



Climate information for Health

Based on GFS and Extended Range Weather Forecast

(Valid from 30th August to 12th September 2024)

Issued on 30th August, 2024

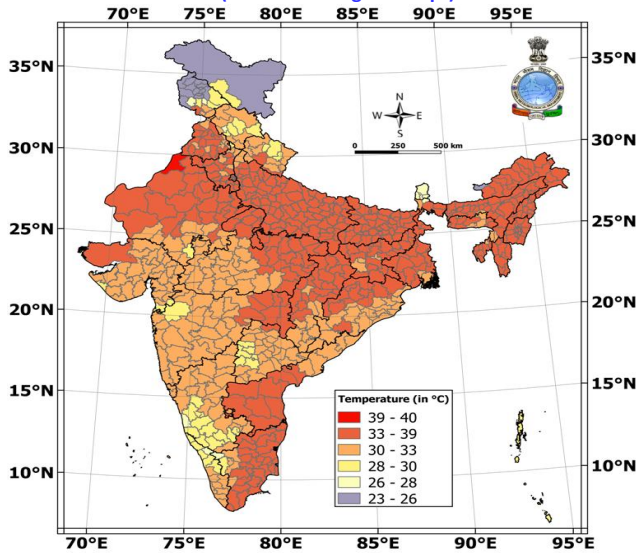
Office of Climate Research and Services, India Meteorological Department, Pune

Climate information for coming two weeks is provided for the transmission windows of temperature favorable for development of vector borne diseases like malaria and dengue based on GFS and ERFS.

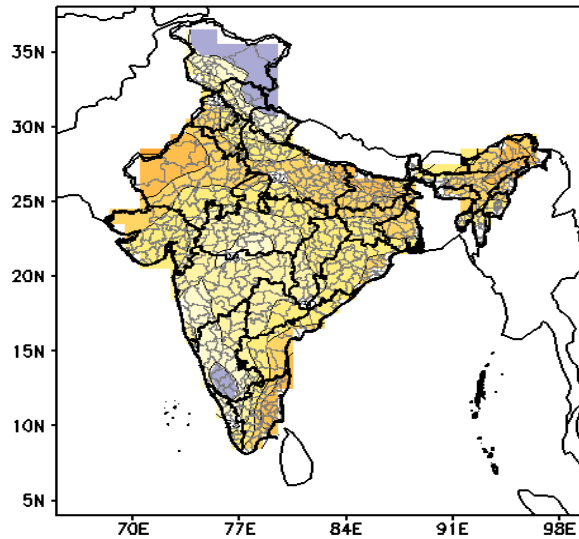
Weekly Prediction of maximum and minimum temperature

Predicted Maximum Temperature

GFS weekly Tmax (°C)
(week 1: 30 Aug – 05 Sept)

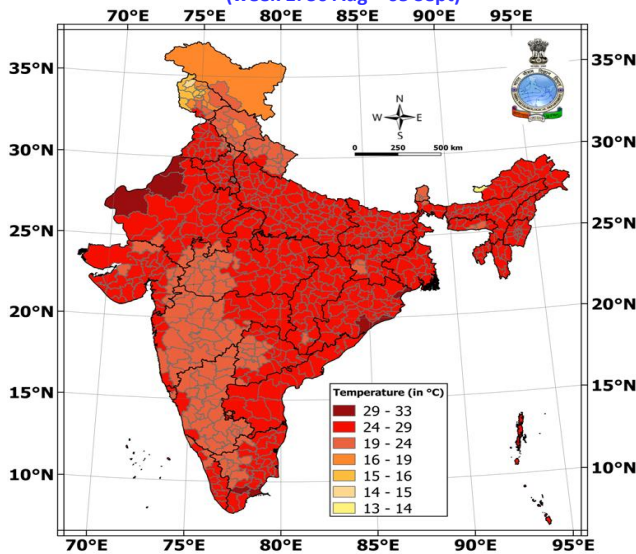


MME weekly Tmax (°C)
(week 2: 06 Sept – 12 Sept)

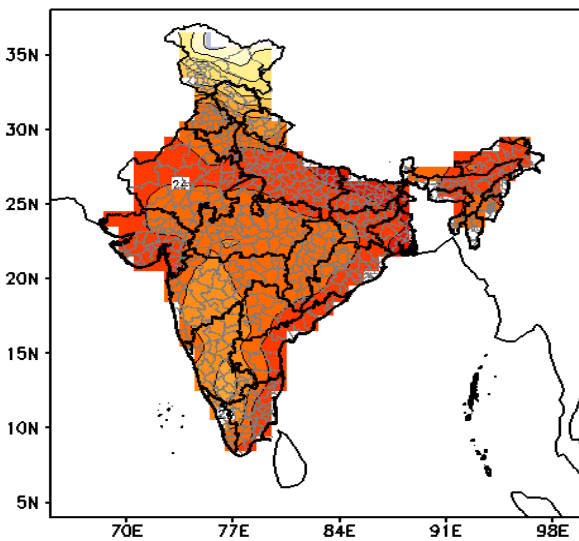


Predicted Minimum Temperature

GFS weekly Tmin (°C)
(week 1: 30 Aug – 05 Sept)



MME weekly Tmin (°C)
(week 2: 06 Sept – 12 Sept)



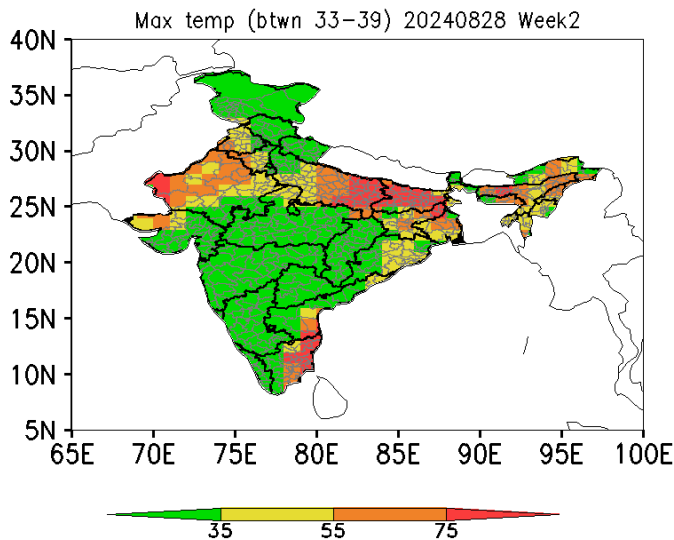
Weather Warning

Ganganagar district of Rajasthan will experience maximum temperature above 39°C during 30th August to 05th September 2024.

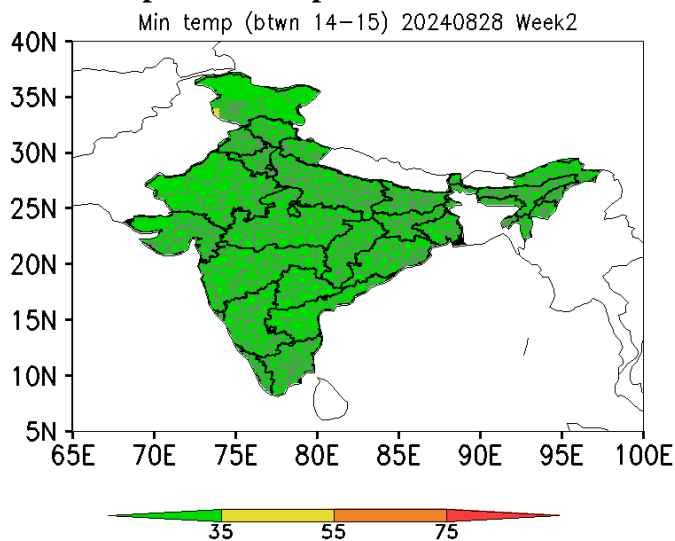
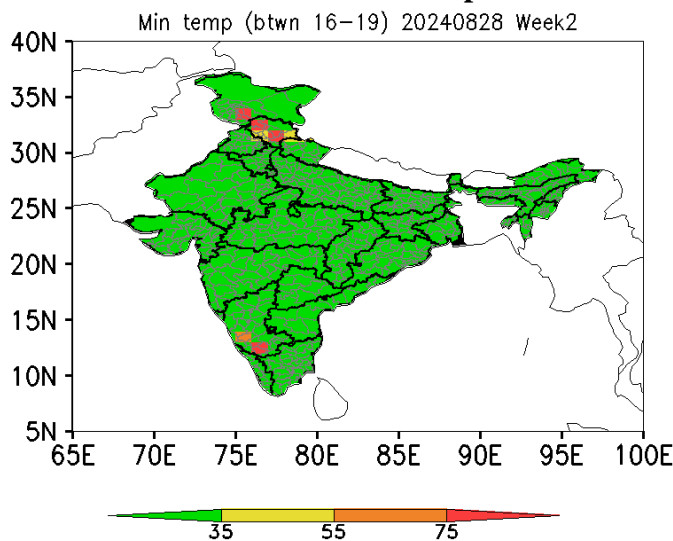
GFS based weekly evolution of transmission window for Malaria and Dengue for Week-I				
Week	VBD	Threshold temp.		Regions within the range of predicted temperatures for Tmax/Tmin or both in Threshold temperatures range.
		Th-Tmax	Th-Tmin	
30 th Aug to 05 th Sept 2024	Malaria (<i>Plasmodium falciparum</i>)	33-39 ⁰ C	16-19 ⁰ C	All districts of Delhi, Bihar, Manipur, Mizoram, Nagaland, Uttar Pradesh (except Prabudhnagar, Saharanpur), Jharkhand (except Gumla, Lohardaga, Ramgarh), Arunachal Pradesh (except Tawang), Assam (except Hailakandi, Kamrup Metro, Karimganj), Tripura (except Unakoti), major districts of Punjab, Haryana, Rajasthan, Chhattisgarh, West Bengal, Meghalaya, Andhra Pradesh, Tamil Nadu, some districts of Jammu & Kashmir, Madhya Pradesh, Maharashtra, Odisha, few districts of Ladakh (Leh), Himachal Pradesh (Hamirpur, Kullu), Uttarakhand (Pauri Garhwal, Udham Singh Nagar), Gujarat (Kachchh) and Telangana (Kumarabheem Asifabad, Virudhunagar).
	Malaria (<i>Plasmodium Vivax</i>)	33-39 ⁰ C	14-15 ⁰ C	All districts of Delhi, Bihar, Manipur, Mizoram, Nagaland, Uttar Pradesh (except Prabudhnagar, Saharanpur), Jharkhand (except Gumla, Lohardaga, Ramgarh), Arunachal Pradesh (except Tawang), Assam (except Hailakandi, Kamrup Metro, Karimganj), Tripura (except Unakoti), major districts of Punjab, Haryana, Rajasthan, Chhattisgarh, West Bengal, Meghalaya, Andhra Pradesh, Tamil Nadu, some districts of Madhya Pradesh, Maharashtra, Odisha, few districts of Jammu & Kashmir (Kupawara, Jammu), Uttarakhand (Pauri Garhwal, Udham Singh Nagar), Gujarat (Kachchh) and Telangana (Kumarabheem Asifabad, Virudhunagar).
	Dengue	Not known	11.9 ⁰ C	Nil.
ERFS based weekly evolution of transmission window for Malaria and Dengue for Week-II				
06 th to 12 th Sept 2024	Malaria (<i>Plasmodium falciparum</i>)	33-39 ⁰ C	16-19 ⁰ C	Arunachal Pradesh, Meghalaya, Nagaland, major parts of Himachal Pradesh, Punjab, Haryana, Rajasthan, Uttar Pradesh, Bihar, West Bengal, Assam, Tamil Nadu, some parts of Jammu & Kashmir, Delhi, Gujarat, Jharkhand, Odisha, Andhra Pradesh, isolated parts of Uttarakhand, Madhya Pradesh and Karnataka.
	Malaria (<i>Plasmodium Vivax</i>)	33-39 ⁰ C	14-15 ⁰ C	Arunachal Pradesh, Meghalaya, Nagaland, major parts of Punjab, Haryana, Rajasthan, Uttar Pradesh, Bihar, West Bengal, Assam, Tamil Nadu, some parts of Jammu & Kashmir, Delhi, Gujarat, Jharkhand, Odisha, Andhra Pradesh, isolated parts of Himachal Pradesh and Madhya Pradesh.
	Dengue	Not known	11.9 ⁰ C	Some parts of Jammu & Kashmir.

Weekly probabilistic outlook for prevalence of transmission window for Malaria

Predicted probabilistic Maximum Temperature map



Predicted probabilistic Minimum Temperature map



Probabilistic weekly evolution of transmission window for Malaria (*Plasmodium falciparum*).

Second week (06th to 12th Sept 2024):

1	<u>75</u> probability level		Major districts of Bihar, some districts of Uttar Pradesh, Assam, Tamil Nadu, few districts of Rajasthan, Jharkhand, West Bengal and Andhra Pradesh. Karnataka,
2	<u>55-75</u> probability level		Major districts of Rajasthan, Assam, Meghalaya, Nagaland, some districts of Punjab, Haryana, Uttar Pradesh, Jharkhand, West Bengal, Arunachal Pradesh, Tamil Nadu, few districts of Gujarat, Madhya Pradesh, Tripura and Andhra Pradesh.
3	<u>35-55</u> probability level		All districts of Tripura, major districts of Punjab, Haryana, Manipur, Mizoram, some districts of Gujarat, Uttar Pradesh, Madhya Pradesh, Jharkhand, West Bengal, Arunachal Pradesh, Assam, Odisha, Andhra Pradesh, few districts of Jammu & Kashmir, Himachal Pradesh, Nagaland and Tamil Nadu.
4	<u>Less than 35</u> probability level		Major districts in rest of states.

Probabilistic weekly evolution of transmission window for Malaria (*Plasmodium vivax*)

Second week (06th to 12th Sept 2024):

1	75 probability level	Major districts of Bihar, some districts of Uttar Pradesh, Assam, Tamil Nadu, few districts of Rajasthan, Jharkhand, West Bengal and Andhra Pradesh.
2	55-75 probability level	Major districts of Rajasthan, Assam, Meghalaya, Nagaland, some districts of Punjab, Haryana, Uttar Pradesh, Jharkhand, West Bengal, Arunachal Pradesh, Tamil Nadu, few districts of Gujarat, Madhya Pradesh, Tripura and Andhra Pradesh.
3	35-55 probability level	All districts of Tripura, major districts of Punjab, Haryana, Manipur, Mizoram, some districts of Gujarat, Uttar Pradesh, Madhya Pradesh, Jharkhand, West Bengal, Arunachal Pradesh, Assam, Odisha, Andhra Pradesh, few districts of Jammu & Kashmir, Himachal Pradesh, Nagaland and Tamil Nadu.
4	Less than 35 probability level	Major districts in rest of states.

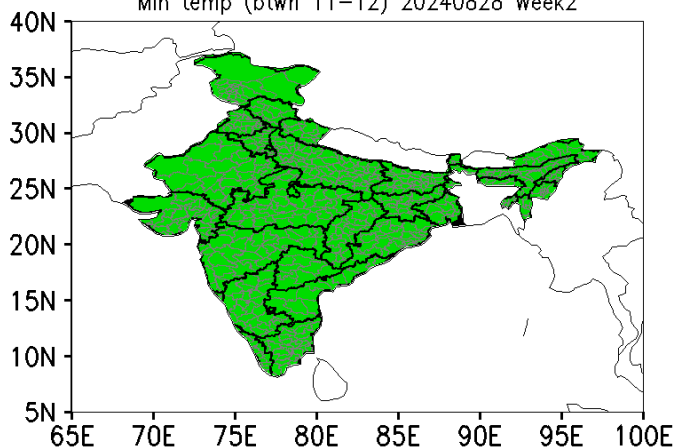
Glossary:

SN	Malaria VBD	Threshold minimum temp (Th-Tmin)	Threshold maximum temp (Th-Tmax)
1	<i>Plasmodium falciparum</i>	16-19°C	33-39°C
2	<i>Plasmodium vivax</i>	14-15°C	

Weekly probabilistic outlook for prevalence of transmission window for Dengue

Predicted probabilistic Minimum Temperature map

Min temp (btwn 11-12) 20240828 Week2



Probabilistic weekly evolution of transmission window for Dengue

Second week (06th to 12th Sept 2024):

1	75 probability level	Nil.
2	55-75 probability level	Nil.
3	35-55 probability level	Nil.
4	Less than 35 probability level	All states.

Glossary:

SN	VBD	Threshold minimum temp (Th-Tmin)	Threshold maximum temp (Th-Tmax)
1	Dengue virus	11.9°C	Not known

Verification of previous week 23rd to 29th Aug 2024 weather warning issued for development of vector borne diseases.

Following table provides the verification of previous week 23rd to 29th Aug 2024 temperature forecast issued in last week bulletin with realized temperature.

Week	VBD	Threshold temp.	Regions within the range of predicted temperatures for Tmax/Tmin or both in Threshold temperatures range.	Regions within the range of realised temperatures for Tmax/Tmin or both in Threshold temperatures range.
23 rd to 29 th Aug 2024	Malaria (Plasmodium falciparum and Vivax)	33-39 °C	All districts of Delhi, Bihar, Nagaland, Andhra Pradesh, Punjab (except Firozpur, Rup Nagar, Sas Nagar), Arunachal Pradesh (except Tawang), major districts of Haryana, Rajasthan, Uttar Pradesh, Jharkhand, West Bengal, Assam, Tamil Nadu, some districts of Gujarat, Madhya Pradesh, Manipur, Odisha, few districts of Jammu & Kashmir (Kathua, Jammu, Samba), Chhattisgarh (Balarampur, Sarguja) and Meghalaya (East, South-west & West Garo Hills).	Major districts of Arunachal Pradesh, Tamil Nadu, some districts of Assam, Andhra Pradesh, few districts of Meghalaya (South-west Garo Hills) and Nagaland (Longleng, Mokakchung, Mon).
	Malaria (Plasmodium falciparum)	16-19°C	Some districts of Jammu & Kashmir and Kullu district of Himachal Pradesh.	Major districts of Himachal Pradesh, some districts of Jammu & Kashmir, few districts of Uttarakhand (Chamoli, Uttarkashi), Arunachal Pradesh (Tawang), Manipur (Chandel), Karnataka (Hassan, Mysore) and Tamil Nadu (Coimbatore, Nilgiri, Tiruppur).
	Malaria (Plasmodium vivax)	14-15°C	Nil.	All districts of Ladakh and major districts of Jammu & Kashmir.
	Dengue virus	11.9°C	Nil.	Nil.