



5th April 2025

Preliminary Precipitation and Temperature Summary
March, 2025

Highlights

Precipitation over the country as a whole was 69.9% of the normal indicating below normal precipitation. Above normal maximum temperature was observed over most part of the country. Above normal minimum temperature was observed over most part of Karnali Province and isolated part of Gandaki Province, Madhesh Province and Koshi Province.

Synoptic Sequence

In March, the weather systems were primarily influenced by western disturbances and local convection. Although several western disturbances appeared as troughs from the lower to upper tropospheric levels and cyclonic circulations, only four of them had a significant impact. The western disturbance, that occurred in first week of March, brought light to moderate precipitation in Sudurpaschim Province, Karnali Province, Gandaki Province and Bagmati Province. The second disturbance, in the second week of March, affected Gandaki Province, Bagmati Province, and Koshi Province. The western disturbance, that occurred in the third week, impacted Sudurpaschim and Karnali Provinces. The western disturbance, in the fourth week, had a broader influence, affecting Koshi Province, Madhesh Province, Bagmati Province, Gandaki Province and Karnali Province.

Precipitation

Most part of Sudurpaschim Province, Karnali Province, Gandaki Province, Bagmati Province and few part of Koshi Province recorded precipitation above 10 mm. Most part of the terai region recorded very few amounts of precipitation below 10 mm. (Figure 1). Few isolated areas in Koshi Province recorded precipitation above 125 mm. Most part of Karnali Province, few part of Madhesh Province and Koshi Province, and isolated part of Gandaki Province and Bagmati Province recorded above normal Precipitation while most part of the country recorded below normal Precipitation in March 2025 (Figure 2).

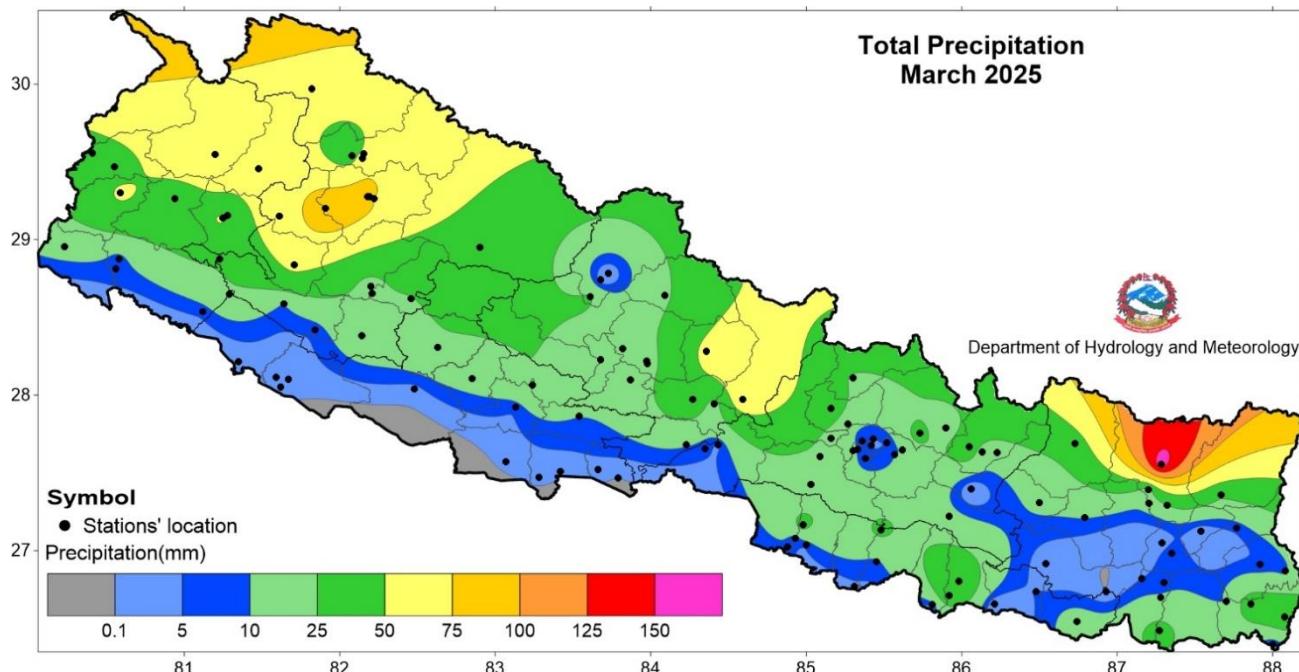


Figure 1: Total precipitation in March 2025.



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Num station recorded the highest monthly precipitation of 161.7 mm while Dunai station recorded the highest percentage of normal of 336.2% (Annex 1). Based on the average of 122 stations, Nepal received 69.9% of the normal precipitation. The highest daily precipitation of 70.7 mm was recorded at Num station on 22nd March. The temporal distribution of monthly cumulative average of daily precipitation shows that precipitation remained below normal for most time of the month (Figure 3). Over the recent five years, three years have shown a negative precipitation anomaly in March. The country averaged total precipitation of March 2025 was lower since 2023 (Figure 4).

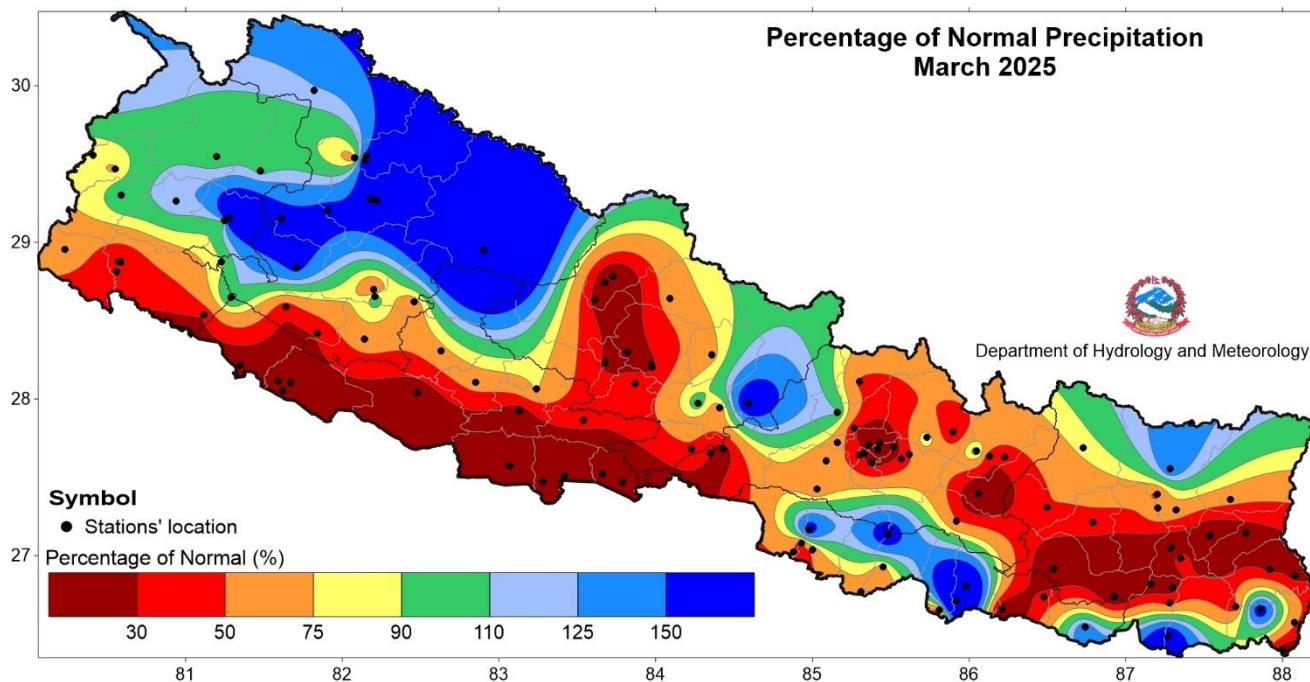


Figure 2: Percentage of normal precipitation in March 2025.

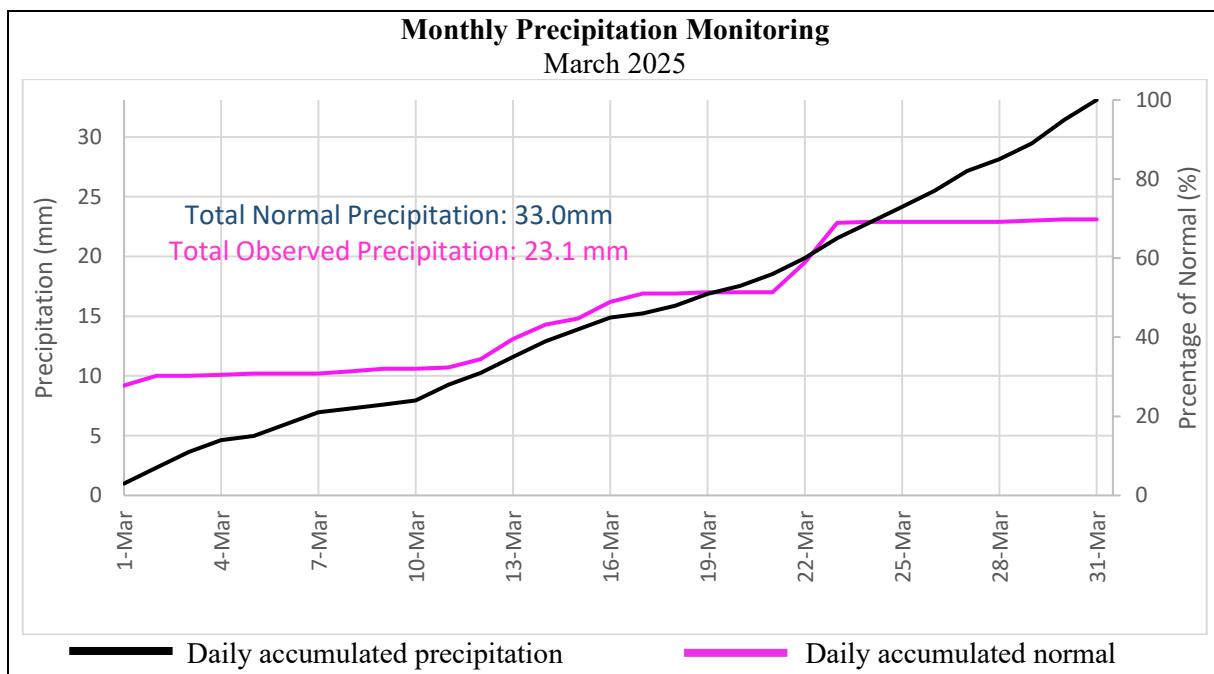


Figure 3: Cumulative average of daily normal and observed precipitation during March 2025.



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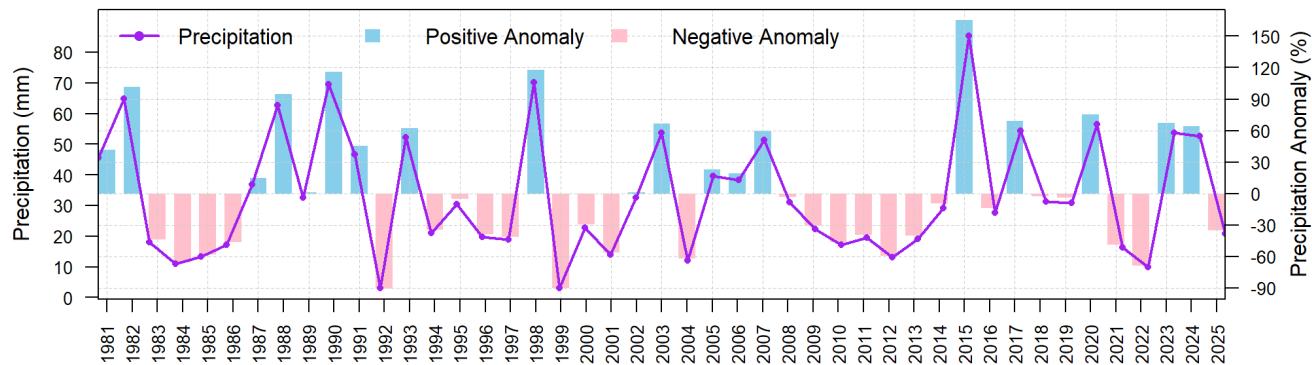


Figure 4: Monthly total precipitation (average of 105 stations) and precipitation anomaly (normal period: 1991-2020) of March

Maximum Temperature

Maximum temperature of Terai remained above 30°C, reaching over 33°C in isolated part of Madhesh Province and Lumbini Province (Figure 5). Most part of the country recorded above normal maximum temperature while few parts of Sudurpaschim Province, Gandaki Province, Bagamati Province, and Koshi Province recorded normal to below normal maximum temperature (Figure 6).

Godavari West station and Humde station recorded the highest and lowest monthly average maximum temperature of 33.7°C and 11.6°C respectively. Similarly, the highest monthly anomaly of 5.0°C was recorded at Gaur Station and the lowest of -1.8°C was recorded at Charikot station (Annex 1). The highest daily maximum temperature of 43.5°C was recorded at Godavari West station on 28th March while the lowest daily maximum temperature of 3.9°C was recorded at Humde station on 1st March. Over the recent five years, three years have shown a positive anomaly in March. The country averaged maximum temperature of March 2025 was higher since 2024 (Figure 7).

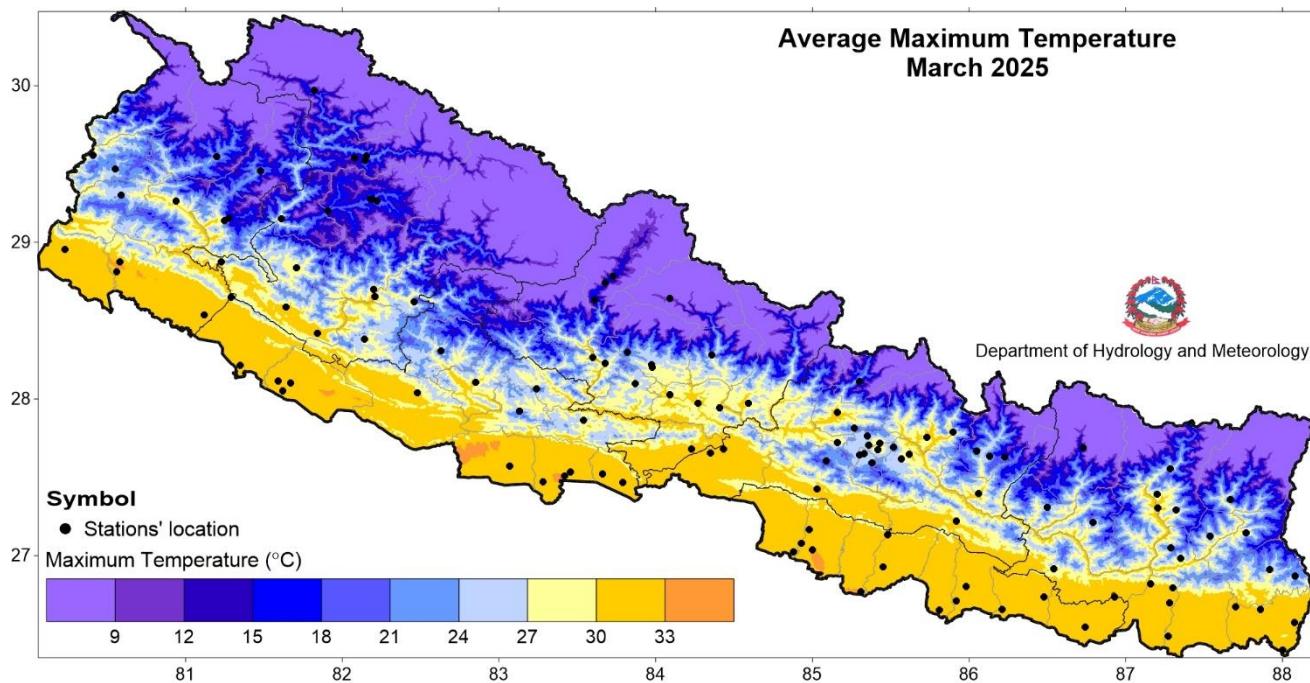


Figure 5: Maximum Temperature in March 2025.



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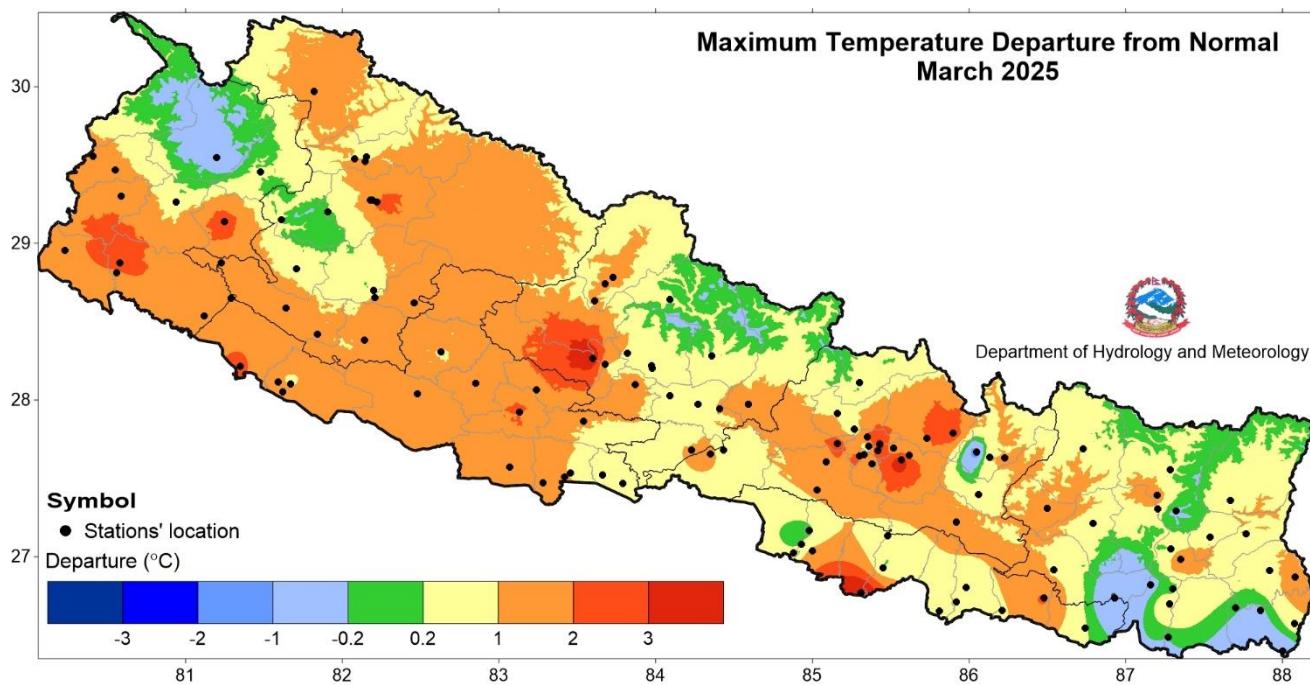


Figure 6: Departure from normal maximum temperature in March 2025.

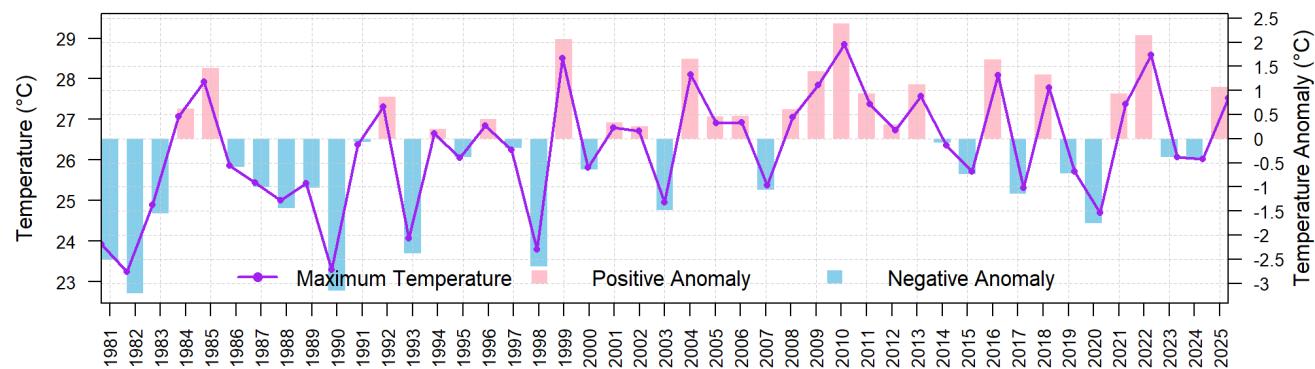


Figure 7: Monthly average maximum temperature (average of 66 stations) and temperature anomaly (normal period: 1991-2020) of March

Minimum Temperature

Minimum temperature of eastern Terai remained relatively warmer than western Terai reaching temperature above 15°C (Figure 8). Most part of Sudurpaschim Province and Bagmati Province, some part of Karnali Province, Lumbini Province, and Gandaki Province, Bagmati Province, isolated part of Madhesh Province, and Koshi Province recorded normal to below normal minimum temperature while rest of the country recorded above normal temperature (Figure 9).

Dharan Bazar station and Humde station recorded the highest and lowest monthly average minimum temperature of 18.6°C and -2.1°C respectively. Similarly, the highest monthly anomaly of 4.1°C was recorded at Siraha station and the lowest anomaly of -3.7°C was recorded at Bahrabise station (Annex 1). The highest daily minimum temperature of 24.5°C was recorded at Phattepur station on 16th March while the lowest daily



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minimum temperature of -6.0°C was recorded at Humde station on 22th March. Last five years have shown a positive anomaly of minimum temperature in March. The country's average minimum temperature in March 2025 was higher since 2023 (Figure 10).

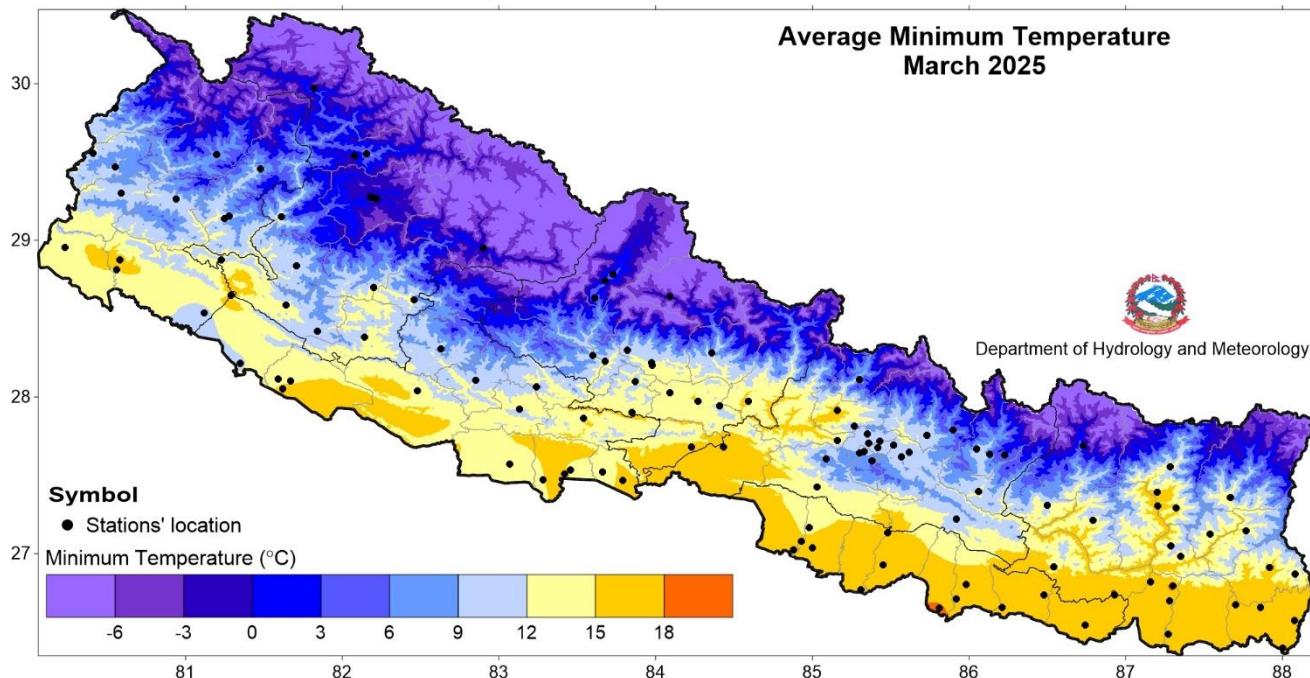


Figure 8: Minimum Temperature in March 2025.

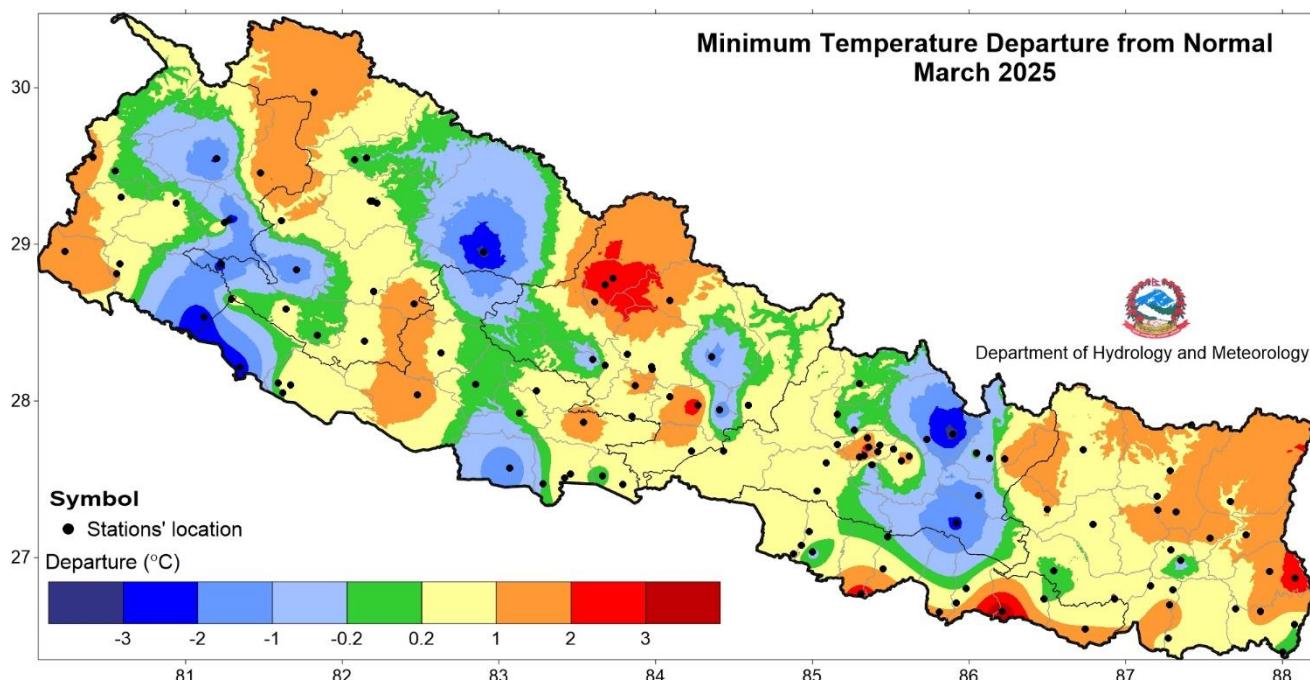


Figure 9: Departure from normal minimum temperature in March 2025.



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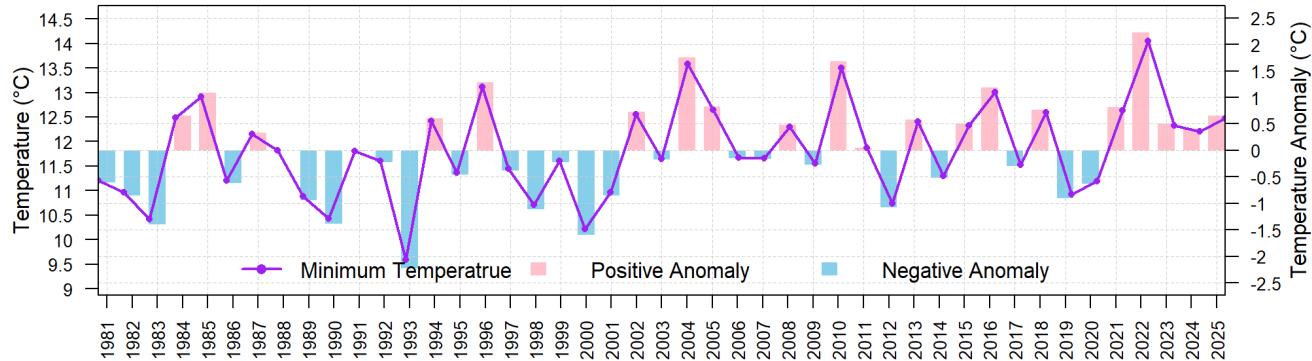


Figure 10 Monthly average minimum temperature (average of 64 stations) and temperature anomaly (normal period: 1991-2020) of March

Diurnal Temperature Range

Most part of Koshi Province, some part of Bagamati Province, and isolated part of Gandaki Province and Lumbini Province had lower diurnal temperature range while remaining part of the country had higher diurnal temperature range (Figure 11).

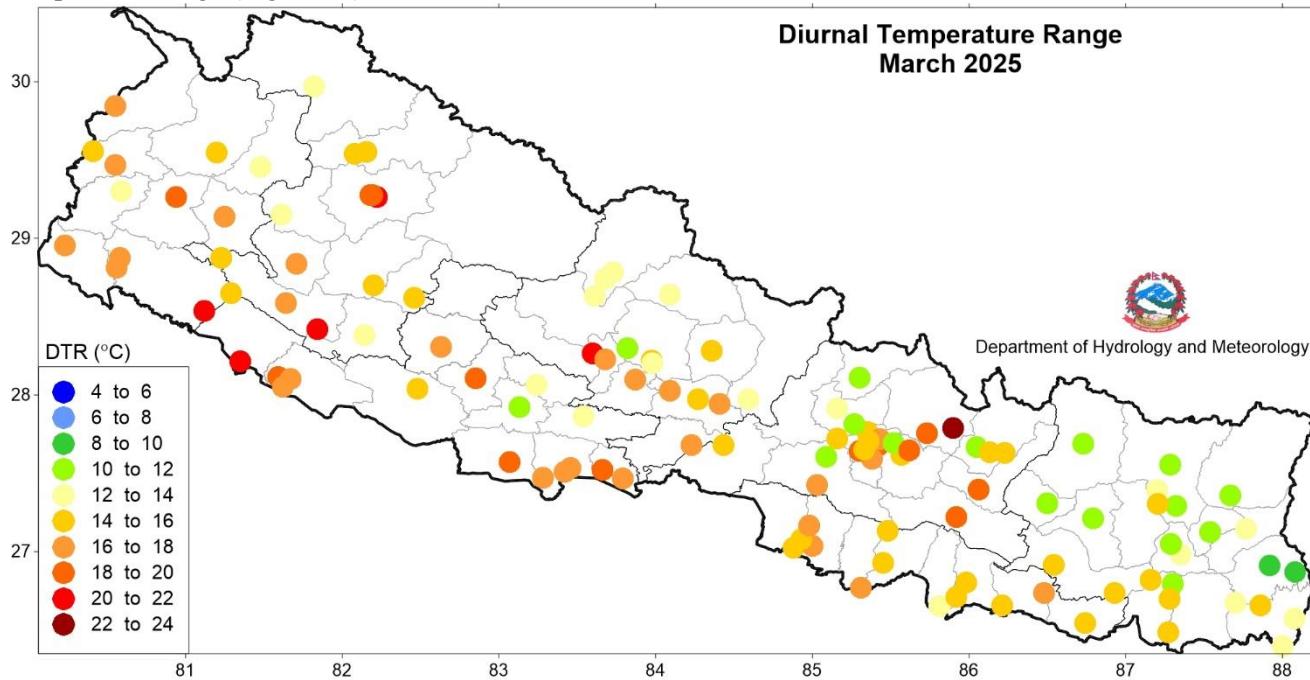


Figure 11: Diurnal Temperature Range in March 2025

Drought

Central part of the Koshi Province, most part of Lumbini Province and some part of Bagamati Province and Gandaki Province faced extreme drought condition (below normal precipitation by 70%) (Figure 2). Moderate to severe drought condition was observed over southern parts of Sudurpaschim Province and Karnali Province, most parts of Gandaki Province, Bagamati Province and Koshi Province, and some parts of Madhesh Province. Drought has been categorized based on the observed precipitation compared to normal. A drought is defined as moderate, severe and extreme as given in the table below.



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Table 1: Drought category

S.N.	Percentage of normal precipitation (%)	Drought category
1	50 - 75	Moderate drought
2	30 - 50	Severe drought
3	< 30	Extreme drought

Historical record break

Several stations broke the previous record of March extremes of precipitation, maximum and minimum temperature (Table 1 ,2 & 3).

Table 1: List of station breaking the March lowest daily minimum temperature.

S.N.	Station Name	District	Record break minimum temperature (°C)/Date	Previous highest minimum temperature (°C)/Date
1	Bahrabise	Sindhupalchowk	4.0/2025-03-02	5.5/2024-03-06

Table 2: List of station breaking the March highest daily maximum temperature

S.N.	Station Name	District	Record break maximum temperature (°C)/Date	Previous highest maximum temperature (°C)/Date
1	Talcha	Mugu	21.9/2025-03-27	21.0/2024-03-29
2	Num	Sankuwasabha	28.5/2025-03-26	28.2/2011-03-14
3	Khadbari	Sankuwasabha	33.0/2025-03-17	32.0/2022-03-15
4	Tumlingtar	Sankuwasabha	38.0/2025-03-17	36.7/2022-03-20
5	Chandragadhi Airport	Jhapa	34.2/2025-03-17	33.1/2023-03-12
6	Bijuwar Tar	Pyuthan	35.8/2025-03-29	35.1/2014-03-16
7	Libang Gaun	Rolpa	33.0/2025-03-29	32.0/2012-03-23
8	Gulariya	Bardiya	38.5/2025-03-17	37.2/2022-03-21
9	Bhairahawa Airport	Rupandehi	40.3/2025-03-28	40.2/1986-03-30
10	Parasi	Nawalparasi (West)	39.0/2025-03-28	38.5/2014-03-28
11	Lumbini	Rupandehi	39.5/2025-03-28	39.0/2004-03-26
12	Godavari West.	Kailali	43.5/2025-03-28	38.5/2010-03-25
13	Musikot (Rukumkot)	Rukum (West)	31.4/2025-03-27	31.2/2004-03-24
14	Godavari	Lalitpur	30.0/2025-03-29	29.5/2010-03-24
15	Dhulikhel	Kavrepalanchowk	32.0/2025-03-29	31.0/2022-03-19
16	Bahrabise	Sindhupalchowk	34.6/2025-03-31	33.5/2022-03-15
17	Khumaltar	Lalitpur	31.0/2025-03-29	30.5/1981-03-21
18	Panchkhal	Kavrepalanchowk	35.8/2025-03-29	34.9/2022-03-19



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19	Bhaktapur	Bhaktapur	34.0/2025-03-29	32.2/2022-03-18
20	Changu Narayan	Bhaktapur	34.5/2025-03-31	31.6/2022-03-19
21	Buddhanilakantha	Kathmandu	31.2/2025-03-30	30.0/2010-03-29
22	Khokana	Lalitpur	31.1/2025-03-29	31.0/2010-03-25
23	Baglung	Baglung	35.3/2025-03-29	34.5/1992-03-27

Table 3: List of station breaking the March highest daily precipitation

S.N.	Station Name	District	Record break daily Precipitation (mm)/Date	Previous highest Precipitation (mm)/Date
1	Darchula	Darchula	56.2/2025-03-01	43.4/2015-03-03
2	Oli Gaun (Patkani)	Achham	40.4/2025-03-01	25.5/2005-03-02
3	Jumla Airport	Jumla	52.4/2025-03-01	44.3/2015-03-03

