{x}}\left(\frac{x}{\mu} + 1\right)\right) exp(2\,\lambda/\mu)$$

and $\Phi(.)$ is cumulative distribution function of standard normal distribution (Chhikara, & Folks, 1989).

Note: Though Inverse Gaussian distribution is good fit to the daily rainfall data for stations, Chhekampar, Dhunche and Dhunibesi, it not suitable when $x = 0$, which is the no rainfall in a particular day. Its alternative best fitted distribution is $F(x)$, for $x \geq 0$. That is given below.

Johnson SB distribution is used for Chhekampar station. Two-parameter Weibull distribution is used for Dhunche and Dhunibesi stations.

Two-Parameter Weibull Distribution

Probability Density Function

$f(x) = \frac{\alpha}{\beta}\left(\frac{x}{\beta}\right)^{\alpha-1} \exp\left(-\left(\frac{x}{\beta}\right)^{\alpha}\right), x \geq 0$

Cumulative Distribution Function

$F(x) = 1 - exp\left(-\left(\frac{x}{\beta}\right)^{\alpha}\right)$, (Papoulis, A., & Pillai, S. U., 2002)

Supplementary B

Table 3.a: Number (percentage) of days of dryness/wetness at Arughat.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	15	.1	1130	8.4	1	.0	1	.0
February	20	.1	1025	7.6	0	0.0	0	0.0
March	25	.2	1115	8.3	7	.1	0	0.0
April	29	.2	1077	8.0	4	.0	0	0.0
May	24	.2	1100	8.1	18	.1	5	.0
June	12	.1	1031	7.6	48	.4	17	.1
July	5	.0	1021	7.6	89	.7	29	.2
August	6	.0	1038	7.7	76	.6	25	.2
September	18	.1	1031	7.6	51	.4	9	.1
October	22	.2	1116	8.3	8	.1	1	.0
November	13	.1	1097	8.1	0	0.0	0	0.0
December	5	.0	1141	8.4	0	0.0	1	.0
Total	194	1.4	12922	95.6	302	2.2	88	.7

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 12922 = 592 or 4.38%.

No. of moderate drought days in 592 non near normal days = 194 = 32.77%.

No. of moderate wet days in 592 non near normal days = 302 = 51.01%.

No. of very wet days in 592 non near normal days = 88 = 14.86%.

Highest no. of moderate drought days seen on April in 592 non near normal days = 29 = 4.89%.

Highest no. of moderate wet days seen on August in 592 non near normal days = 76 = 12.84%.

Highest no. of very wet days seen on July in 592 non near normal days = 29 = 4.89%.

Table 3.b: Number (percentage) of days of dryness/wetness at Chame.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	7	0.1	1140	8.4	0	0	0	0
February	17	0.1	1028	7.6	0	0	0	0
March	21	0.2	1124	8.3	2	0	0	0
April	24	0.2	1085	8	1	0	0	0
May	19	0.1	1103	8.2	21	0.2	3	0
June	20	0.1	999	7.4	71	0.5	16	0.1
July	21	0.2	1004	7.4	94	0.7	25	0.2
August	18	0.1	994	7.4	120	0.9	14	0.1
September	39	0.3	1027	7.6	33	0.2	11	0.1
October	15	0.1	1122	8.3	10	0.1	0	0
November	6	0	1104	8.2	0	0	0	0
December	6	0	1141	8.4	0	0	0	0
Total	213	1.6	12871	95.2	352	2.6	69	.5

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 12871 = 643 or 4.76%.

No. of moderate drought days in 643 non near normal days = 213 = 33.13%.

No. of moderate wet days in 643 non near normal days = 352 = 54.74%.

No. of very wet days in 643 non near normal days = 69 = 10.73%.

Highest no. of moderate drought days seen on September in 643 non near normal days = 39 = 6.07%.

Highest no. of moderate wet days seen on August in 643non near normal days = 120 = 18.66%.

Highest no. of very wet days seen on July in 643non near normal days = 25 = 3.89%.

Table 3.c: Number (percentage) of days of dryness/wetness at Dhading.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	7	.1	1140	8.4	0	0.0	0	0.0
February	3	.0	1041	7.7	1	.0	0	0.0
March	7	.1	1138	8.4	2	.0	0	0.0
April	23	.2	1085	8.0	2	.0	0	0.0
May	17	.1	1115	8.3	12	.1	3	.0
June	14	.1	1034	7.7	51	.4	7	.1
July	10	.1	1001	7.4	114	.8	18	.1
August	5	.0	1021	7.6	105	.8	14	.1
September	8	.1	1065	7.9	33	.2	3	.0
October	10	.1	1133	8.4	4	.0	0	0.0
November	2	.0	1108	8.2	0	0.0	0	0.0
December	3	.0	1142	8.5	2	.0	0	0.0
Total	109	.8	13023	96.4	326	2.4	45	.3

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 13023 = 491 or 3.63%.

No. of moderate drought days in 491 non near normal days = 109 = 22.19%.

No. of moderate wet days in 491 non near normal days = 326 = 66.39%.

No. of very wet days in 491 non near normal days = 45 = 9.16%.

Highest no. of moderate drought days seen on April in 491 non near normal days = 23 = 4.68%.

Highest no. of moderate wet days seen on July in 491 non near normal days = 114 = 23.22%.

Highest no. of very wet days seen on July in 491 non near normal days = 18 = 3.67%.

Table 3.d: Number (percentage) of days of dryness/wetness at Gharedhunga.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	296	2.2	842	6.2	6	.0	3	.0
February	327	2.4	709	5.2	7	.1	1	.0
March	368	2.7	762	5.6	14	.1	2	.0
April	360	2.7	737	5.5	8	.1	4	.0
May	346	2.6	788	5.8	10	.1	3	.0
June	153	1.1	895	6.6	53	.4	8	.1
July	44	.3	966	7.1	125	.9	10	.1
August	39	.3	985	7.3	107	.8	15	.1
September	169	1.3	881	6.5	51	.4	8	.1
October	425	3.1	710	5.3	11	.1	1	.0
November	228	1.7	881	6.5	0	0.0	1	.0
December	168	1.2	976	7.2	2	.0	1	.0
Total	2923	21.6	10132	75	394	2.9	57	.4

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 10132 = 3382 or 25.03%.

No. of moderate drought days in 3382 non near normal days = 2923 = 86.43%.

No. of moderate wet days in 3382 non near normal days = 394 = 11.65%.

No. of very wet days in 3382 non near normal days = 57 = 1.69%.

Highest no. of moderate drought days seen on October in 3382 non near normal days = 425 = 12.57%.

Highest no. of moderate wet days seen on July in 3382 non near normal days = 125 = 3.69%.

Highest no. of very wet days seen on August in 3382 non near normal days = 15 = 0.44%.

Table 3.e: Number (percentage) of days of dryness/wetness at Gorkha.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	74	.5	1054	7.8	16	.1	3	.0
February	76	.6	945	7.0	14	.1	9	.1
March	88	.7	1031	7.6	23	.2	4	.0
April	99	.7	998	7.4	13	.1	0	0.0
May	82	.6	1045	7.7	15	.1	4	.0
June	43	.3	1026	7.6	30	.2	8	.1
July	14	.1	1041	7.7	75	.6	14	.1
August	20	.1	1050	7.8	72	.5	5	.0
September	56	.4	994	7.4	45	.3	13	.1
October	104	.8	1010	7.5	20	.1	13	.1
November	81	.6	1023	7.6	3	.0	2	.0
December	46	.3	1092	8.1	5	.0	4	.0
Total	783	5.8	12309	91.1	331	2.4	79	.6

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 12309 = 1232 or 9.11%.

No. of moderate drought days in 1232 non near normal days = 783 = 63.56%.

No. of moderate wet days in 1232 non near normal days = 331 = 26.87%.

No. of very wet days in 1232 non near normal days = 79 = 6.41%.

Highest no. of moderate drought days seen on October in 1232 non near normal days = 104 = 8.44%.

Highest no. of moderate wet days seen on July in 1232 non near normal days = 75 = 6.09%.

Second highest no. of moderate wet days seen on August in 1232 non near normal days = 72 = 5.84%.

Highest no. of very wet days seen on July in 1232 non near normal days = 14 = 1.14%.

Table 3.f: Number (percentage) of days of dryness/wetness at Jagat.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	98	.7	1037	7.7	9	.1	3	.0
February	112	.8	914	6.8	16	.1	2	.0
March	127	.9	992	7.3	24	.2	3	.0
April	153	1.1	939	6.9	14	.1	2	.0
May	118	.9	1008	7.5	17	.1	2	.0
June	45	.3	1000	7.4	60	.4	4	.0
July	11	.1	1010	7.5	112	.8	11	.1
August	11	.1	1042	7.7	85	.6	7	.1
September	53	.4	992	7.3	55	.4	9	.1
October	202	1.5	925	6.8	17	.1	3	.0
November	63	.5	1045	7.7	1	.0	1	.0
December	73	.5	1068	7.9	5	.0	1	.0
Total	1066	7.9	11972	88.6	415	3.1	48	.4

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 11972 = 1542 or 11.41%.

No. of moderate drought days in 1542 non near normal days = 1066 = 69.13%.

No. of moderate wet days in 1542 non near normal days = 415 = 26.91%.

No. of very wet days in 1542 non near normal days = 48 = 3.11%.

Highest no. of moderate drought days seen on October in 1542 non near normal days = 202 = 13.09%.

Highest no. of moderate wet days seen on July in 1542 non near normal days = 112 = 7.26%.

Highest no. of very wet days seen on July in 1542 non near normal days = 11 = 0.71%.

Table 3.g: Number (percentage) of days of dryness/wetness at Khudi.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	13	.1	1134	8.4	0	0.0	0	0.0
February	33	.2	1009	7.5	2	.0	1	.0
March	42	.3	1100	8.1	5	.0	0	0.0
April	49	.4	1057	7.8	4	.0	0	0.0
May	45	.3	1086	8.0	13	.1	3	.0
June	60	.4	990	7.3	38	.3	19	.1
July	33	.2	987	7.3	99	.7	24	.2
August	41	.3	969	7.2	114	.8	22	.2
September	62	.5	986	7.3	55	.4	7	.1
October	36	.3	1100	8.1	10	.1	1	.0
November	13	.1	1095	8.1	2	.0	0	0.0
December	7	.1	1139	8.4	1	.0	0	0.0
Total	434	3.2	12652	93.6	343	2.5	77	.6

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 12652 = 862 or 6.38%.

No. of moderate drought days in 862 non near normal days = 434 = 50.34%.

No. of moderate wet days in 862 non near normal days = 343 = 39.79%.

No. of very wet days in 862 non near normal days = 77 = 8.93%.

Highest no. of moderate drought days seen on September in 862 non near normal days = 62 = 7.19%.

Highest no. of moderate wet days seen on August in 862 non near normal days = 114 = 13.22%.

Highest no. of very wet days seen on July in 862 non near normal days = 24 = 2.78%.

Table 3.h: Number (percentage) of days of dryness/wetness at Larke.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	187	1.4	915	6.8	30	.2	10	.1
February	222	1.6	764	5.7	49	.4	9	.1
March	282	2.1	820	6.1	36	.3	8	.1
April	283	2.1	788	5.8	32	.2	7	.1
May	247	1.8	883	6.5	16	.1	1	.0
June	114	.8	959	7.1	31	.2	5	.0
July	45	.3	1037	7.7	57	.4	8	.1
August	59	.4	1036	7.7	44	.3	7	.1
September	151	1.1	914	6.8	40	.3	4	.0
October	265	2.0	859	6.4	17	.1	2	.0
November	146	1.1	962	7.1	2	.0	0	0.0
December	93	.7	1043	7.7	8	.1	1	.0
Total	2094	15.5	10980	81.2	362	2.7	62	.5

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 10980 = 2534 or 18.75%.

No. of moderate drought days in 2534 non near normal days = 2094 = 82.64%.

No. of moderate wet days in 2534non near normal days = 362 = 14.29%.

No. of very wet days in 2534non near normal days = 62 = 2.45%.

Highest no. of moderate drought days seen on April in 2534 non near normal days = 283 = 11.17%.

Highest no. of moderate wet days seen on July in 2534 non near normal days = 57 = 2.25%.

Highest no. of very wet days seen on January in 2534 non near normal days = 10 = 0.39%.

Table 3.i: Number (percentage) of days of dryness/wetness at Nuwakot.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	12	.1	1131	8.4	4	.0	0	0.0
February	12	.1	1024	7.6	7	.1	1	.0
March	19	.1	1118	8.3	10	.1	0	0.0
April	12	.1	1090	8.1	8	.1	0	0.0
May	21	.2	1101	8.1	24	.2	1	.0
June	20	.1	1021	7.6	63	.5	6	.0
July	11	.1	1004	7.4	116	.9	9	.1
August	17	.1	994	7.4	116	.9	16	.1
September	40	.3	986	7.3	69	.5	12	.1
October	15	.1	1103	8.2	28	.2	1	.0
November	12	.1	1096	8.1	2	.0	0	0.0
December	7	.1	1139	8.4	1	.0	0	0.0
Total	198	1.5	12807	94.8	448	3.3	46	.3

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 12807 = 707 or 5.23%.

No. of moderate drought days in 707 non near normal days = 198 = 28.00%.

No. of moderate wet days in 707 non near normal days = 448 = 63.37%.

No. of very wet days in 707 non near normal days = 46 = 6.51%.

Highest no. of moderate drought days seen on September in 707 non near normal days = 40 = 5.66%.

Highest no. of moderate wet days seen on July/ August in 707 non near normal days = 116 = 16.41%.

Highest no. of very wet days seen on August in 707 non near normal days = 16 = 2.26%.

Table 3.j: Number (percentage) of days of dryness/wetness at Pansayakhola.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	7	.1	1140	8.4	0	0.0	0	0.0
February	3	.0	1041	7.7	1	.0	0	0.0
March	7	.1	1138	8.4	2	.0	0	0.0
April	23	.2	1085	8.0	2	.0	0	0.0
May	17	.1	1115	8.3	12	.1	3	.0
June	14	.1	1034	7.7	51	.4	7	.1
July	10	.1	1001	7.4	114	.8	18	.1
August	5	.0	1021	7.6	105	.8	14	.1
September	8	.1	1065	7.9	33	.2	3	.0
October	10	.1	1133	8.4	4	.0	0	0.0
November	2	.0	1108	8.2	0	0.0	0	0.0
December	3	.0	1142	8.5	2	.0	0	0.0
Total	109	.8	13023	96.4	326	2.4	45	.3

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 13023 = 491 or 3.63%.

No. of moderate drought days in 491 non near normal days = 109 = 22.19%.

No. of moderate wet days in 491 non near normal days = 326 = 66.39%.

No. of very wet days in 491 non near normal days = 45 = 9.16%.

Highest no. of moderate drought days seen on April in 491 non near normal days = 23 = 4.68%.

Highest no. of moderate wet days seen on July in 491 non near normal days = 114 = 23.22%.

Highest no. of very wet days seen on July in 491 non near normal days = 18 =3.67%.

Table 3.k: Number (percentage) of days of dryness/wetness at Samdobazar.

Month	Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent
January	1144	8.5	3	.0	0	0.0
February	1043	7.7	2	.0	0	0.0
March	1143	8.5	4	.0	0	0.0
April	1094	8.1	16	.1	0	0.0
May	1106	8.2	37	.3	3	.0
June	1024	7.6	66	.5	14	.1
July	1005	7.4	115	.9	23	.2
August	1043	7.7	84	.6	17	.1
September	1062	7.9	39	.3	8	.1
October	1135	8.4	10	.1	2	.0
November	1110	8.2	0	0.0	0	0.0
December	1144	8.5	3	.0	0	0.0
Total	13053	96.6	379	2.8	67	.5

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 13053 = 461 or 3.41%.

No. of moderate wet days in 461 non near normal days = 379 = 82.21%.

No. of very wet days in 461 non near normal days = 67 = 14.53%.

Highest no. of moderate wet days seen on July in 461 non near normal days = 115 = 24.95%.

Highest no. of very wet days seen on July in 461 non near normal days = 23 =4.99%.

Table 3.1: Number (percentage) of days of dryness/wetness at Chhekampar.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	31	.2	1111	8.2	3	.0	2	.0
February	43	.3	993	7.3	6	.0	3	.0
March	40	.3	1100	8.1	2	.0	3	.0
April	72	.5	1035	7.7	2	.0	1	.0
May	83	.6	1044	7.7	17	.1	3	.0
June	50	.4	1002	7.4	56	.4	2	.0
July	23	.2	990	7.3	112	.8	19	.1
August	21	.2	983	7.3	126	.9	17	.1
September	48	.4	974	7.2	74	.5	13	.1
October	59	.4	1077	8.0	9	.1	1	.0
November	21	.2	1089	8.1	0	0.0	0	0.0
December	20	.1	1123	8.3	3	.0	1	.0
Total	511	3.8	12521	92.7	410	3.0	65	.5

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 12521 = 993 or 7.35%.

No. of moderate drought days in 993 non near normal days = 511 = 89.94%.

No. of moderate wet days in 993 non near normal days = 410 = 41.29%.

No. of very wet days in 993 non near normal days = 65 = 6.55%.

Highest no. of moderate drought days seen on May in 993 non near normal days = 83 = 8.36%.

Highest no. of moderate wet days seen on August in 993 non near normal days = 126 = 12.69%.

Highest no. of very wet days seen on July in 993 non near normal days = 19 =1.91%.

Table 3.m: Number (percentage) of days of dryness/wetness at Dhunche.

Month	Moderate drought		Near normal		Moderately wet	
	Number	Percent	Number	Percent	Number	Percent
January	142	1.1	973	7.2	25	.2
February	165	1.2	840	6.2	31	.2
March	219	1.6	899	6.7	27	.2
April	207	1.5	893	6.6	7	.1
May	247	1.8	895	6.6	5	.0
June	147	1.1	944	7.0	15	.1
July	78	.6	1051	7.8	17	.1
August	59	.4	1065	7.9	20	.1
September	188	1.4	893	6.6	24	.2
October	350	2.6	765	5.7	21	.2
November	286	2.1	821	6.1	2	.0
December	158	1.2	978	7.2	7	.1
Total	2246	16.6	11017	81.5	201	1.5

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 11017 = 2497 or18.48%.

No. of moderate drought days in 2497 non near normal days = 2246 = 89.94%.

No. of moderate wet days in 2497 non near normal days = 81.5 = 3.26%.

No. of very wet days in 2497 non near normal days = 201 = 8.05%.

Highest no. of moderate drought days seen on October in 2497 non near normal days = 350 = 14.02%.

Highest no. of moderate wet days seen on March in 2497 non near normal days = 27 = 1.08%.

Table 3.n: Number (percentage) of days of dryness/wetness at Dhunibesi.

Month	Moderate drought		Near normal		Moderately wet	
	Number	Percent	Number	Percent	Number	Percent
January	144	1.1	971	7.2	25	.2
February	163	1.2	845	6.3	28	.2
March	221	1.6	899	6.7	25	.2
April	204	1.5	897	6.6	6	.0
May	248	1.8	894	6.6	5	.0
June	153	1.1	938	6.9	15	.1
July	72	.5	1060	7.8	15	.1
August	59	.4	1068	7.9	18	.1
September	178	1.3	904	6.7	23	.2
October	328	2.4	789	5.8	19	.1
November	267	2.0	838	6.2	4	.0
December	150	1.1	986	7.3	7	.1
Total	2187	16.2	11089	82.1	190	1.4

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days. = 13514 – 12924 = 2426 or17.95%.

No. of moderate drought days in 2426 non near normal days = 2187 = 90.15%.

No. of moderate wet days in 2426 non near normal days = 82.1 = 3.38%.

No. of very wet days in 2426 non near normal days = 190 = 7.83%.

Highest no. of moderate drought days seen on May in 2426 non near normal days = 328 = 13.52%.

Highest no. of moderate wet days seen on August in 2426 non near normal days = 28 = 1.15%.

Table 3.o: Number (percentage) of days of dryness/wetness at Timure.

Month	Moderate drought		Near normal		Moderately wet		Very wet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	15	.1	1130	8.4	1	.0	1	.0
February	20	.1	1025	7.6	0	0.0	0	0.0
March	25	.2	1115	8.3	7	.1	0	0.0
April	29	.2	1077	8.0	4	.0	0	0.0
May	24	.2	1100	8.1	18	.1	5	.0
June	12	.1	1031	7.6	48	.4	17	.1
July	5	.0	1022	7.6	89	.7	29	.2
August	6	.0	1039	7.7	76	.6	25	.2
September	18	.1	1031	7.6	51	.4	9	.1
October	22	.2	1116	8.3	8	.1	1	.0
November	13	.1	1097	8.1	0	0.0	0	0.0
December	5	.0	1141	8.4	0	0.0	1	.0
Total	194	1.4	12924	95.6	302	2.2	88	.7

In total 13514 days for 38 years,

No. of days far from near normal day in Total 13514 days = 13514 – 12924 = 590 or 5.37%.

No. of moderate drought days in 590 non near normal days = 194 = 32.88%.

No. of moderate wet days in 590 non near normal days = 302 = 51.19%.

No. of very wet days in 590 non near normal days = 88 = 14.91%.

Highest no. of moderate drought days seen on April in 590 non near normal days = 29 = 4.92%.

Highest no. of moderate wet days seen on July in 590 non near normal days = 89 = 15.08%.

Highest no. of very wet days seen on July in 590 non near normal days = 29 =4.92%.

