



Climate information for Health

Based on GFS and Extended Range Weather Forecast

(Valid from 10th May to 23th May 2024)

Issued on 10th May, 2024

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

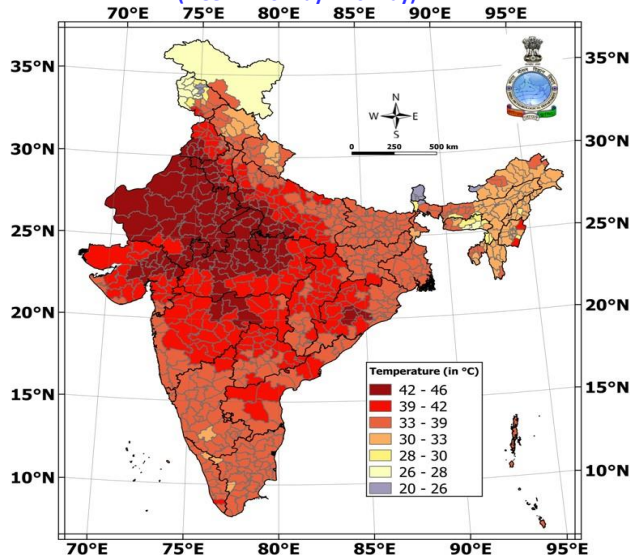
Climate information for coming two weeks is provided for the transmission windows of temperature favorable for development of vector borne diseases like malaria and dengue based on GFS and ERFS.

Weekly Prediction of maximum and minimum temperature

Predicted Maximum Temperature

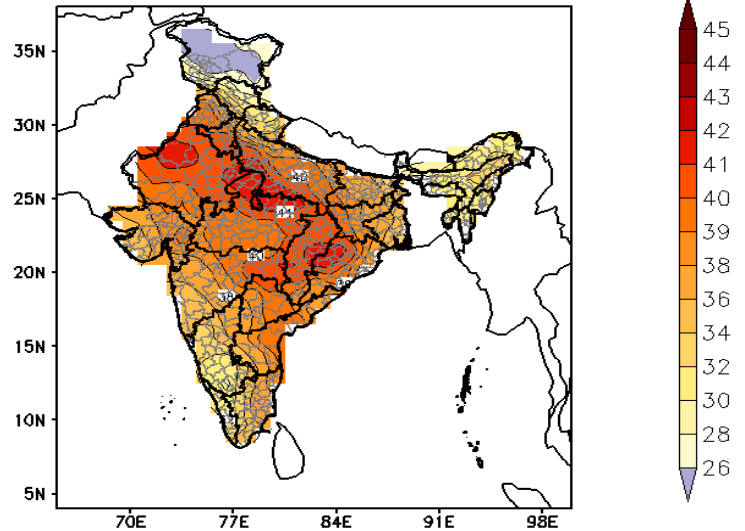
GFS weekly Tmax (°C)

(week 1: 10 May – 16 May)



MME weekly Tmax (°C)

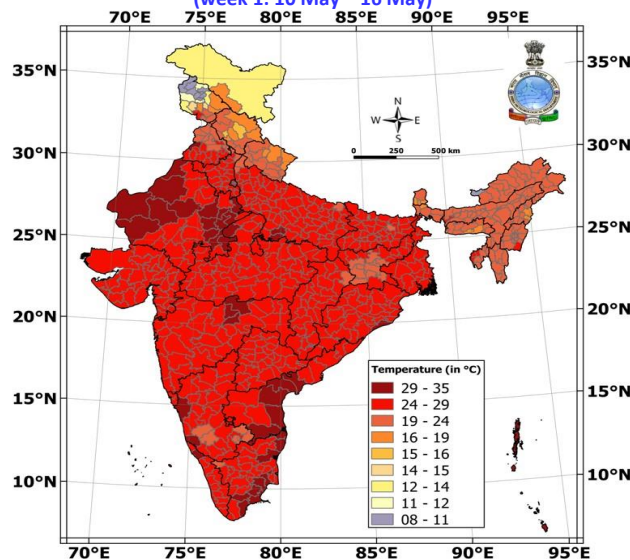
(week 2: 17 May – 23 May)



Predicted Minimum Temperature

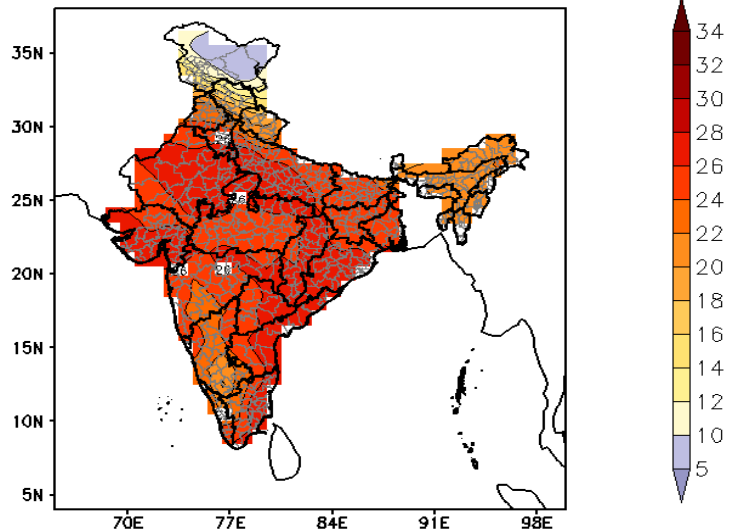
GFS weekly Tmin (°C)

(week 1: 10 May – 16 May)



MME weekly Tmin (°C)

(week 2: 17 May – 23 May)



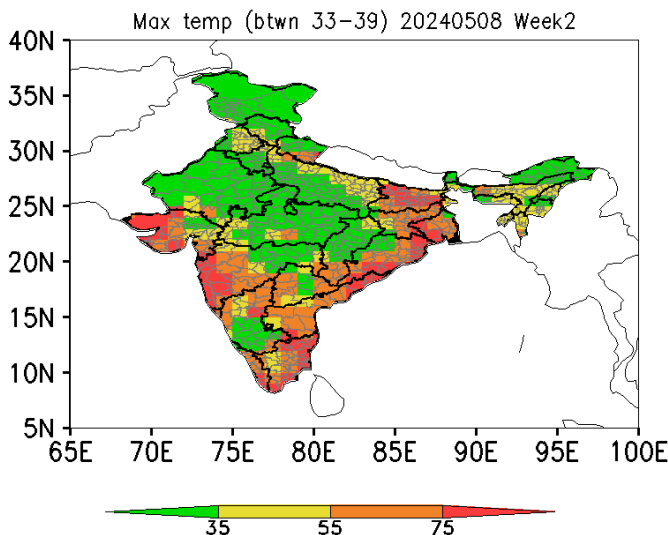
Weather Warning

All districts of Rajasthan (except Sirohi), some districts of Punjab, Haryana, Uttar Pradesh Madhya Pradesh, Gujarat Maharashtra, few districts of Odisha (Bauda, Kandhamal, Nayagarh), will experience maximum temperature above 42°C during 10th to 16th May 2024.

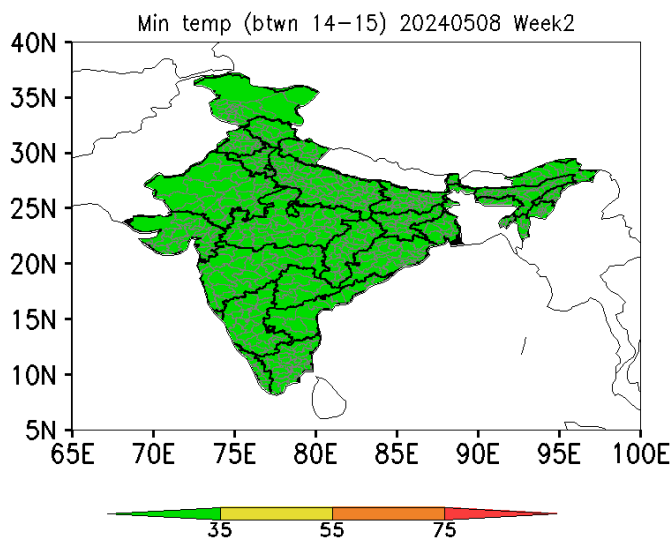
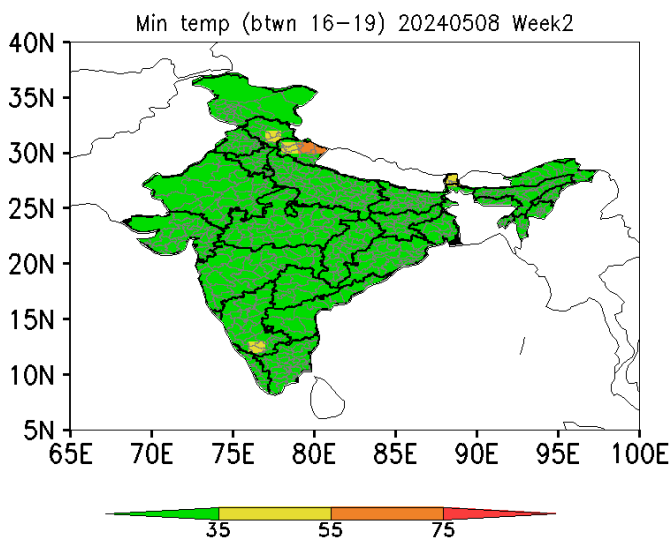
GFS based weekly evolution of transmission window for Malaria and Dengue for Week-I				
Week	VBD	Threshold temp.		Regions within the range of predicted temperatures for Tmax/Tmin or both in Threshold temperatures range.
		Th-Tmax	Th-Tmin	
10 th to 16 th May 2024	Malaria (<i>Plasmodium falciparum</i>)	33-39 ⁰ C	16-19 ⁰ C	All districts of Goa, Bihar, Uttarakhand (except Champawat, Almora, Bageshwar), Jharkhand (except Paschim Singhbhum), West Bengal (except Darjeeling, Kolkata, Malda), Karnataka (except Bidar, Gulbarga, Hassan), Kerala (except Kollam, Wayanad), Tamil Nadu (except Teni, Nilgiri), some districts of Jammu & Kashmir, Himachal Pradesh, Punjab, Uttar Pradesh, Assam, Meghalaya, Tripura, Odisha, Chhattisgarh, Telangana, Andhra Pradesh, Maharashtra, Gujarat, few districts of Ladakh (Kargil), Haryana (Kurukshetra, Panchkula, Yamunanagar), Sikkim (East, West, South Sikkim), Mizoram (Saiha), Nagaland (Kiphire, Tuensang) and Arunachal Pradesh (Dibang Valley, Kra Daadi, Kurung Kumey).
	Malaria (<i>Plasmodium Vivax</i>)	33-39 ⁰ C	14-15 ⁰ C	All districts of Goa, Bihar, Jharkhand (except Paschim Singhbhum), Karnataka (except Bidar, Gulbarga, Hassan), Kerala (except Kollam, Wayanad), Tamil Nadu (except Teni, Nilgiri), major districts of Uttarakhand, West Bengal, some districts of Jammu & Kashmir, Himachal Pradesh, Punjab, Uttar Pradesh, Assam, Tripura, Odisha, Chhattisgarh, Telangana, Andhra Pradesh, Maharashtra, Gujarat, few districts of Ladakh (Kargil), Haryana (Kurukshetra, Panchkula, Yamunanagar), Meghalaya (South, West and South-West Garo Hills), Mizoram (Saiha) and Arunachal Pradesh (Dibang Valley, Kra Daadi, Kurung Kumey).
	Dengue	Not known	11.9 ⁰ C	Bandipore, Punch and Kulgam districts of Jammu & Kashmir.
ERFS based weekly evolution of transmission window for Malaria and Dengue for Week-II				
17 th to 23 rd May 2024	Malaria (<i>Plasmodium falciparum</i>)	33-39 ⁰ C	16-19 ⁰ C	Goa, major parts of Uttarakhand, Bihar, Jharkhand, West Bengal, Nagaland, Gujarat, Maharashtra, Karnataka, Tamil Nadu, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Assam, Odisha, Andhra Pradesh, Telangana, Kerala, isolated parts of Arunachal Pradesh, Chhattisgarh and Rajasthan.
	Malaria (<i>Plasmodium Vivax</i>)	33-39 ⁰ C	14-15 ⁰ C	Goa, major parts of Uttarakhand, Bihar, Jharkhand, West Bengal, Nagaland, Gujarat, Maharashtra, Karnataka, Tamil Nadu, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Assam, Odisha, Andhra Pradesh, Telangana, Kerala, isolated parts of Arunachal Pradesh, Chhattisgarh and Rajasthan.
	Dengue	Not known	11.9 ⁰ C	Some parts of Jammu & Kashmir and isolated parts of 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 (17th to 23rd May 2024):

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

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

Second week (17th to 23rd May 2024):

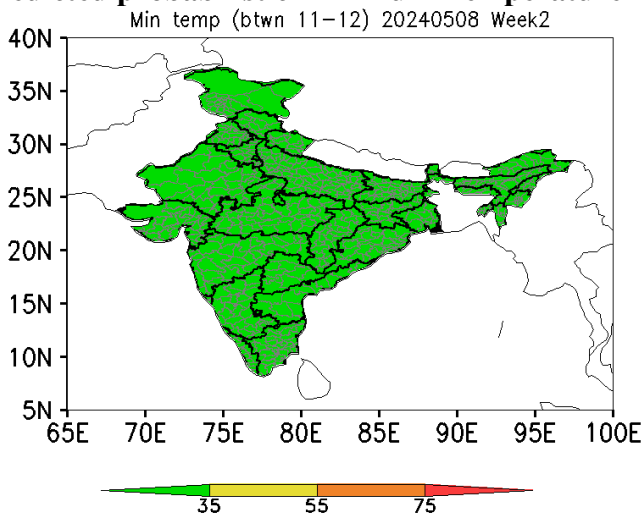
1	75 probability level	Some districts of Gujarat, Maharashtra, Kerala, Tamil Nadu, Andhra Pradesh, Odisha, West Bengal, Bihar, few districts of Uttarakhand, Rajasthan, Jharkhand, Karnataka and Goa.
2	55-75 probability level	Major districts of Jharkhand, Andhra Pradesh, Kerala, some districts of Uttarakhand,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



Probabilistic weekly evolution of transmission window for Dengue

Second week (17th to 23rd May 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 03rd May to 09th May 2024 weather warning issued for development of vector borne diseases.

Following table provides the verification of previous week 03rd May to 09th May 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.
03 rd May to 09 th May 2024	Malaria (<i>Plasmodium falciparum</i> and <i>Vivax</i>)	33-39 °C	All districts of Goa, Uttarakhand (except Champawat, Chamoli, Rudraprayag), Punjab (except Firozpur), Kerala (except Wayanad), major districts of Bihar, some districts of Haryana, Delhi, Uttar Pradesh, Assam, Tripura, West Bengal, Odisha, Gujarat, Maharashtra, Karnataka, Tamil Nadu, few districts of Jammu & Kashmir (Kathua, Samba), Himachal Pradesh (Kangra, Una), Rajasthan (Sirohi), Jharkhand (Sahebganj), Meghalaya (South, West and South-West Garo Hills), Mizoram (Saiha), Manipur (Churachandpur, Tamenglong, Chandel), and Andhra Pradesh (Srikakulam, Vishakhapatnam).	All districts of Delhi, Chhattisgarh, Goa, Haryana (except Panchkula, Yamunanagar, Ambala), Jharkhand (except Sahebganj), Gujarat, (except Ahmadabad, Gandhinagar), major districts of Uttar Pradesh, West Bengal, Odisha, Karnataka, Tamil Nadu, Kerala, some districts of Rajasthan, Bihar, Madhya Pradesh Maharashtra, Andhra Pradesh and few districts of Jammu & Kashmir (Samba).
	Malaria (<i>Plasmodium falciparum</i>)	16-19°C	Some districts of Himachal Pradesh, Uttarakhand, few districts of Jammu & Kashmir (Reasi, Udhampur), Sikkim (East, West Sikkim) and Nagaland (Kiphire, Tuensang).	All districts of Nagaland, Arunachal Pradesh (except Tawang), Meghalaya (except West and South-West Garo Hills), major districts of Uttarakhand, Assam, some districts of Manipur, few districts of Jammu & Kashmir (Kathua), Himachal Pradesh (Sirmaur, Una), Punjab (Hoshiarpur, Pathankot, Rupnagar) and West Bengal (Darjeeling, Jalpaiguri).
	Malaria (<i>Plasmodium vivax</i>)	14-15°C	Hamirpur districts of Himachal Pradesh.	Few districts of Himachal Pradesh (Chamba, Shimla), Uttarakhand (Chamoli) and Manipur (Chandel).
	Dengue virus	11.9°C	Some districts of Himachal Pradesh, Uttarakhand, few districts of Jammu & Kashmir (Reasi, Udhampur), Sikkim (East, West Sikkim) and Nagaland (Kiphire, Tuensang).	Ramban districts of Jammu & Kashmir.