



Climate information for Health

Based on GFS and Extended Range Weather Forecast

(Valid from 19th April to 02nd May 2024)

Issued on 19th April, 2024

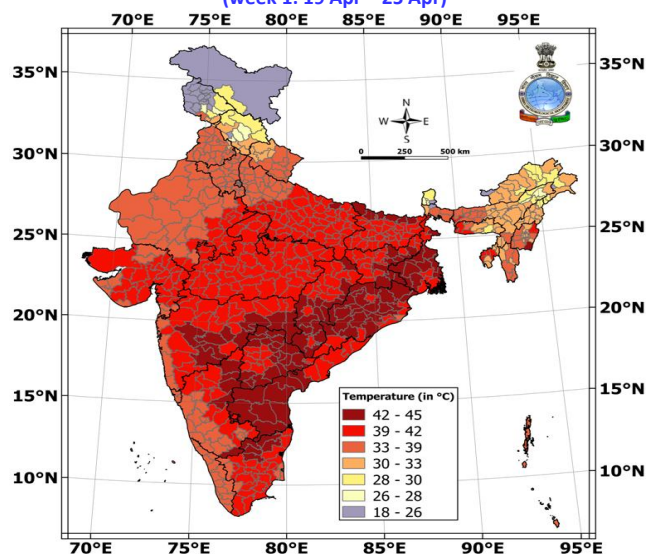
Office of Climate Research and Services, India Meteorological Department, Pune

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.

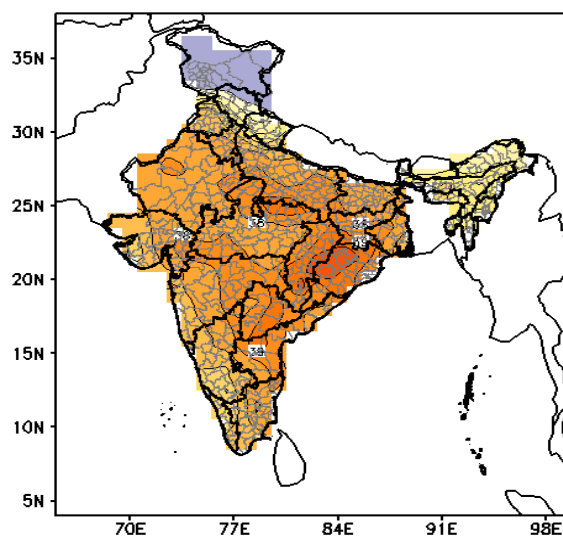
Weekly Prediction of maximum and minimum temperature

Predicted Maximum Temperature

GFS weekly Tmax (°C)
(week 1: 19 Apr – 25 Apr)

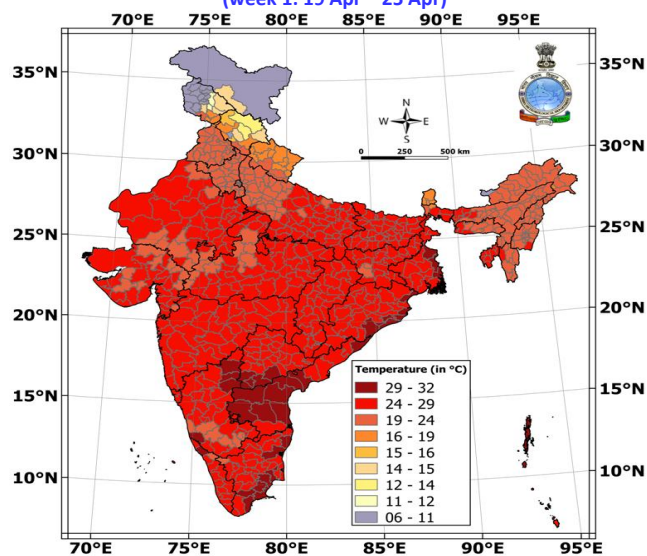


MME weekly Tmax (°C)
(week 2: 26 Apr – 02 May)

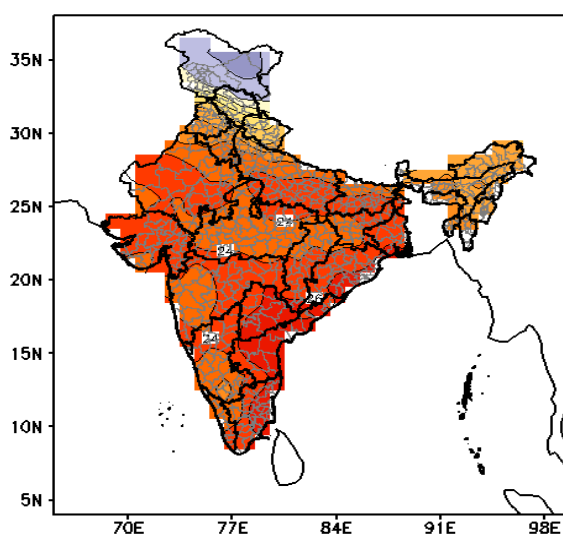


Predicted Minimum Temperature

GFS weekly Tmin (°C)
(week 1: 19 Apr – 25 Apr)



MME weekly Tmin (°C)
(week 2: 26 Apr – 02 May)



Weather Warning

- Major districts of West Bengal, Odisha, Chhattisgarh, Telangana, Andhra Pradesh, some districts of Bihar, Jharkhand, Maharashtra, Karnataka, Tamil Nadu, few districts of Uttar Pradesh (Siddharthnagar) and Manipur (Chandel) will experience maximum temperature above 42°C during 19th to 25th April 2024.

GFS based weekly evolution of transmission window for Malaria and Dengue for Week-I

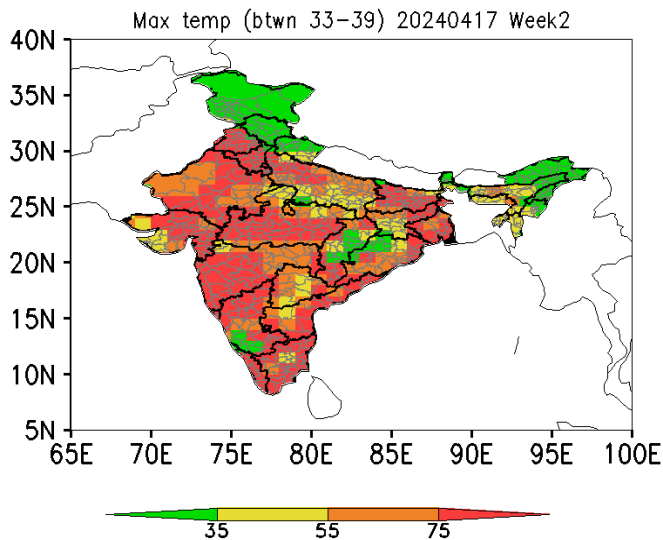
Week	VBD	Threshold temp.		Regions within the range of predicted temperatures for Tmax/Tmin or both in Threshold temperatures range.
		Th-Tmax	Th-Tmin	
19 th Apr to 25 th Apr 2024	Malaria (<i>Plasmodium falciparum</i>)	33-39 ⁰ C	16-19 ⁰ C	All districts of Delhi, Sikkim, Goa, Kerala, Punjab (except Rupnagar), Haryana (except Panchkula), Mizoram (except Kolasib, Mamit, Serchhip), major districts of Uttarakhand, Rajasthan, some districts of Jammu & Kashmir, Uttar Pradesh, Gujarat, West Bengal, Assam, Manipur, Maharashtra, Karnataka, Tamil Nadu, few districts of Himachal Pradesh (Kangra, Shimla, Una), Meghalaya (East Garo Hills), Arunachal Pradesh (Namsai).and Odisha (Jagatsinghpur).
	Malaria (<i>Plasmodium Vivax</i>)	33-39 ⁰ C	14-15 ⁰ C	All districts of Delhi, Goa, Kerala, Punjab (except Pathankot, Rupnagar), Haryana (except Panchkula), Mizoram (except Kolasib, Mamit, Serchhip), major districts of Uttarakhand, Rajasthan, some districts of Jammu & Kashmir, Uttar Pradesh, Gujarat, Assam, Manipur, Maharashtra, Karnataka, Tamil Nadu, few districts of Ladakh (Kargil), Himachal Pradesh (Kinnaur, Mandi), West Bengal (Alipurduar, Jalpaiguri, Koch Bihar), Meghalaya (East Garo Hills) and Odisha (Jagatsinghpur).
	Dengue	Not known	11.9 ⁰ C	Few districts of Jammu & Kashmir (Anantnag, Ramban).

ERFS based weekly evolution of transmission window for Malaria and Dengue for Week-II

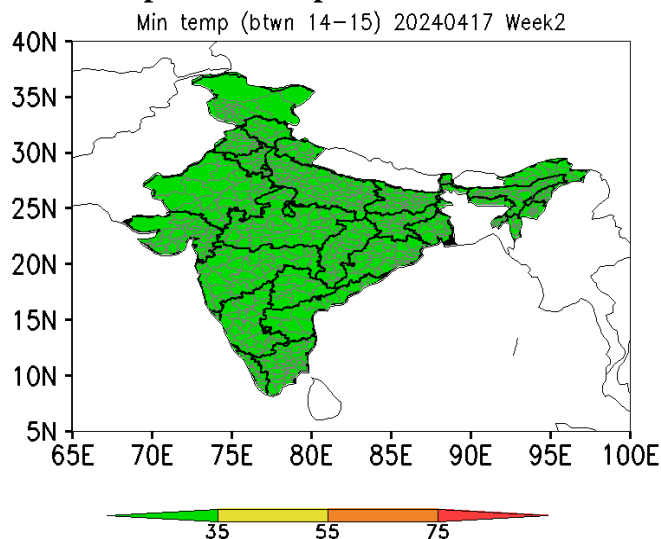
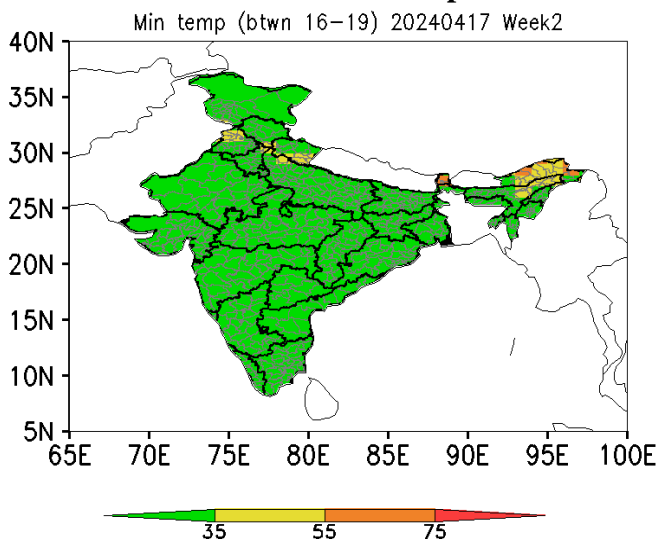
26 th Apr to 02 nd May 2024	Malaria (<i>Plasmodium falciparum</i>)	33-39 ⁰ C	16-19 ⁰ C	Haryana, Rajasthan, Gujarat, Goa, Kerala, Bihar, major parts of Punjab, Uttarakhand, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Karnataka, Tamil Nadu, some parts of Odisha and isolated parts of Himachal Pradesh.
	Malaria (<i>Plasmodium Vivax</i>)	33-39 ⁰ C	14-15 ⁰ C	Haryana, Rajasthan, Gujarat, Goa, Kerala, Bihar, major parts of Punjab, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Karnataka, Tamil Nadu, some parts of Himachal Pradesh, Uttarakhand and Odisha.
	Dengue	Not known	11.9 ⁰ C	Some parts of Jammu & Kashmir and Himachal Pradesh.

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 (19th Apr to 25th Apr 2024):

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

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

Second week (19th Apr to 25th Apr 2024):

1	75 probability level	Goa, Major districts of Punjab, Haryana, Bihar, West Bengal, Gujarat, Rajasthan, Madhya Pradesh, Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, Kerala, some districts of Uttar Pradesh, Jharkhand, Chhattisgarh, Telangana and Odisha.
2	55-75 probability level	Some districts of Rajasthan, Gujarat, Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Assam, Odisha, Chhattisgarh, Maharashtra, Telangana, Karnataka, Andhra Pradesh, few districts of Meghalaya, Tamil Nadu and Kerala.
3	35-55 probability level	Mizoram, Tripura, major districts of Meghalaya, Assam, some districts of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, Manipur, Odisha, Chhattisgarh, Madhya Pradesh, Gujarat, Telangana, Tamil Nadu, few districts of Jammu & Kashmir, Rajasthan, Maharashtra, Andhra Pradesh and West Bengal.
4	Less than 35 probability level	Major districts in rest of states.

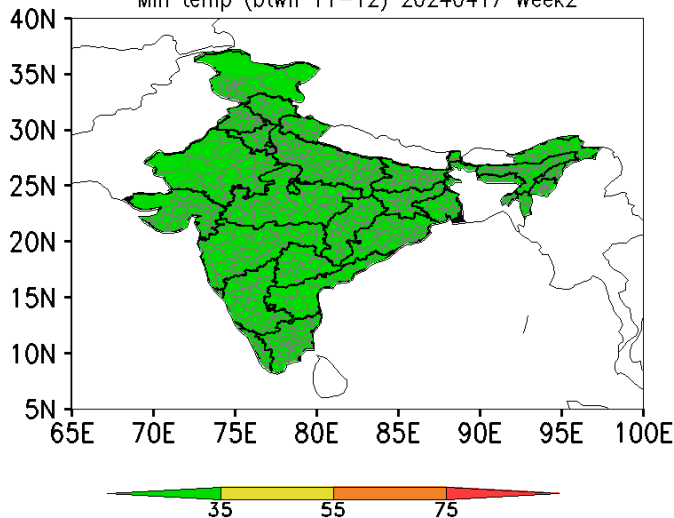
Glossary:

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) 20240417 Week2



Probabilistic weekly evolution of transmission window for Dengue

Second week (19th Apr to 25th Apr 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 12th to 18th April 2024 weather warning issued for development of vector borne diseases.

Following table provides the verification of previous week 12th to 18th April 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.
12 th Apr to 18 th Apr 2024	Malaria (<i>Plasmodium falciparum</i> and <i>Vivax</i>)	33-39 °C	All districts of Delhi, Jharkhand, Mizoram, Odisha, Goa, Haryana (except Panchkula), Assam (except Dhubri, Charaideo, Kamrup Metro), Manipur (except Chandel, Ukhrul), Chhattisgarh (except Balarampur, Bijapur), Kerala (except Trishur), Tamil Nadu (except Teni, Vellore), major districts of Punjab, Rajasthan, Uttar Pradesh, Bihar, Madhya Pradesh, West Bengal, Arunachal Pradesh, Meghalaya, Tripura, Maharashtra, Telangana, Karnataka, some districts of Uttarakhand, Gujarat, Andhra Pradesh and few districts of Jammu & Kashmir (Jammu).	All districts of Delhi, Gujarat, Madhya Pradesh, Maharashtra, Goa, Chhattisgarh, Jharkhand Odisha, Rajasthan (except Ganganagar), Bihar (except Kishanganj), Mizoram (except Kolasib, Mamit), Andhra Pradesh (except Cuddapah, Kurnool), Tamil Nadu (except Nilgiri, Teni), major districts of Haryana, Uttar Pradesh, West Bengal, Telangana, Karnataka, Kerala, some districts of Manipur, few districts of Arunachal Pradesh (Changlang, Tawang), Assam (Baksa) and Meghalaya (West Garo Hills).
	Malaria (<i>Plasmodium falciparum</i>)	16-19°C	All districts of Sikkim (except North Sikkim), major districts of Himachal Pradesh, Punjab, Uttarakhand, few districts of Jammu & Kashmir (Kathua, Samba), Haryana (Panchkula), West Bengal (Kalimpong) and Nagaland (Kiphire).	All districts of Nagaland (except Peren), major districts of Punjab, Arunachal Pradesh, Meghalaya, some districts of Uttarakhand, Haryana, Uttar Pradesh, Assam, few districts of Himachal Pradesh (Sirmaur, Solan), West Bengal (Darjeeling, Jalpaiguri) and Karnataka (Hassan).
	Malaria (<i>Plasmodium vivax</i>)	14-15°C	Few districts of Ladakh (Kargil), Jammu & Kashmir (Kishtwar, Udhampur) and Himachal Pradesh (Bilaspur, Mandi).	Few districts of Uttarakhand (Bageshwar, Pithoragarh, Uttarkashi).
	Dengue virus	11.9°C	Few districts of Ladakh (Leh), Jammu & Kashmir (Reasi) and Himachal Pradesh (Hamirpur).	Few districts of Himachal Pradesh (Chamba, Kinnaur).