



December 12, 2022

Preliminary Precipitation Summary Monsoon Season (June-September), 2022

1. Seasonal Precipitation

Monsoon entered into eastern Nepal by eight days earlier than normal onset day on 5th June and withdrew from eastern Nepal on 16th October delayed by fourteen days this year (A.D. 2022). The normal monsoon onset and withdrawal date in Nepal is 13th June and 2nd October respectively. The duration of monsoon was 134 days, which was twenty-two days longer than normal monsoon period (112 days). This year, country received normal precipitation during the monsoon season. In Nepal, four months period from June to September is considered as monsoon season.

This summary is prepared based on the precipitation received at 91 meteorological stations during the monsoon season, 2022. The seasonal total precipitation is also expressed as percentage of normal precipitation of the monsoon season. The normal precipitation is the average of the seasonal precipitation for period of 1991-2020. The analysis shows that the most parts of Province 2, large parts of Lumbini and Karnali provinces, some areas in the western part of Gandaki province, central parts of Bagmati province and some parts of Province 1 received below normal precipitation whereas south-western part of Province 1, northern part of Bagmati province, eastern part of Gandaki province and western and eastern part of Sudurpaschim province and some isolated parts of Karnali province received above normal precipitation. The remaining parts of the country received near normal precipitation (Figure 1). Among the 91 stations, Lumle of Kaski district recorded the highest seasonal total precipitation of 4196.8 mm whereas Jomsom of Mustang district recorded the lowest of 156.5 mm. Similarly, the highest (134.3%) and the lowest (66.1%) percentage of normal precipitation were recorded at Pusma Camp of Surkhet district and Birgunj of Parsa district respectively (Annex 1). Based on the average of 92 stations shown in figure 1, Nepal received 97.3% of the normal precipitation of the season. However, based on the average of 20 stations shown in figure 4, Nepal received 90.3% of normal precipitation of the season. In general, 90 to 110% of normal precipitation is considered as the near normal precipitation for the season.

During this season, two station Pusma Camp of Surkhet district and Khumaltar of Lalitpur district broke the historical record of the highest daily precipitation (Table 1).

Table 1: List of stations with new records of the highest daily precipitation during the monsoon season.

S.N.	Station Name	District	Monsoon season 2022 record (24hr precipitation mm)/Date	Previous record (24hr precipitation mm)/Date
1	Pusma Camp	Surkhet	260.6/2022-09-17	240/2013-6-18
2	Khumaltar	Lalitpur	136.0/2022-08-10	135.4/2002-7-23



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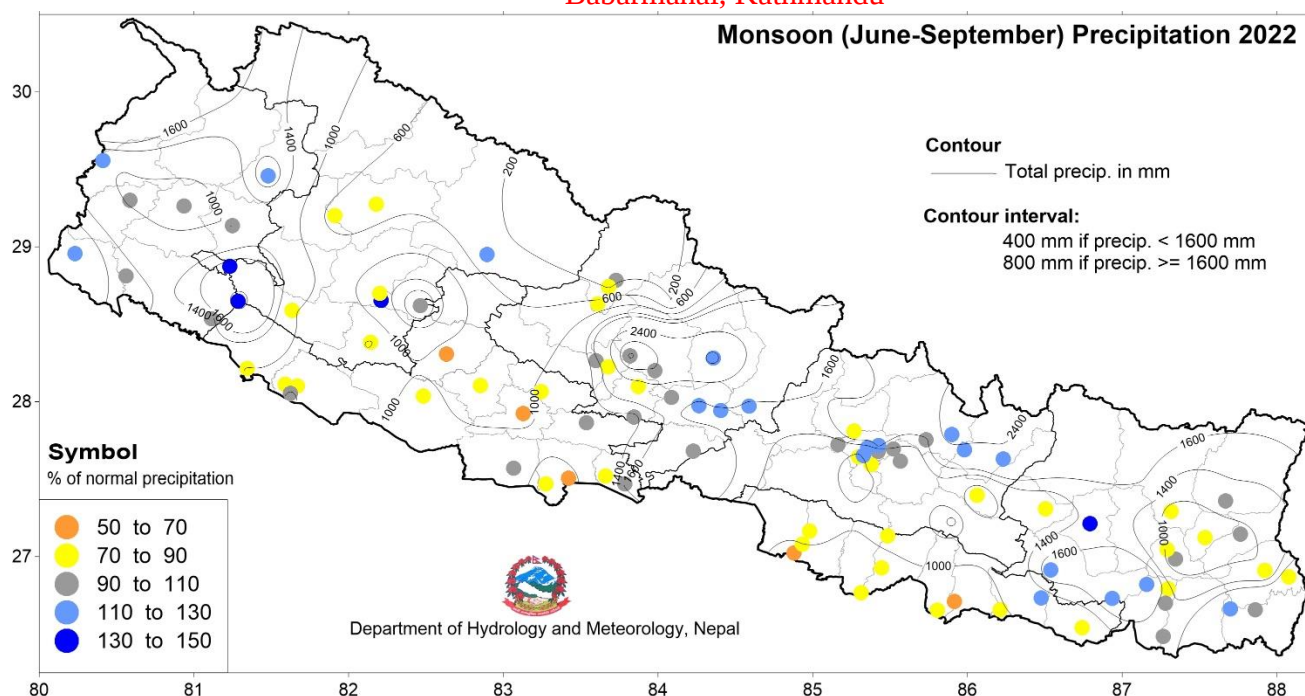


Figure 1: Monsoon season precipitation. Contour lines indicate the total precipitation during the monsoon season 2022 in mm and coloured circles indicate the percentage of seasonal normal precipitation at the meteorological stations.

Figures 2 and 3, respectively, show the temporal distribution of annual and monsoon seasonal cumulative average of daily precipitation at 20 stations located as shown in figure 4. The timeseries of precipitation shows that the precipitation was near normal until mid of the July. After that it was below normal.

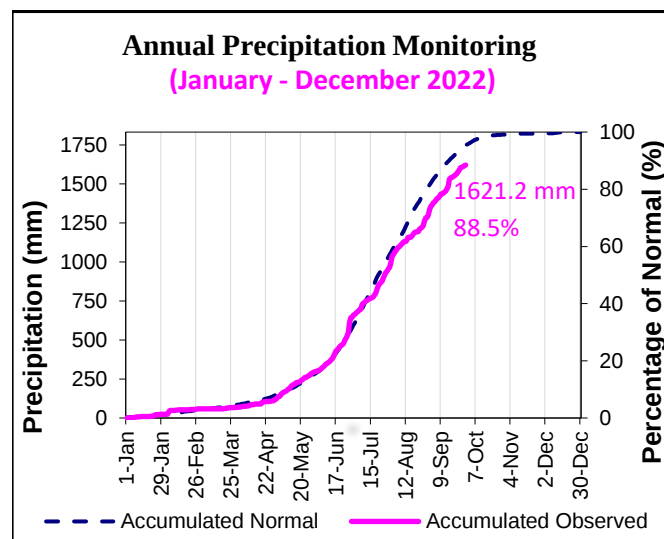


Figure 2: In the above graph, blue dotted line indicates the cumulative average of daily normal precipitation at 20 stations throughout the year (Jan - Dec) and pink solid line indicates the cumulative average of daily observed precipitation of this year.

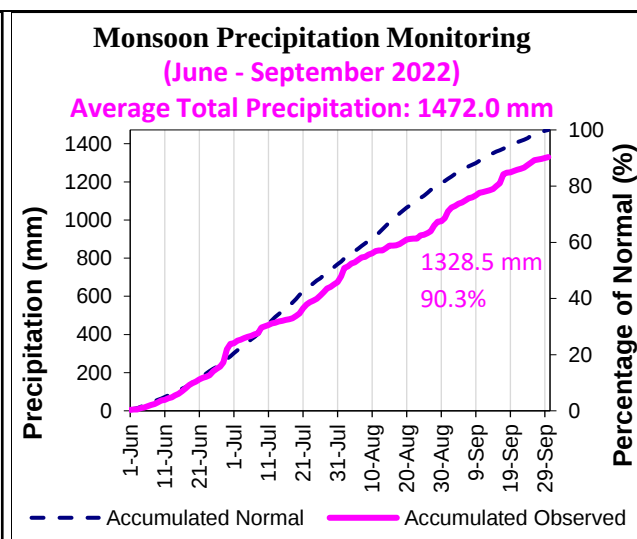


Figure 3: In the above graph, blue dotted line indicates the cumulate average of daily normal precipitation of 20 stations during monsoon season and pink solid line indicates the cumulative average of daily observed precipitation of this monsoon season.



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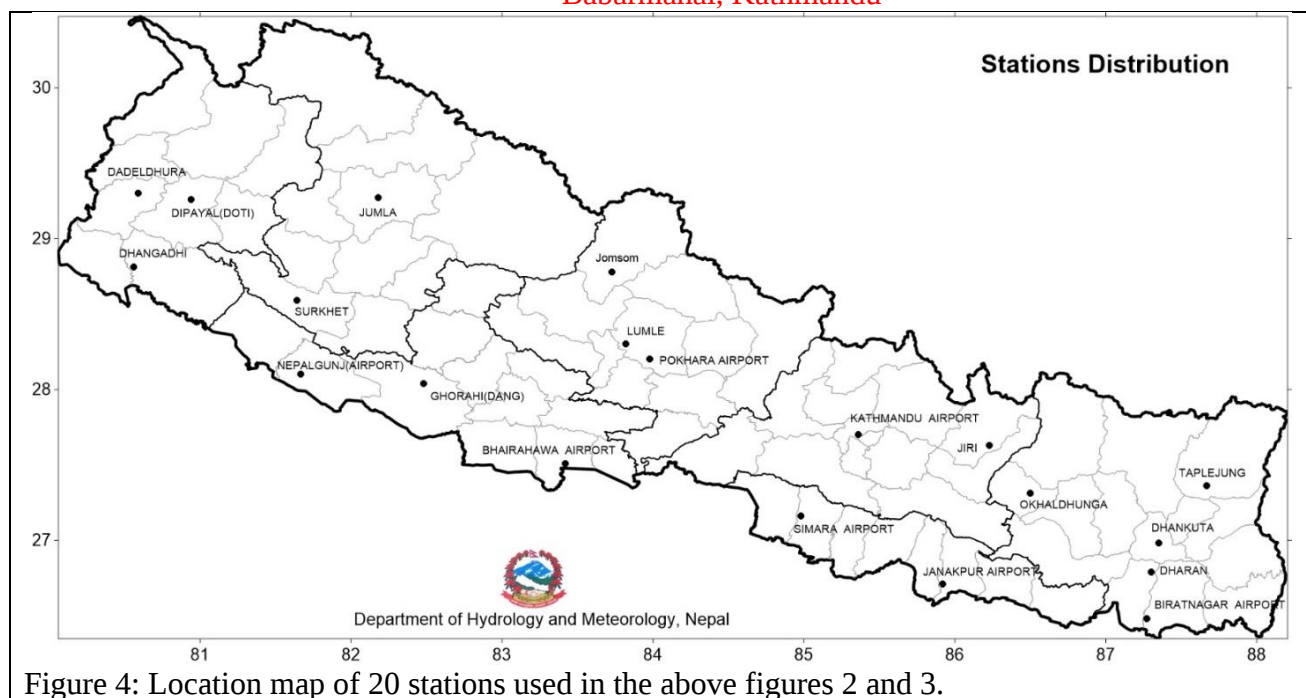


Figure 4: Location map of 20 stations used in the above figures 2 and 3.

2. Monthly Precipitation

2.1. June

Most parts of Province 1, Madhesh province and Bagmati province, eastern parts of Gandaki province and some isolated parts of remaining provinces recorded above normal precipitation in June. Large parts of Sudurpaschim province, Karnali province and central and northern parts of Lumbini province received normal to below normal precipitation (Fig 5).

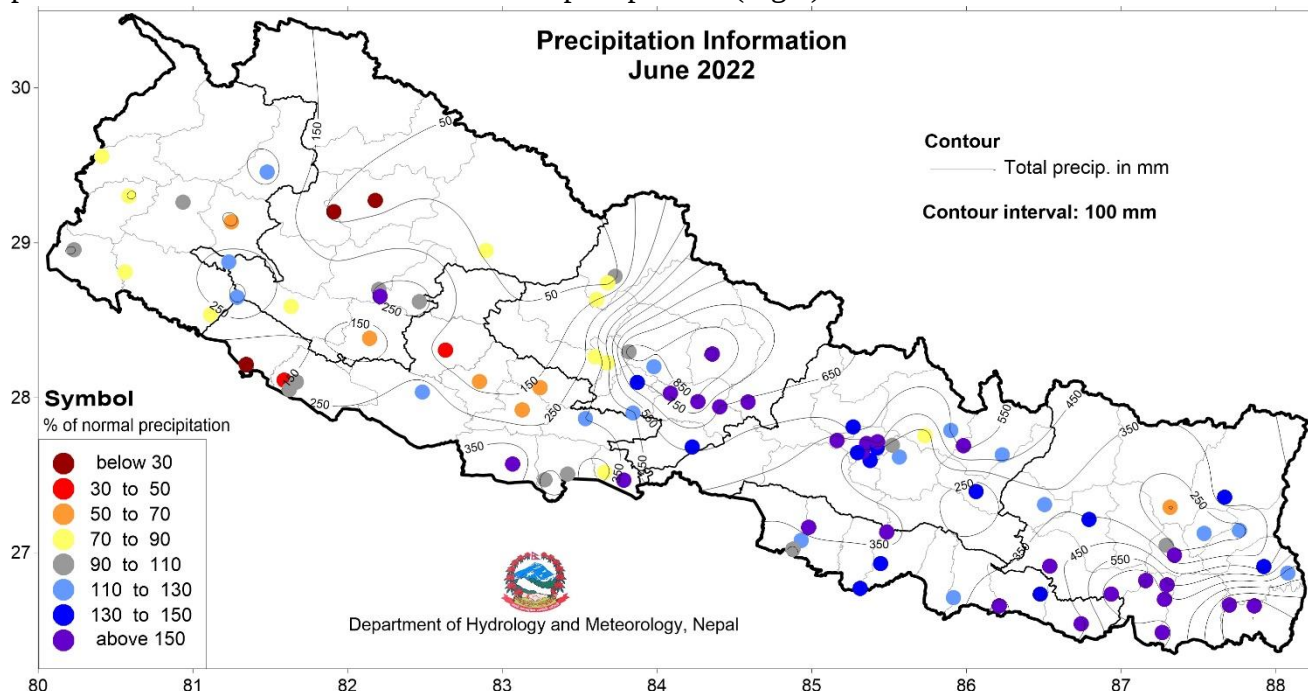


Figure 5: Precipitation in June 2022. Contour lines indicate the total precipitation in mm and coloured circles indicate the percentage of monthly normal precipitation at the meteorological stations.



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Among 91 stations, Taulihawa of Kapilvastu district recorded the highest 24-hours precipitation of 202.0 mm on 30th June 2022. The highest monthly total precipitation of 1037.6 mm was recorded at Gaida (Kankai) of Jhapa district while the lowest monthly total precipitation of 22.8 mm was recorded at Jumla station of Jumla district. Similarly, the highest (256.8%) and the lowest (20.8%) percentage of normal precipitation were recorded at Damauli of Tanahu district and Gulariya of Bardiya district respectively (Annex 1).

2.2. July

Central and southern part of Province 1, most parts of Madhesh and Lumbini provinces, large parts of Gandaki province and isolated parts in Bagmati, Karnali and Sudurpaschim provinces recorded below normal precipitation whereas remaining parts of the country received normal to above normal precipitation in July (Figure 6). Dumkauli of Nawalpur district recorded the highest 24-hours precipitation of 300.0 mm on 28th July 2022. The highest monthly total precipitation of 1220.4 mm was recorded at Lumle of Kaski district and the lowest of 38.7 mm was recorded at Thakmarpha of Mustang district. Similarly, the highest (154.2%) and the lowest (19.7%) percentage of normal precipitation were recorded at Chaurjharitar of Rukum East district and Janakpur airport of Dhanusha district respectively (Annex 1).

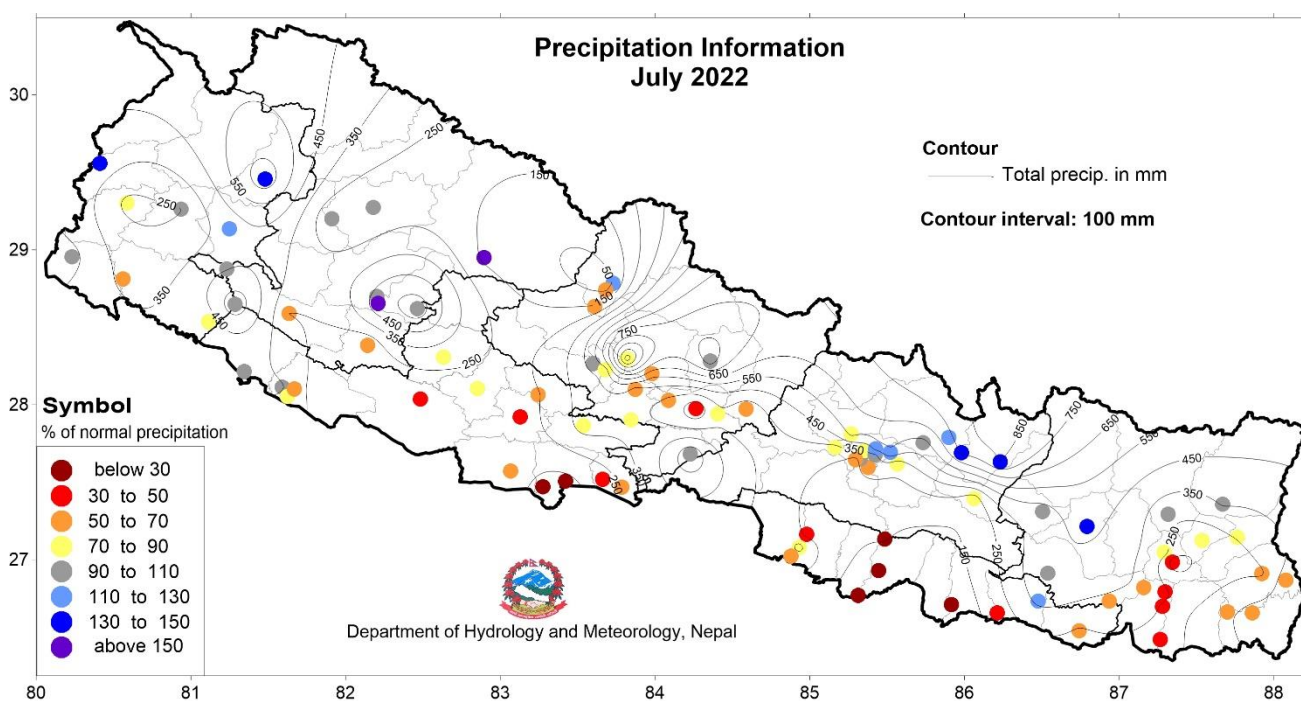


Figure 6: Precipitation in July 2022. Contour lines indicate the total precipitation in mm and coloured circles indicate the percentage of monthly normal precipitation at the meteorological stations.

2.3. August

Large parts of the country received below normal precipitation in August (Figure 7). Among 91 stations, 71 stations received below normal precipitation, 13 stations received near normal precipitation and 7 stations received above normal precipitation. Pokhara airport of Kaski district recorded the highest 24-hours precipitation of 249.0 mm on 1st August 2022. The highest monthly total precipitation



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of 1306.6 mm was recorded at Lumle of Kaski district and the lowest monthly total precipitation of 28.0 mm was recorded at Jomsom of Mustang district. Similarly, the highest (132.9%) and the lowest (38.2%) percentage of normal precipitation were recorded at Khumaltar of Lalitpur district and Chapakot of Syangja district respectively (Annex 1).

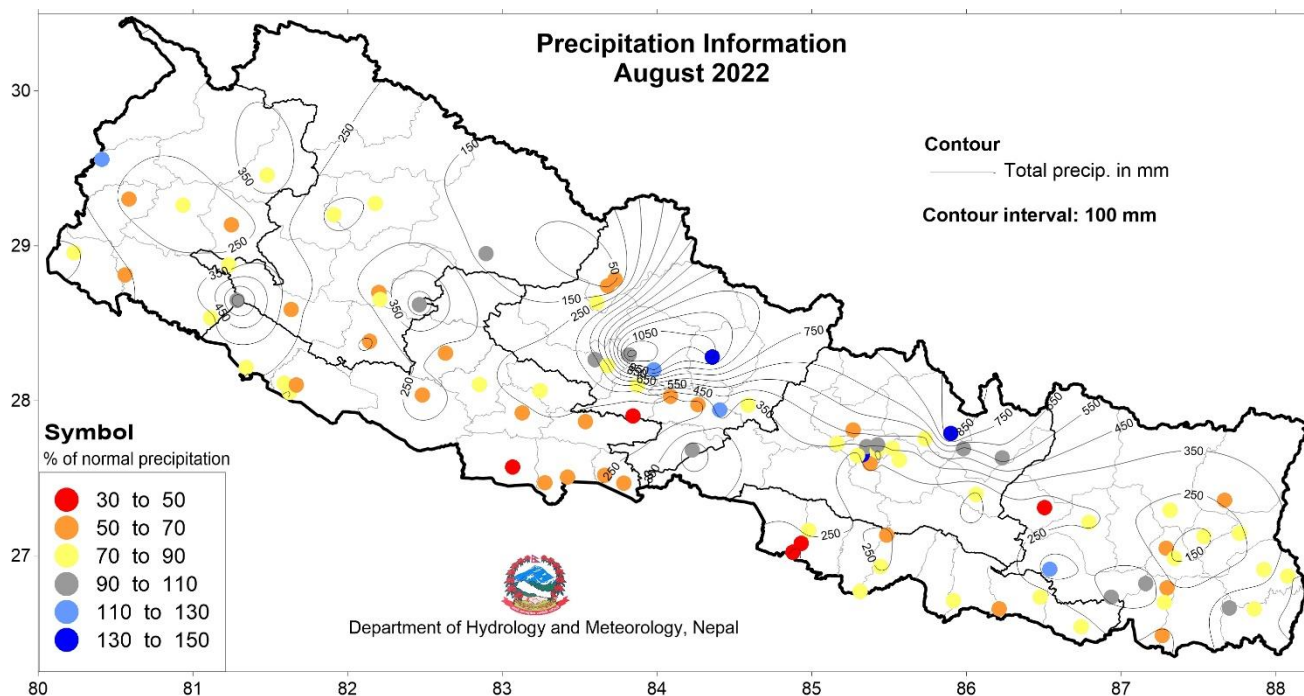


Figure 7: Precipitation in August 2022. Contour lines indicate the total precipitation in mm and coloured circles indicate the percentage of monthly normal precipitation at the meteorological stations.

2.4. September

Most parts of Sudurpaschim, Karnali and Lumbini provinces, north-western and southern part of Gandaki province, north-eastern part of Bagmati province, large parts of Province 1 and some isolated Madhesh province recorded normal to above normal precipitation and the remaining parts of the country received near normal precipitation in September (Figure 8). Chisapani of Kailali district recorded the highest 24-hours precipitation of 390.7 mm on 17th November 2022. The highest monthly total precipitation of 995.6 mm was recorded at Chisapani of Karnali district and the lowest monthly total precipitation of 39.5 mm was recorded at Jomsom of Mustang district. Similarly, the highest (320.3%) and the lowest (54.2%) percentage of normal precipitation were recorded at Chisapani of Kailali district and Nagarkot of Bhaktapur district respectively (Annex 1).



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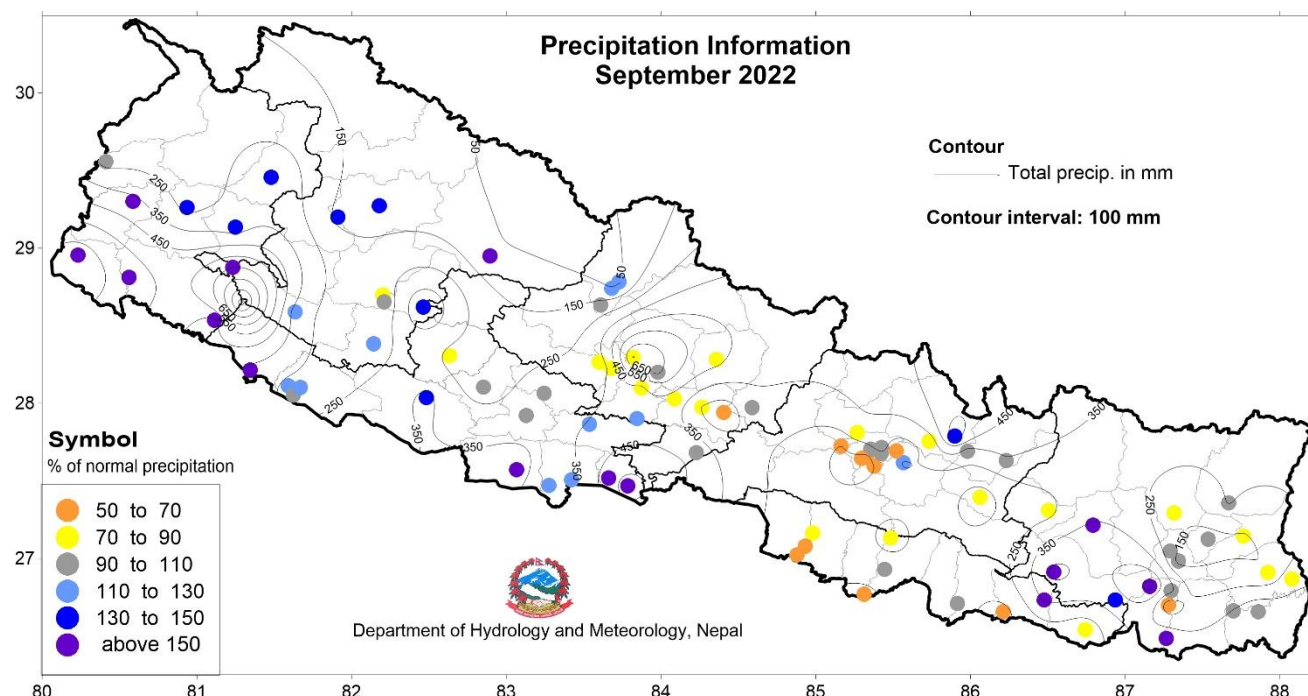


Figure 8: Precipitation in September 2022. Contour lines indicate the total precipitation in mm and coloured circles indicate the percentage of monthly normal precipitation at the meteorological stations.

3. Heavy Precipitation Events

Yearly many people are killed due to landslides at hills and floods at plains caused by heavy precipitation during monsoon season (June-September). According to Ministry of Home Affairs (<http://drportal.gov.np/>), 15 people were killed due to floods, 54 people were killed due to landslides and 5 people were killed due to heavy precipitation during this monsoon season. A few extreme precipitation events causing major floods and landslides during the monsoon season are presented below.

3.1. Heavy precipitation event of 28-30th June 2022

Heavy precipitation was recorded over large parts of mid-hill and terai region from 28th to 30th June 2022 which caused deaths of two persons: a person in Beldandi Rural Municipality of Kanchanpur district and a person in Galyang Municipality of Syangja district.

Table 2: Top 5 precipitation records of the event

S.N.	Station Name	District	Daily Precipitation (mm)			Total Precipitation (mm)
			28 June	29 June	30 June	
1	Taulihawa	Kapilvastu	0	137.4	202	339.4
2	Gaida (Kankai)	Jhapa	168	107.8	36	311.8
3	Tarahara	Sunsari	144.8	73.9	68	286.7
4	Chisapani (Karnali)	Kailali	5.2	200.3	77.1	282.6
5	Damak	Jhapa	127.7	81.4	68	277.1



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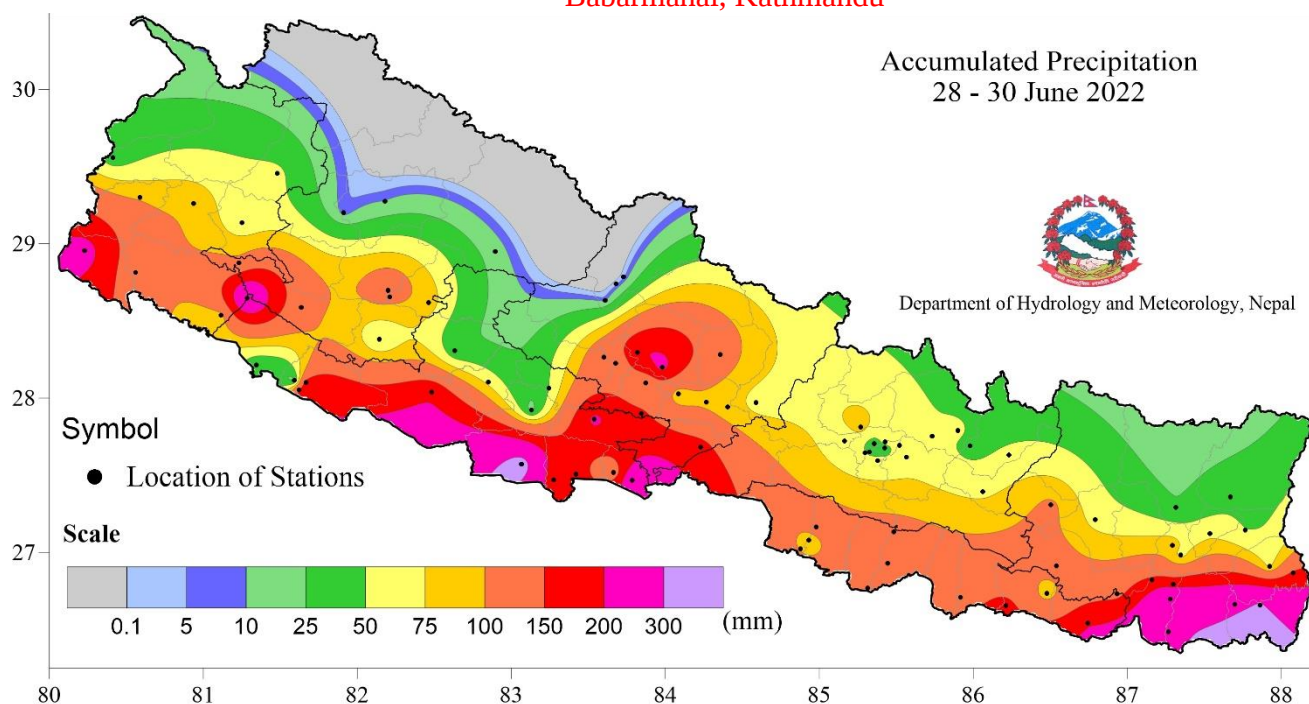


Figure 9: 3 days (28 – 30 June 2022) total precipitation

3.2. Heavy precipitation event of 1st and 2nd August 2022

Heavy precipitation was recorded over central and eastern parts of the country on 1st and 2nd August 2022. The precipitation event caused flooding and inundation in Kapilbastu, Parasi and Nawalpur districts and claimed the deaths of 2 persons in Kapilvastu. Similarly, a few landslide events were reported in Gandaki province and caused the death of 6 persons in Myagdi and Kaski districts.

Table 3: Top 5 precipitation records of the event

S.N.	Station Name	District	Daily Precipitation (mm)		Total Precipitation (mm)
			01 August	02 August	
1	Pokhara Airport	Kaski	249	127.1	376.1
2	Dumkauli	Nawalpur	120	154	274.0
3	Lumle	Kaski	83.7	170.1	253.8
4	Tarahara	Sunsari	153.8	11.2	165.0
5	Kanyam Tea Estate	Ilam	40.8	122.1	162.9



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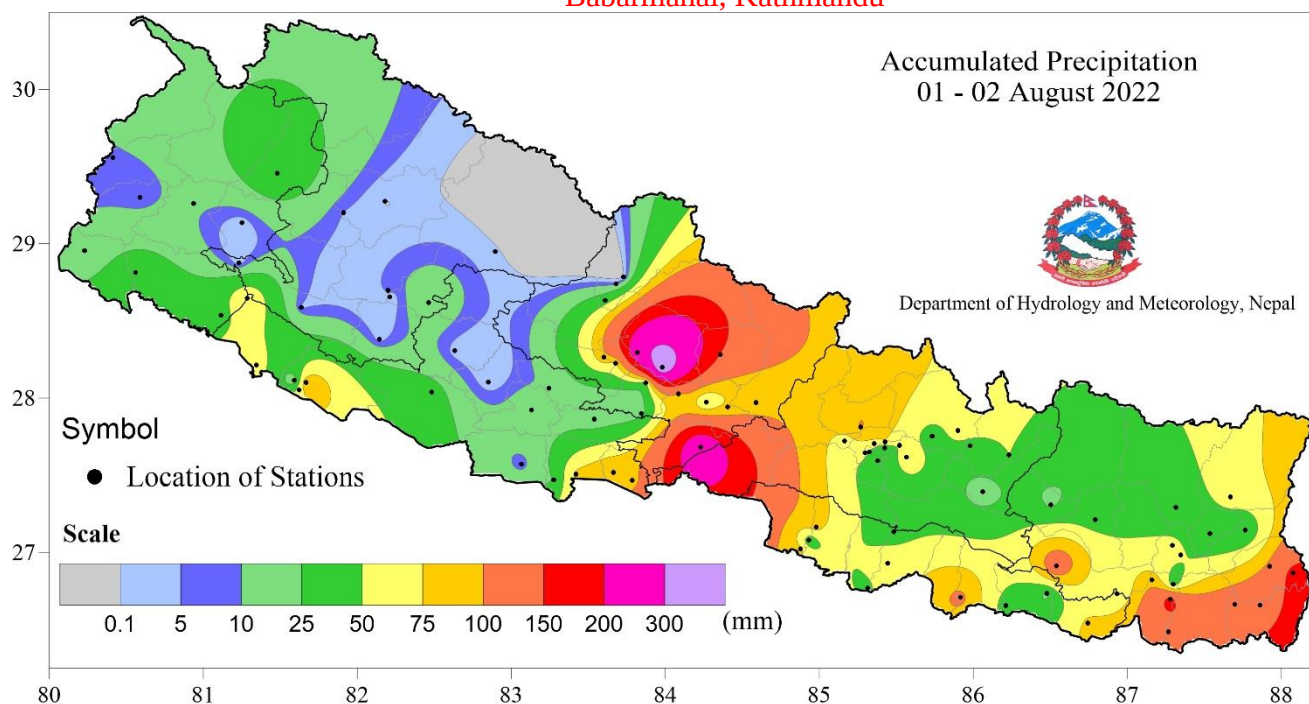


Figure 10: 2 days (1st and 2nd August 2022) total precipitation

3.3. Heavy precipitation event of 31st August - 2nd September 2022

The three days long heavy precipitation event was occurred from 31st August to 2nd September in and around the Kailali, Kaski and Syangja districts. The total precipitation was more than 200mm in the region.

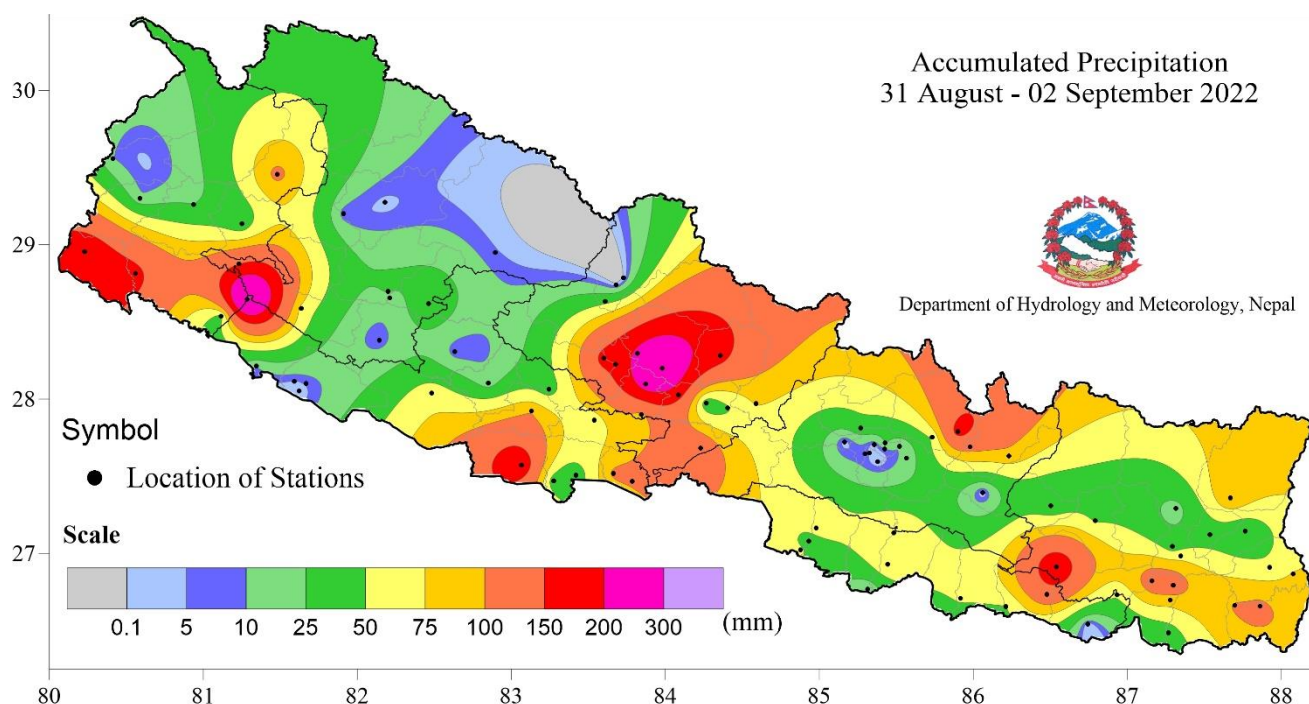


Figure 11: 3 days (31st August - 2nd September 2022) total precipitation



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Table 4: Top 5 precipitation records of the event

S.N.	Station Name	District	Daily Precipitation (mm)			Total Precipitation (mm)
			31 August	01 September	02 September	
1	Chisapani (Karnali)	Kailali	37.8	206.9	73.1	317.8
2	Pokhara Airport	Kaski	111.8	125.3	46.4	283.5
3	Syangja	Syangja	96	29	101.2	226.2
4	Lumle	Kaski	75.8	92.7	41.6	210.1
5	Udayapur Gadhi	Udayapur	120	76	1.2	197.2

3.4. Flood event of 9th September 2022

Heavy precipitation over Darchula on 9th September caused flooding on the Lasku and Mahakali rivers of Mahakali municipality which killed 6 persons and 9 were missing. Though there are no precipitation observation stations close to the flood prone site, precipitation recorded at Darchula station is shown below.

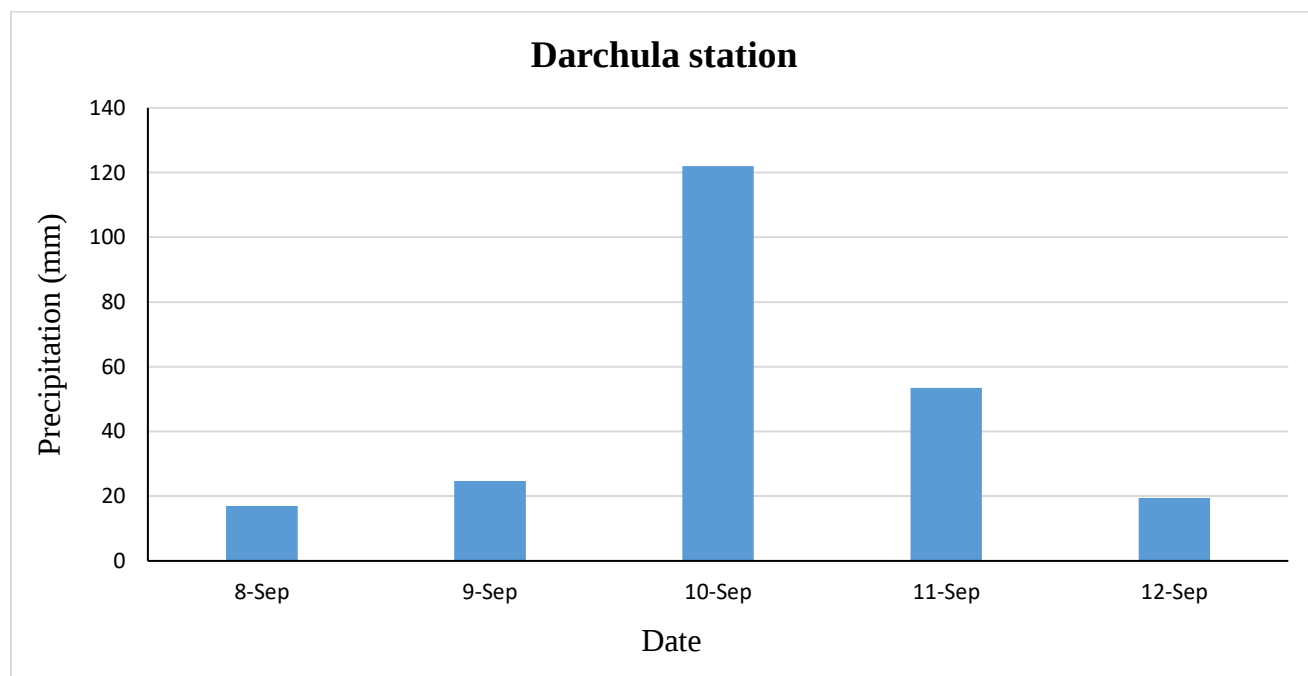


Figure 12: Daily precipitation recorded at Darchula station

3.5. Heavy precipitation event of 15-17th September 2022

Heavy precipitation from 15th to 17th September triggered flood and landslides at different places of Kailali and Achham districts which killed 23 persons. Similarly, 3 persons were killed at Bethanchowk Rural Municipality of Kavrepalanchok district due to landslide on 15th September (Table 6).



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Table 5: Daily precipitation records at Kailali and Achham on 15th to 17th September event.

S.N.	Station Name	District	Daily Precipitation (mm)			Total Precipitation (mm)
			15 September	16 September	17 September	
1	Chisapani (Karnali)	Kailali	5.7	20.5	390.7	416.9
2	Tikapur	Kailali	0.5	30.2	261.5	292.2
3	Dhangadhi (Attariya)	Kailali	2.1	17.6	164	183.7
4	Mangalsen	Achham	4.3	6.8	145.4	156.5

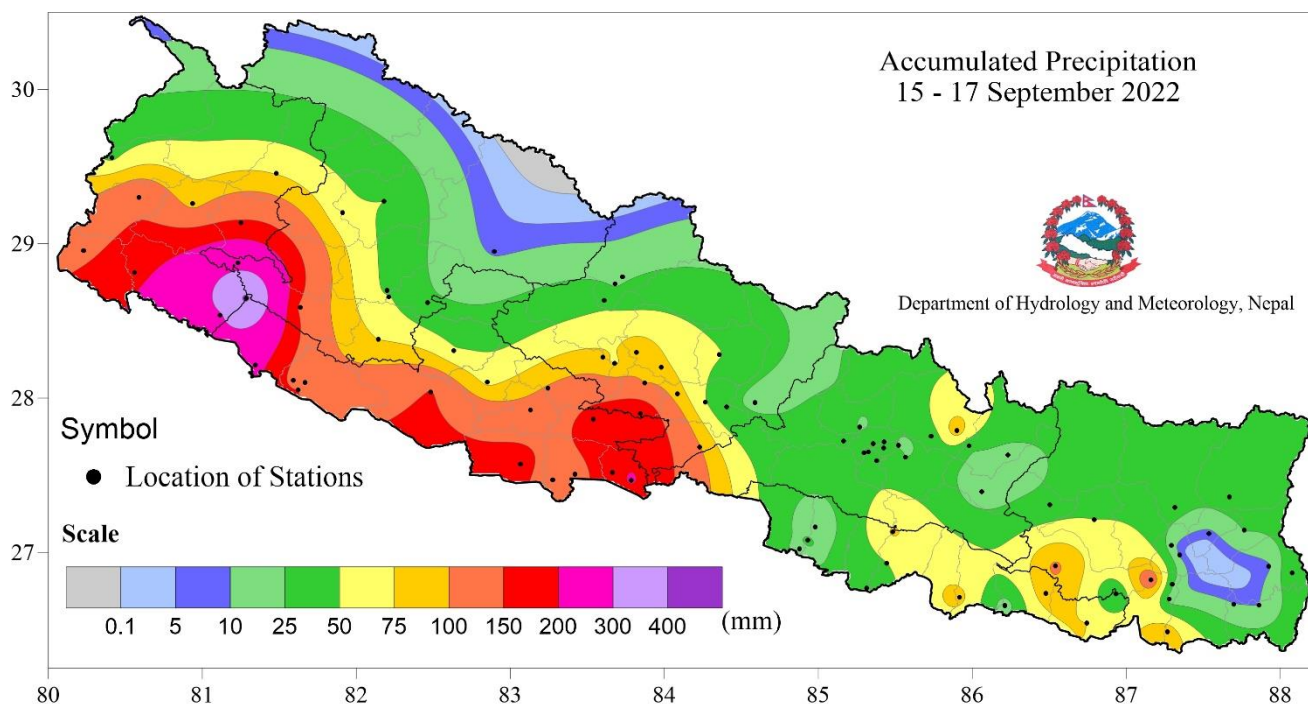


Figure 13: 3 days (15-17th September 2022) total precipitation

Table 6: Number of human casualties from the flood and landslide event

District	Local level	Ward	City/Village	Event	No. of persons killed
Kailali	Bhajani Municipality	8	Goruchauda	Flood	1
Achhaam	Dhakari Rural Municipality	6	Khimane	Landslide	1
Achhaam	Kamalbazar Municipality	8	Dhungachalna	Landslide	5
Achhaam	Turmakhad Rural Municipality	5	Nada	Landslide	9
Achhaam	Kamalbazar Municipality	6	Thatikhadh	Landslide	7
Kavrepalanchok	Bethanchowk Rural Municipality	4	Chalal	Landslide	3



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Annex 1: Seasonal and monthly precipitation data 2022

Station Name	Monsoon Season			June			July			August			September		
	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)
Baitadi (Gothalapani)	1118.2	912.5	122.5	173.7	214.1	81.1	406.5	313	129.9	316.7	259.4	122.1	221.4	214.1	103.4
Dadeldhura	960.1	1000	96	147.7	183.1	80.7	225.8	323.9	69.7	208.1	309.8	67.2	378.5	183.1	206.7
Mahendra Nagar	1911.4	1658.1	115.3	253.2	262	96.6	480.6	514.4	93.4	468.5	573.9	81.6	709	262	270.6
Bajura (Martadi)	1797.0	1508.4	119.1	291.1	253.5	114.8	723.3	512.1	141.2	444.3	529.4	83.9	338.2	253.5	133.4
Tikapur	1321.3	1396.6	94.6	204.7	237.2	86.3	386.6	480.8	80.4	310.6	438.7	70.8	419.5	237.2	176.9
Dhangadhi(Attariya)	1482.3	1618	91.6	175.4	251.5	69.7	331.3	531.5	62.3	365.2	534.2	68.4	610.3	251.5	242.7
Mangalsen	991.4	1037.3	95.6	132.9	202.7	65.6	384.8	343.6	112	173.7	313.5	55.4	300	202.7	148
Dipayal (Doti)	798.7	763.8	104.6	163.1	165.8	98.4	247.3	230.6	107.2	167.1	224.8	74.3	221.1	165.8	133.4
Jumla	465.8	534.2	87.2	22.8	79.2	28.8	177.6	177.6	100	156.9	182.2	86.1	108.4	79.2	136.9
Nagma	412.3	467.2	88.2	24.4	93	26.2	149.9	148.3	101.1	109.8	149.3	73.5	128.2	93	137.8
Dunai	333.2	276.1	120.7	36.3	45	80.7	128.6	84.5	152.2	97.4	101.1	96.3	70.9	45	157.6
Pusma Camp	1710.7	1273.6	134.3	310.2	266.1	116.6	446.4	417.2	107	302.1	395	76.5	651.9	266.1	245
Jajarkot	1261.6	1431.9	88.1	259.1	271.9	95.3	478.4	441.9	108.3	313.6	473.2	66.3	210.5	271.9	77.4
Chisapani (Karnali)	2733.8	2044.1	133.7	381.2	310.8	122.7	631.5	700.9	90.1	725.4	672.4	107.9	995.6	310.8	320.3
Surkhet Airport	1039.8	1288.2	80.7	201.1	247.7	81.2	249.1	464.9	53.6	278.9	407.3	68.5	310.7	247.7	125.4
Gulariya	984.2	1117.1	88.1	42	201.9	20.8	364.5	385.4	94.6	253.3	340.7	74.3	324.3	201.9	160.6
Khajura (Nepalganj)	881.0	1086.7	81.1	57.4	185.4	31	360.8	390.4	92.4	232.4	333.7	69.6	230.5	185.4	124.3
Nepalgunj (Reg.Off.)	1029.9	1121.9	91.8	229.8	214.9	106.9	316.6	385.5	82.1	253.9	348.7	72.8	229.5	214.9	106.8
Nepalgunj Airport	928.1	1276.4	72.7	210.9	209.7	100.6	277.5	482.9	57.5	206.1	397.4	51.9	233.6	209.7	111.4
Libang Gaun	819.0	1234.8	66.3	100.2	266.3	37.6	286	367.7	77.8	209.2	370.9	56.4	223.6	266.3	84
Bijuwar Tar	762.1	950.9	80.1	113	202.4	55.8	214.1	307.6	69.6	242.9	289.8	83.8	192.1	202.4	94.9
Salyan Bazar	569.1	748.7	76	82	160	51.3	156.6	245.6	63.8	138	235.4	58.6	192.6	160	120.4
Chaurjhari Tar	1262.6	952.2	132.6	281.4	165.3	170.2	527.1	341.9	154.2	279.8	313.2	89.3	174.3	165.3	105.4
Musikot (Rukumkot)	1908.3	1774.1	107.6	298.8	312.2	95.7	619.3	576.4	107.4	529.2	573.4	92.3	460.9	312.2	147.6
Ghorai (Dang)	1122.1	1332.3	84.2	303	249.9	121.2	166.1	420.9	39.5	283.2	427.6	66.2	369.8	249.9	148
Jomsom	156.5	158.5	98.7	32.1	31.8	100.9	56.9	46.8	121.6	28	43.9	63.8	39.5	31.8	124.2
Thakmarpha	166.8	234	71.3	37.9	49.2	77	38.7	75.5	51.3	35.8	61.8	57.9	54.3	49.2	110.4
Baglung	1536.9	1627.7	94.4	292.7	360.7	81.1	505.1	548.3	92.1	427.2	449.1	95.1	311.8	360.7	86.4
Lete	719.9	888.2	81.1	149.8	188.1	79.6	162	277.8	58.3	222.4	254.3	87.5	185.7	188.1	98.7
Kushma	1784.7	2133.7	83.6	388.2	450.1	86.2	499.5	702	71.2	524.8	616.5	85.1	372.2	450.1	82.7
Tansen	1322.2	1273.9	103.8	352.1	282.8	124.5	390.3	460.3	84.8	224.6	350.1	64.2	355.1	282.8	125.6
Bhairahawa Airport	951.2	1369.3	69.5	269.3	254.7	105.7	121.5	498.1	24.4	245.5	399.7	61.4	314.9	254.7	123.6
Dumkauli	2148.0	1967.5	109.2	561.4	419.6	133.8	637.7	615.6	103.6	523.7	562.6	93.1	425.2	419.6	101.3



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Parasi	1133.8	1379	82.2	198.9	277.2	71.8	201.4	461.8	43.6	231.1	403.2	57.3	502.4	277.2	181.2
Khanchikot	921.3	1365.8	67.5	179.7	287.8	62.4	213.1	479.9	44.4	218.9	386.6	56.6	309.6	287.8	107.6
Taulihawa	1270.1	1184.4	107.2	453.3	209.9	216	244	417.2	58.5	168.2	376.4	44.7	404.5	209.9	192.7
Tamghas	1060.6	1470	72.1	168.2	320.9	52.4	243.5	482.4	50.5	330.3	423.8	77.9	318.6	320.9	99.3
Lumbini	786.0	1097.3	71.6	217.5	204.8	106.2	99.5	394.2	25.2	221	343.6	64.3	248	204.8	121.1
Semari	1629.5	1572.8	103.6	436.5	260	167.9	265.5	533.5	49.8	334	532.9	62.7	593.5	260	228.3
Khudi Bazar	3422.0	2720.5	125.8	970.6	539.7	179.8	898.2	871.6	103.1	1071.4	818.2	130.9	481.8	539.7	89.3
Pokhara Airport	3137.2	3063.4	102.4	808.6	648.2	124.7	591.8	940.8	62.9	1068.2	839.4	127.3	668.5	648.2	103.1
Syangja	2001.1	2325.6	86	744	551.9	134.8	414.4	786.3	52.7	417.3	583.6	71.5	425.3	551.9	77.1
Bandipur	1542.0	1256.9	122.7	640.6	314.1	203.9	340.4	435.9	78.1	382.3	319.8	119.5	178.6	314.1	56.9
Gorkha (Birenchowk)	1503.4	1265.7	118.8	626.4	322.1	194.5	275.7	412.7	66.8	280.7	350.9	80	320.6	322.1	99.5
Chapakot	1350.3	1451.5	93	435.1	337.4	129	374.8	491.4	76.3	146.8	384.2	38.2	393.6	337.4	116.7
Lumle	4196.8	4661.5	90	911.3	866	105.2	1220.4	1472.5	82.9	1306.6	1419.6	92	758.5	866	87.6
Khairini Tar	1771.1	1682.5	105.3	797.3	462.4	172.4	328.4	515.5	63.7	238.4	429.7	55.5	407	462.4	88
Damauli	1442.5	1251	115.3	846.2	329.5	256.8	154.2	401.9	38.4	198	326.2	60.7	244.1	329.5	74.1
Simara Airport	1142.7	1502.8	76	416.4	273.5	152.2	221.2	549.2	40.3	297.2	422.1	70.4	207.8	273.5	76
Parwanipur	995.1	1299	76.6	287.7	257.2	111.9	385.5	466	82.7	156.6	377.2	41.5	165.2	257.2	64.2
Birganj	831.8	1257.9	66.1	238.4	251.9	94.6	284.3	475.7	59.8	144.7	305.5	47.4	164.4	251.9	65.3
Gaur	731.9	1030.2	71	311.2	224.1	138.9	86.6	374.3	23.1	205	278.1	73.7	129.1	224.1	57.6
Kakani	1968.5	2346.7	83.9	597	447	133.6	574.4	754.4	76.1	481.1	743.5	64.7	316.1	447	70.7
Chautara	1528.7	1654	92.4	300.5	361.6	83.1	514.3	476.7	107.9	431	530.1	81.3	282.9	361.6	78.2
Godavari	1074.3	1331.2	80.7	343	258.1	132.9	305.9	452.3	67.6	274.5	414.8	66.2	150.9	258.1	58.5
Dhulikhel	1104.9	1156.9	95.5	265.8	224.5	118.4	293.8	387.9	75.7	286.1	358.1	79.9	259.2	224.5	115.5
Bahrabise	2874.1	2303.6	124.8	559	463.2	120.7	725.3	656.3	110.5	975.4	748.2	130.4	614.4	463.2	132.6
Khumaltar	1083.8	878.4	123.4	336.2	187.4	179.4	289.6	289	100.2	336.9	253.5	132.9	121.1	187.4	64.6
Kathmandu Airport	1317.2	1176.3	112	403.4	242	166.7	338.5	383.8	88.2	346.8	342.7	101.2	228.4	242	94.4
Dhunibesi	1246.3	1278.4	97.5	408.8	235.6	173.5	323.4	412.8	78.3	367.9	412.8	89.1	146.2	235.6	62.1
Nagarkot	1372.3	1497.8	91.6	313.6	289.9	108.2	532.1	477.5	111.4	369.6	470.1	78.6	157	289.9	54.2
Bhaktapur	1093.4	1055.5	103.6	302.8	224.5	134.9	329.9	340.6	96.9	226.4	320	70.8	234.3	224.5	104.4
Changu Narayan	1666.3	1347.8	123.6	500.9	277.6	180.4	486.2	405.2	120	392.2	429.2	91.4	287	277.6	103.4
Khokana	857.0	988.5	86.7	314.7	214.3	146.9	221.1	341.6	64.7	191.1	272	70.3	130.1	214.3	60.7
Charikot	2178.0	1781.2	122.3	584.2	334	174.9	764.5	573.7	133.3	520.9	561.6	92.8	308.4	334	92.3
Jiri	2264.8	2011.5	112.6	482.3	379.3	127.2	848.4	637.4	133.1	594.4	645.3	92.1	339.7	349.5	97.2
Janakpur Airport	796.7	1196	66.6	294.6	259.4	113.6	86.3	437.9	19.7	229.9	319.1	72	185.9	179.6	103.5
Manusmara	832.0	1159.8	71.7	279.2	209.5	133.3	97.3	438.2	22.2	255.7	316.8	80.7	199.7	195.3	102.3



Government of Nepal
Ministry of Energy, Water Resource and Irrigation
Department of Hydrology and Meteorology
Climate Division (Climate Analysis Section)
Babarmahal, Kathmandu

Station Name	Monsoon Season			June			July			August			September		
	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)	Observed Precipitation (mm)	Normal Precipitation (mm)	Percentage of Normal (%)
Karmaiya	1112.7	1572.9	70.7	409.3	255.2	160.4	155.2	546.8	28.4	257.1	441.7	58.2	291.1	329.2	88.4
Manthali	591.2	703.9	84	163.4	125.8	129.9	198.9	270.2	73.6	131.2	188.2	69.7	97.7	119.7	81.6
Okhaldhunga	1152.4	1391.6	82.8	336.3	292.9	114.8	402.5	418	96.3	191.7	415.7	46.1	221.9	265	83.7
Phatepur	1819.2	1503.6	121	713.4	313.3	227.7	330.7	522.6	63.3	369	376.3	98.1	406	291.4	139.3
Udayapur Gadhi	1782.1	1370.9	130	433.2	282.3	153.5	450.5	447	100.8	417.8	351.1	119	480.6	290.5	165.4
Lahan	1246.3	1015.6	122.7	331.3	226	146.6	370.8	338.1	109.7	185.5	250.6	74	358.5	200.9	178.4
Siraha	964.4	1119.1	86.2	481.9	244.4	197.2	193.2	412.9	46.8	176.3	291.4	60.5	113	170.4	66.3
Diktel	1422.9	1067.2	133.3	351.8	249.7	140.9	476.3	337.4	141.2	235.8	297.8	79.2	359	182.3	196.9
Rajbiraj	1046.5	1179.8	88.7	426.2	252.4	168.9	239	411.3	58.1	208.2	292.9	71.1	173.1	223.2	77.6
Chainpur (East)	809.9	976.9	82.9	143.6	225.6	63.7	271.3	275.3	98.5	221.3	280.1	79	173.7	195.9	88.7
Pakhribas	946.9	1182.3	80.1	290.2	266	109.1	286.9	383.2	74.9	172	320.7	53.6	197.7	212.4	93.1
Dhankuta	633.8	663.6	95.5	269.9	143.6	188	108.9	239	45.6	136.8	160.6	85.2	118.1	120.4	98.1
Dharan Bazar	1464.4	1675.2	87.4	557.2	317.8	175.3	264.4	543.8	48.6	269.5	461	58.5	373.2	352.6	105.8
Terhathum	616.5	697.4	88.4	180.6	149.4	120.9	179.9	230.7	78	127.8	179.9	71	128.1	137.4	93.2
Chatara	2117.7	1687.8	125.5	759.7	342.9	221.6	335	561.2	59.7	429.3	404.5	106.1	593.7	379.2	156.6
Biratnagar Airport	1479.1	1404	105.3	604.3	306.2	197.4	221.9	475.6	46.7	224.2	353.1	63.5	428.7	269.1	159.3
Tarahara	1435.3	1520.2	94.4	687.7	328.9	209.1	241.8	544.5	44.4	327.5	368.9	88.8	178.2	277.9	64.1
Taplejung	1298.2	1354.8	95.8	416.6	296.8	140.4	358.3	387.5	92.5	268.9	415	64.8	254.4	255.5	99.6
Ilam Tea Estate	1060.5	1178.9	90	390.4	278.9	140	240.3	390.4	61.6	277.4	315.3	88	152.3	194.3	78.4
Damak	2078.1	1872.2	111	970.8	421.8	230.2	336.3	642.7	52.3	416.3	462.5	90	354.7	345.2	102.8
Kanyam Tea Estate	1844.7	2309.5	79.9	687.8	535.7	128.4	395.6	771.5	51.3	443.7	565.7	78.4	317.6	436.6	72.7
Phidim (Panchther)	857.8	922.3	93	220	177.8	123.7	256.4	294.5	87.1	238.6	283.1	84.3	142.8	166.9	85.6
Gaida (Kankai)	2292.1	2123.1	108	1037.6	446.4	232.4	380.9	734.7	51.8	435.3	539.9	80.6	438.2	402.1	109