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01 May, 2026

Extended Range Prediction for Bhutan

Background

Extended Range Prediction (ERP) for Bhutan is prepared with the support from the Indian Meteorological Department (IMD), Government of India. The model used for the system is CFSv2 coupled model (Atmospheric and Ocean model) which runs once every week (Wednesday), with the 16 Ensemble Members at the horizontal resolution of around 25 km, and the products are made available the next day (Thursday). Therefore, the ERP products for Bhutan will be generated every Friday. ERP for Bhutan is carried out for two climate variables, rainfall and temperature.

Generally, the forecast output is produced on a weekly basis for a period of a month for both the variables. The current products available from NCHM are on pilot basis which needs further studies and validation with the ground observations until the product is fully operationalized.



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Observed weather over last week

Most of the stations across the country showed fluctuating maximum and minimum temperatures throughout the week. Rainfall was recorded in many parts of the country, with light to moderate rainfall observed at most places and heavy rainfall in isolated areas during the end of the week. The table below displays observed real time rain and temperature data from regional meteorological stations over the last week.

Station		24 Apr	25 Apr	26 Apr	27 Apr	28 Apr	29 Apr	30 Apr
Thimphu	Tmax (°C)	24.0	21.5	19.0	21.0	19.0	16.0	13.0
	Tmin (°C)	8.5	11.5	11.0	8.0	9.0	9.0	8.0
	Rain (mm)	0.0	0.0	0.0	2.6	9.3	16.8	0.2
Dagana	Tmax (°C)	26.0	22.5	17.0	20.0	24.0	17.5	17.5
	Tmin (°C)	15.0	16.5	15.0	13.5	15.0	15.0	13.0
	Rain (mm)	0.6	3.0	1.2	0.0	21.2	40.4	2.2
Bumthang	Tmax (°C)	23.5	20.0	19.5	16.5	21.0	16.0	12.5
	Tmin (°C)	10.5	10.5	9.5	10.5	8.5	7.0	8.5
	Rain (mm)	0.1	1.8	3.9	0.0	0.0	6.7	6.4
S/Jongkhar	Tmax (°C)	30.5	29.0	28.0	25.0	27.0	22.0	21.0
	Tmin (°C)	21.5	20.0	18.0	18.5	19.0	19.5	18.5
	Rain (mm)	17.0	14.2	0.6	0.0	23.0	6.8	4.8
Gasa	Tmax (°C)	20.0	19.0	16.0	16.5	23.0	10.0	10.0
	Tmin (°C)	7.0	11.0	9.0	9.0	7.0	9.0	8.0
	Rain (mm)	1.0	4.4	7.2	1.2	3.8	24.2	9.2



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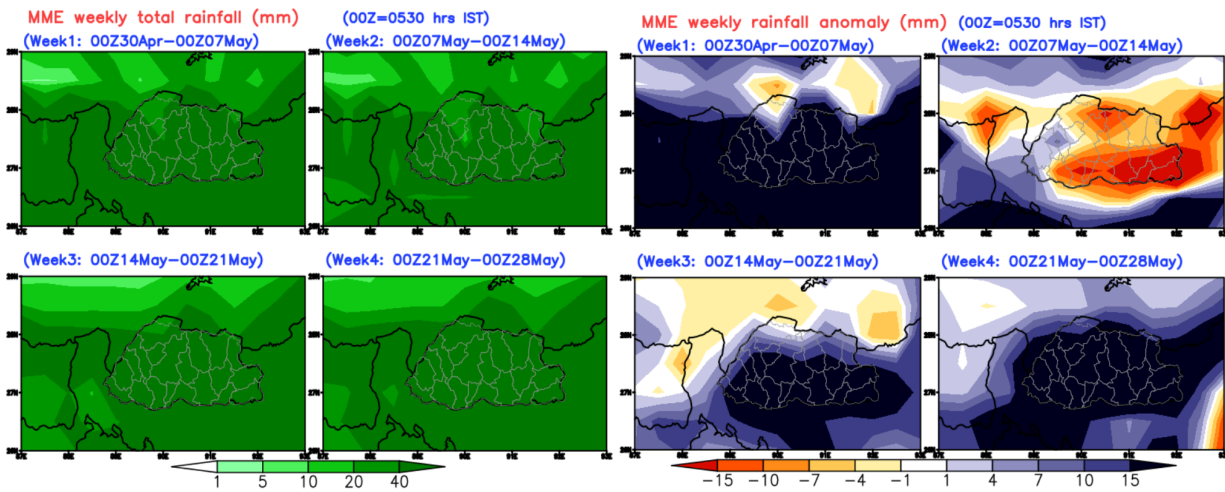
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Weekly forecast for Bhutan

1. Rainfall Prediction



Week 1 (01 May - 07 May), Week 3 (15 May - 21 May) and Week 4 (22 May - 28 May)

Above normal rainfall is expected over most parts of the country during the first, third and fourth weeks.

Week 2 (08 May - 14 May)

Below-normal rainfall is expected across most parts of the country during Week 2, with more pronounced dry conditions over the southeastern regions. However, isolated rainfall events are likely over some western parts of the country.



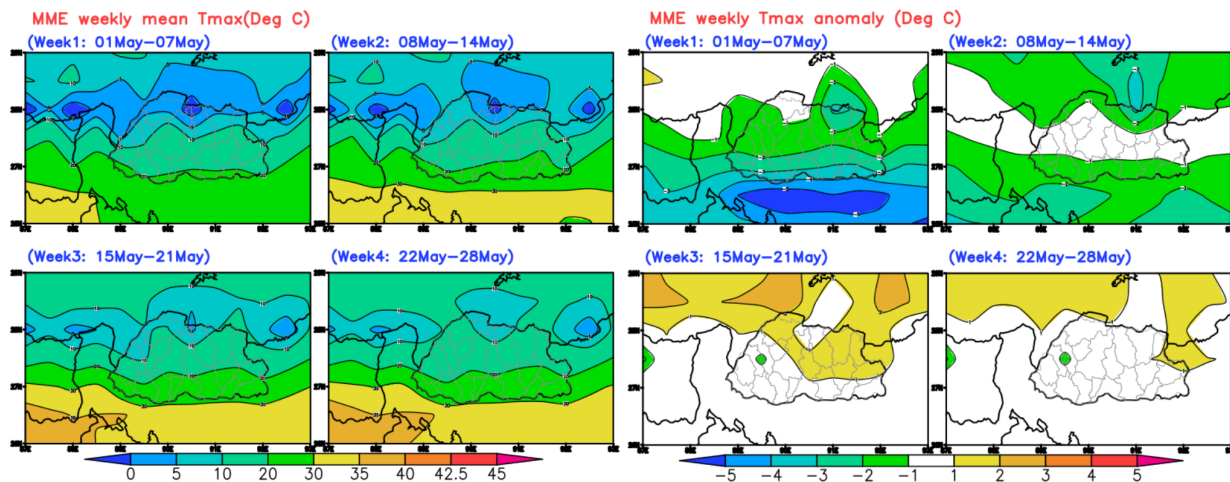
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2. Maximum Temperature Prediction



Week 1 (01 May - 07 May) and Week 2 (08 May - 14 May)

Below normal maximum temperature is expected over most parts of the country during the first two weeks. The negative anomaly is more pronounced over the southern parts, especially in Week 1.

Week 3 (15 May - 21 May) and Week 4 (22 May - 28 May)

Maximum temperatures are expected to remain near normal across most parts of the country during Weeks 3 and 4, with slightly above-normal conditions over the central and northeastern regions.



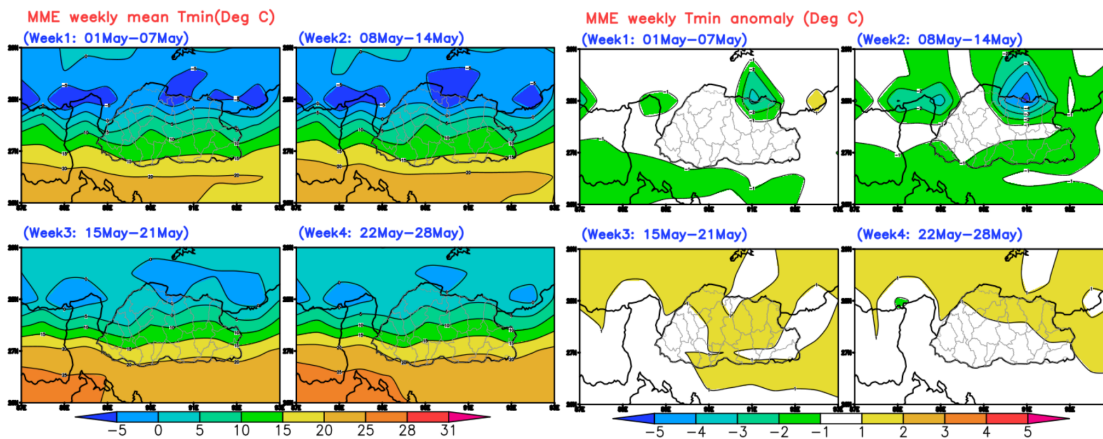
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3. Minimum Temperature Prediction



Week 1 (01 May - 07 May) and Week 2 (08 May - 14 May)

Normal to slightly below normal minimum temperature is expected over many parts of the country during the first two weeks.

Week 3 (15 May - 21 May) and Week 4 (22 May - 28 May)

Normal to above normal minimum temperature is likely over central and north-eastern parts of the country in the later parts of the week.

Summary

- Above-normal rainfall is expected during Weeks 1, 3, and 4, while Week 2 is likely to experience predominantly below-normal rainfall with drier conditions over the southeast and isolated rainfall in the west.
- Below-normal Tmax are expected in Weeks 1–2 (stronger over the south), followed by near-normal conditions in Weeks 3–4 with slight warming over central and northeastern regions.
- Tmin is expected to be normal to slightly below normal in Weeks 1–2, shifting to normal to above normal over central and northeastern regions in Weeks 3–4.



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Classification of rainfall for 24 Hours

No rainfall	0.0 mm
Very light rainfall	0.1 to 0.9 mm
Light rainfall	1.0 to 10.0 mm
Moderate rainfall	11.0 to 30.0 mm
Heavy rainfall	31.0 to 70.0 mm
Very heavy rainfall	71.0 to 150.0 mm
Extremely heavy rainfall	Equal or more than 151.0 mm