



Government of Nepal
Ministry of Population and Environment
Department of Hydrology and Meteorology
Nagpokhari, Kathmandu, Nepal

PRELIMINARY WEATHER SUMMARY OF NEPAL

July 2017

MAIN HIGHLIGHT

Most parts of the country recorded below normal rainfall and above normal temperature (Fig.2, Fig.4, and Table 2).

SYNOPTIC SEQUENCES

Weather over Nepal was affected by the following systems enhancing the rainfall activities during July 2017.

Monsoon Trough

During monsoon season, position of the monsoon trough plays an important role in the contribution of rainfall. In general, if it shifts north of its normal position towards foothills of the Himalayas, Nepal gets significant rainfall and when it moves to the south, monsoon break period occurs resulting in less or no rainfall. The axis of monsoon trough as usual oscillated north and south of its normal position during this month.

From 4-8th July, monsoon trough moved to north of its normal position and on 8th western part of the trough shifted to foot hills of the Himalayas. It lay south of its normal position during 3rd and 4th week of the month while the trough moved close to the foot hills of the Himalayas again after 30th July onwards.

Low Pressure Area (LPA)

Two consecutive LPA's, (7th -9th July) and (11th -17th July) formed over East Uttar Pradesh and neighborhood. Third LPA formed over Odisha and North Andra Pradesh (15th -19th July) which concentrated into depression on 18th over North West & adjoining West Central Bay of Bengal and moved northwest wards and crossed Odisha. Fourth LPA formed over Gujarat region (21th -25th July). Fifth formed over Gangetic West Bengal and adjoining Jharkhand (23th -29th July) which further intensified into a depression over northwest Jharkhand on 26th July.

Upper Air Cyclonic Circulation (UACC)

Many UACCs formed during this month and many of them contributed in enhancing heavy rainfall activities over Nepal in this July.

PRECIPITATION DISTRIBUTION

Eastern half of the country along with the adjoining southern areas of Western Region (WR), Mid-Western Region (MWR) recorded below normal rainfall. The rest of the region recorded round to above normal rainfall. The highest 24 hour rainfall of 308.3mm on 9th July was recorded at Lumle contributing to the highest total rainfall of 1702.8mm (115.9%) while highest percentage of rainfall

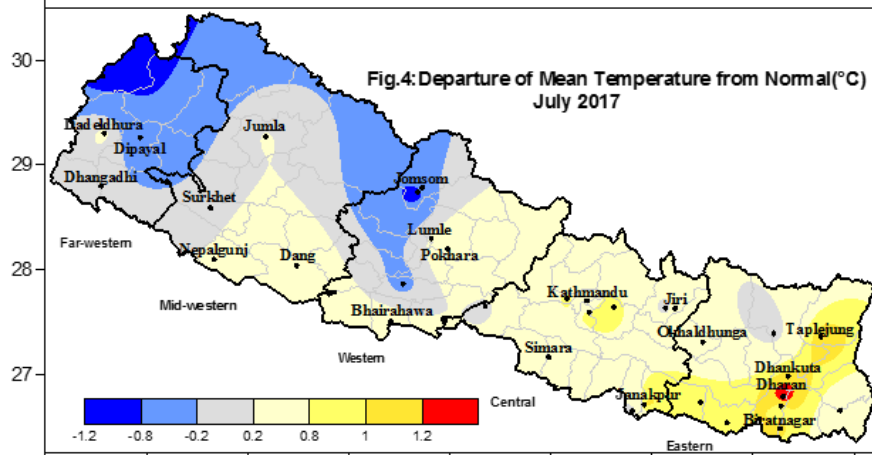
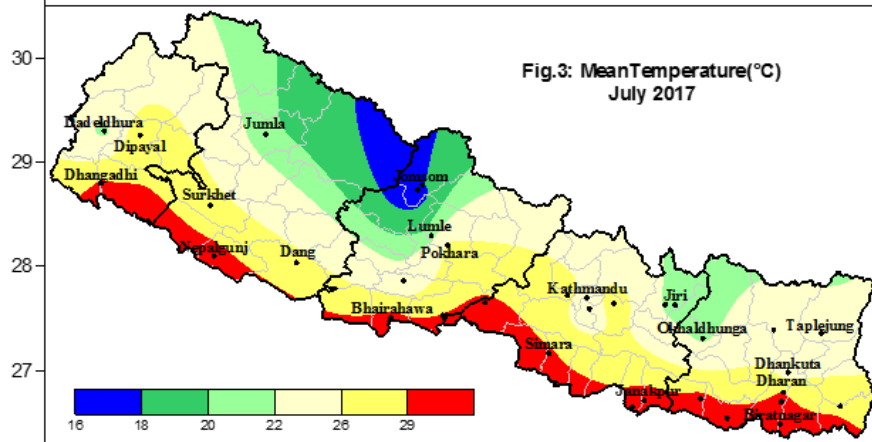
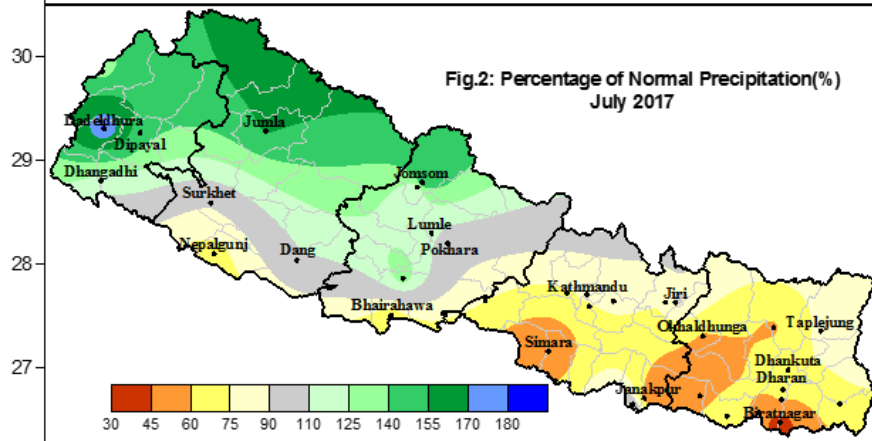
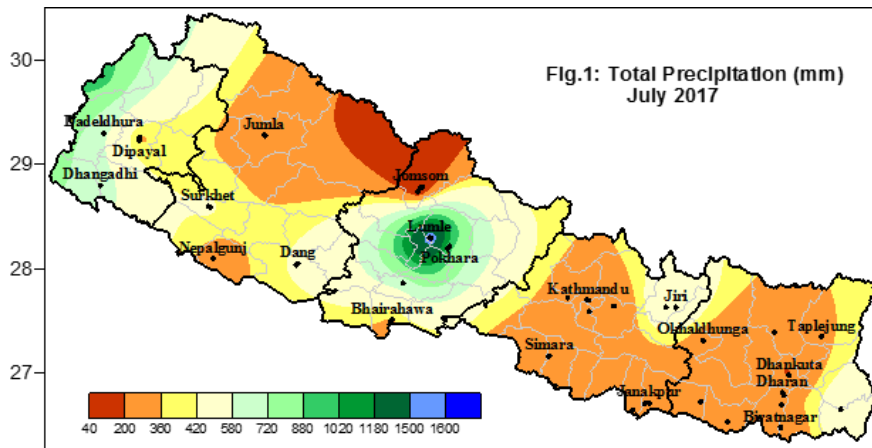
183.1% (602.8mm) was recorded at Dadeldhura. (Figure 1, Table 2). Highest amount of the rainfall was received during 1st week of the month (Table 1).

Table 1: Temporal distribution of average rainfall in July, 2017

Week	Total rainfall (mm) (arithmetic average from station rainfall)	Percentage (%) of monthly total	Daily rainfall Intensity (mm)
1 st	154.5	36.7	22.1
2 nd	91.5	21.7	13.1
3 rd	69.5	16.5	9.9
4 th	47.3	11.2	6.8
Remaining 3 days	58.6	13.9	19.5
Total	421.4	100.0	

TEMPERATURE PATTERN

Most parts of the country recorded normal to above normal temperature. However, northern parts of FWR, adjoining areas of MWR and WR recorded below normal temperature. (Fig: 4). The mean temperature varied between less than 18.0°C in the northern parts of MWR and adjoining WR to above 29.0°C in southern parts of Tarai Region (Figure 3). As compared to other stations, Biratnagar Airport recorded the highest maximum temperature of 38.5°C on 17th July while the lowest minimum temperature of 9.0°C was recorded in Thakmarpha on 13st July (Table 2).



Remarks: Normal Rainfall (Gray colour) = $100 \pm 10\%$
 Normal Temperature (Gray colour) = $0 \pm 0.2\text{ }^{\circ}\text{C}$

Table: 2
PRELIMINARY MONTHLY WEATHER DATA
July 2017

Stations	PRECIPITATION							TEMPERATURE								
	Total (mm)	% of Normal	No. of Rainy Days				24hrs Extreme Rainfall & Date	Maximum (°C)			Minimum (°C)			Mean (°C)		No. of Days with maximum temperature $\geq 30^{\circ}\text{C}$
			≥ 1.0 mm	≥ 10.0 mm	≥ 25.0 mm	≥ 50.0 mm		Average Max	Departure from the normal	Highest Max & Date	Average Min	Departure from the normal	Lowest Min & Date	Monthly Mean	Departure from the normal	
DADEL DHURA	602.8	183.1	28	16	7	3	100/7	24.5	0.32	29.7/11	17.6	0.3	16.1/11	21.1	0.3	0
DARCHULA	965.3	135.6	28	24	18	5	85.1/29	29.4	-2.7	33.7/19	22.1	0.4	21/7	25.7	-1.1	17
DHANGADHI	663.4	117.2	21	13	9	4	109/3	33.1	0.0	37.5/19	25.7	-0.1	23.5/5	29.4	-0.1	26
DIPAYAL	350.6	146.9	26	14	5	0	49/20	32.8	-1.4	36.8/19	24.1	0.0	22.6/10	28.4	-0.7	27
JUMLA	281.0	156.0	27	11	2	0	45/23	24.3	-0.7	30.2/1	17	1.1	14.5/31	20.6	0.2	1
SURKHET	435.2	92.2	25	16	8	1	53/10	31.1	0.4	34.8/18	23.1	-0.3	22.3/12	27.1	0.0	24
NEPALGUNJ AIRPORT	311.4	67.6	19	11	4	2	78/30	34.0	0.6	37.7/19	25.7	0.0	24.3/30	29.8	0.3	30
GHORAI (DANG)	440.0	106.5	23	9	5	4	83/1	30.9	1.1	34.5/18	23.5	0.4	22.5/27	27.2	0.8	23
JOMSOM	66.7	154.5	14	2	0	0	14.6/7	22.2	-0.8	25.6/19	13.6	0.0	11.5/13	17.9	-0.4	0
THAKMARPHA	84.8	114.7	16	3	0	0	15.3/7	21.5	-0.2	23.5/8	11.3	-1.9	9/13	16.4	-1.0	0
TANSEN	639.6	133.0	22	14	9	4	155/10	28.2	1.6	32.3/20	18.0	-2.4	16/12	23.1	-0.4	10
BHAIRHAWA AIRPORT	348.5	63.9	21	10	4	1	58/10	33.9	0.9	36.5/19	26.1	0.2	24.4/10	30.0	0.5	29
POKHARA AIRPORT	923.5	98.2	23	15	7	5	191/2	30.9	0.9	33.9/19	22.6	0.5	20.5/17	26.7	0.7	20
LUMLE	1702.7	115.9	29	27	20	11	308.3/9	24.0	0.5	27.5/18	17.6	0.0	10.5/12	20.8	0.3	0
RAMPUR	427.0	75.6	21	16	7	0	46.2/5	33.6	0.4	37.4/18	25.1	-0.1	23/11	29.4	0.1	28
SIMARA AIRPORT	253.1	43.6	18	10	2	1	58/5	33.2	0.7	36.8/18	25.7	0.2	23.5/3	29.5	0.5	28
GODAVARI	354.3	73.1	23	14	2	1	55.4/4	27.0	1.7	30.6/18	18.6	0.0	17/20	22.8	0.8	1
KATHMANDU AIRPORT	285.7	78.6	23	9	4	1	62/30	29.3	0.9	31.5/18	20.4	0.2	19.5/12	24.8	0.6	13
PANCHKHAL	224.5	79.7	20	8	3	0	37.7/20	33.0	1.4	35/16	23.0	0.5	21.7/13	28.0	1.0	30
DHUNIBESI	306.2	72.9	26	12	1	0	41.4/16	31.4	1.1	33.1/7	22.4	0.6	21/4	26.9	0.9	26
JIRI	578.5	93.5	27	20	9	1	68.1/28	24.5	0.7	26.2/18	17.1	0.1	15/18	20.8	0.4	0
JANAKPUR AIRPORT	251.2	51.5	12	7	4	1	53.4/4	33.6	1.2	37.8/17	27.0	0.9	25/11	30.3	1.0	29
JALESORE	291.7	113.4	10	7	5	2	59/11	33.5	0.0	37.5/31	26.1	0.0	24.5/11	29.8	0.0	28
KABRE	558.0	76.2	28	20	11	0	42.7/15	25.1	0.4	28/17	18.0	-0.3	16/29	21.6	0.1	0
OKHALDHUNGA	274.5	58.2	21	9	3	1	64/9	25.4	1.3	28.1/17	17.6	-0.2	16.4/12	21.5	0.5	0
LAHAN	212.4	52.8	13	5	3	1	83.5/1	33.1	0.7	36.5/17	26.4	1.1	23.5/1	29.7	0.9	29
RAJBIRAJ	314.4	71.3	16	6	3	3	99.6/5	32.7	-0.1	37/17	26.8	2.0	24/1	29.8	1.0	27
DHANKUTA	189.1	73.8	17	5	3	1	53/1	28.2	1.4	31.4/20	21.0	0.8	19.7/13	24.6	1.1	3
DHARAN	356.4	61.2	18	9	5	2	73.1/14	32.9	1.1	37.4/18	25.6	1.8	23.4/1	29.2	1.4	28
BIRATNAGAR AIRPORT	196.9	37.1	16	7	2	1	65/10	33.6	1.5	38.5/17	26.2	0.6	24/1	29.9	1.1	29
TARAHARA	334.5	61.8	17	10	5	2	76.6/5	32.9	0.9	36.5/17	26.1	0.9	23/1	29.5	0.9	29
KHADBARI	239.3	57.6	23	10	3	0	38.6/18	29.1	-0.4	32/17	21.6	0.3	20.8/18	25.3	0.0	15
TAPLEJUNG	325.3	78.1	24	11	4	0	49/30	26.4	1.7	29.5/17	18.6	0.6	17.3/30	22.5	1.2	0
KANKAI	540.5	71.3	23	14	7	3	98.5/10	33.3	0.7	37.8/18	23.9	0.2	22/10	28.6	0.4	27