



## Climate information for Health

Based on GFS and Extended Range Weather Forecast

(Valid from 03<sup>rd</sup> September to 16<sup>th</sup> September, 2021)

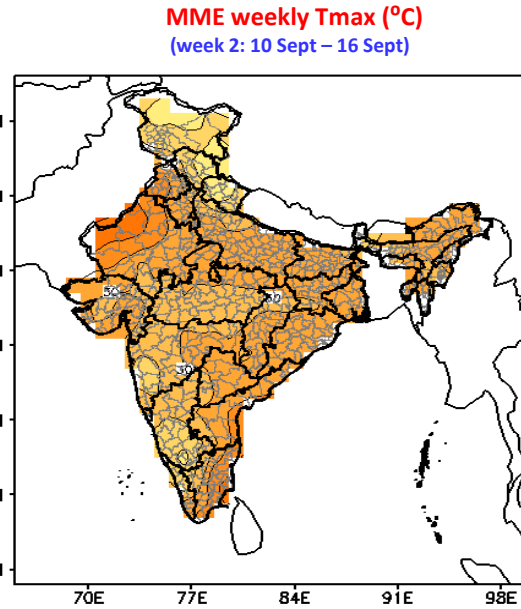
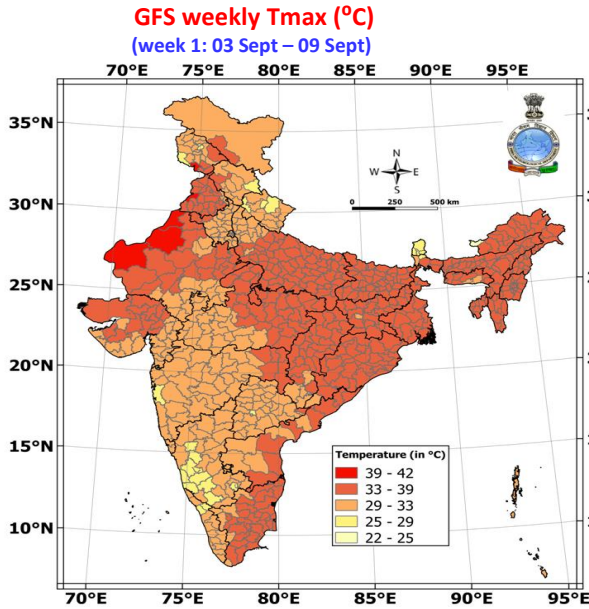
Issued on 03<sup>rd</sup> September, 2021

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

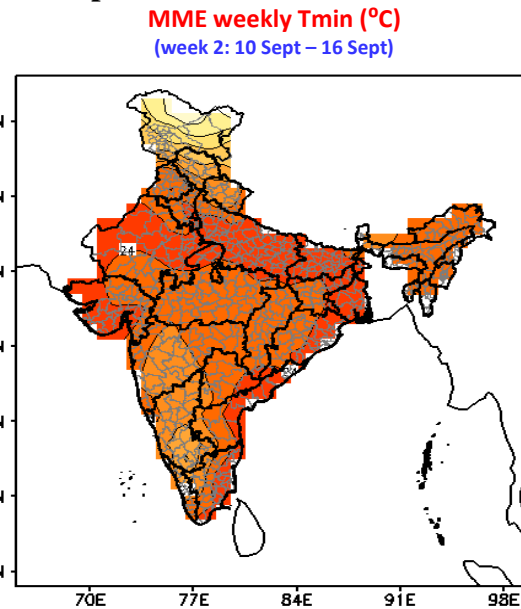
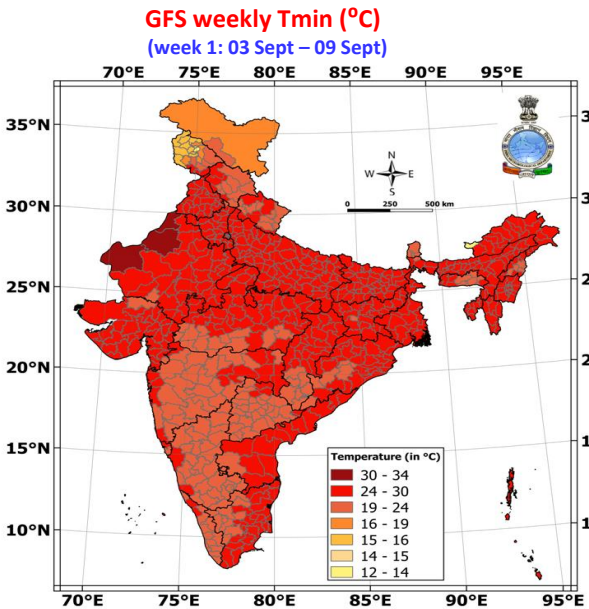
Climate information for coming two weeks is provided for the transmission windows of temperature favorable for development of vector borne diseases like malaria and dengue based on GFS and ERFS.

### Weekly Prediction of maximum and minimum temperature

#### Predicted Maximum Temperature



#### Predicted Minimum Temperature



#### Weather Warning

- Few districts of Jammu & Kashmir, Punjab and Rajasthan will experience maximum temperature above 39°C during 03<sup>rd</sup> to 09<sup>th</sup> September 2021.

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

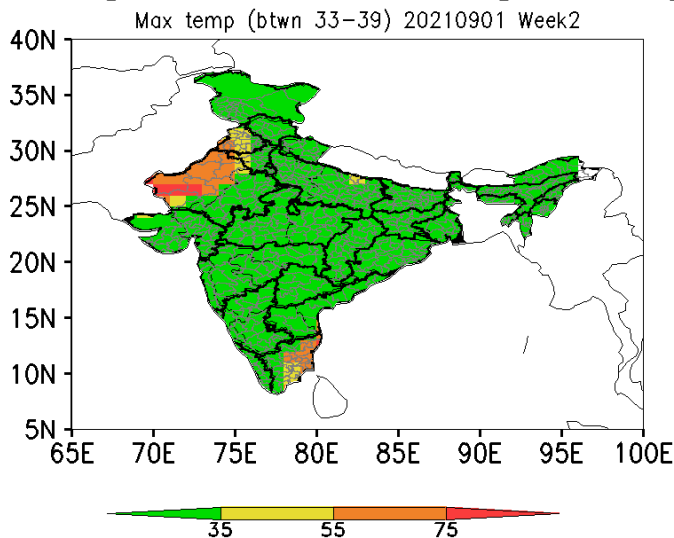
Week	VBD	Threshold temp.		Regions within the range of predicted temperatures for Tmax/Tmin or both in Threshold temperatures range.
		Th-Tmax	Th-Tmin	
03 <sup>rd</sup> to 09 <sup>th</sup> Sept 2021	Malaria ( <i>Plasmodium falciparum</i> )	33-39 <sup>o</sup> C	16-19 <sup>o</sup> C	All districts of Ladakh, Bihar, Assam, Nagaland, Manipur, Mizoram, Tripura, Punjab (except Rup Nagar, Sas Nagar, Firozpur), Jharkhand (except Lohardaga), Arunachal Pradesh (except Tawang), Meghalaya ( except East & South-West Khasi Hills), West Bengal (except Kalimpong, Darjeeling), Odisha (except Malkangiri), major districts of Rajasthan, Uttar Pradesh, Chhattisgarh, Andhra Pradesh, Tamil Nadu, some districts of Jammu & Kashmir, Gujarat, Madhya Pradesh, Maharashtra, few districts of Himachal Pradesh (Una, Kangra) and Haryana (Fatehabad, Sirsa).
	Malaria ( <i>Plasmodium Vivax</i> )	33-39 <sup>o</sup> C	14-15 <sup>o</sup> C	All districts of Bihar, Assam, Nagaland, Manipur, Mizoram, Tripura, Punjab (except Rup Nagar, Sas Nagar, Firozpur), Jharkhand (except Lohardaga), Arunachal Pradesh (except Tawang), Meghalaya ( except East & South-West Khasi Hills), West Bengal (except Kalimpong, Darjeeling), Odisha (except Malkangiri), major districts of Rajasthan, Uttar Pradesh, Chhattisgarh, Andhra Pradesh, Tamil Nadu, some districts of Jammu & Kashmir, Gujarat, Madhya Pradesh, Maharashtra, few districts of Ladakh (Kargil), Himachal Pradesh (Una, Kangra) and Haryana (Fatehabad, Sirsa).
	Dengue	Not known	11.9 <sup>o</sup> C	Nil.

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

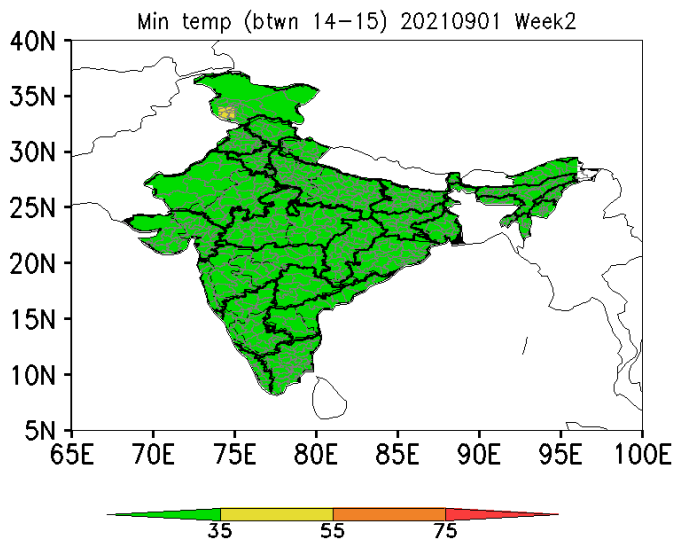
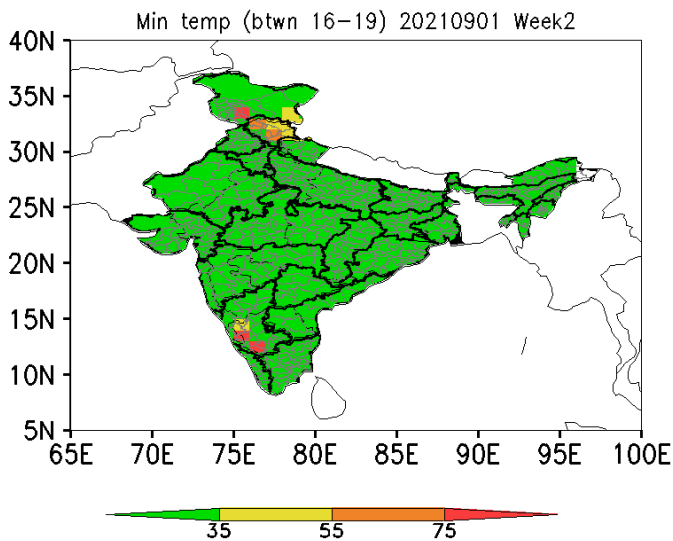
10 <sup>th</sup> to 16 <sup>th</sup> Sept 2021	Malaria ( <i>Plasmodium falciparum</i> )	33-39 <sup>o</sup> C	16-19 <sup>o</sup> C	Major parts of Himachal Pradesh, some parts of Jammu & Kashmir, Punjab, Rajasthan, Tamil Nadu, Karnataka, Kerala, isolated parts of Uttarakhand and Andhra Pradesh.
	Malaria ( <i>Plasmodium Vivax</i> )	33-39 <sup>o</sup> C	14-15 <sup>o</sup> C	Some parts of Jammu & Kashmir, Punjab, Rajasthan, Tamil Nadu and isolated parts of Andhra Pradesh.
	Dengue	Not known	11.9 <sup>o</sup> C	Isolated 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 (10<sup>th</sup> to 16<sup>th</sup> Sept 2021):**

1	<b>75</b> probability level		Few districts of Jammu & Kashmir, Rajasthan and some districts of Karnataka.
2	<b>55-75</b> probability level		Some districts of Himachal Pradesh, Punjab, Rajasthan and Tamil Nadu.
3	<b>35-55</b> probability level		Major districts of Punjab, some districts of Himachal Pradesh, Haryana, Tamil Nadu, few districts of Jammu & Kashmir, Rajasthan, Uttar Pradesh and Karnataka.
4	<b>Less than 35</b> probability level		Major districts in rest of states.

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

**Second week (10<sup>th</sup> to 16<sup>th</sup> Sept 2021):**

1	<b>75</b> probability level	Red	Few districts of Rajasthan.
2	<b>55-75</b> probability level	Orange	Some districts of Punjab, Rajasthan and Tamil Nadu.
3	<b>35-55</b> probability level	Yellow	Major districts of Punjab, some districts of Haryana, Tamil Nadu, few districts of Jammu & Kashmir, Rajasthan and Uttar Pradesh.
4	<b>Less than 35</b> probability level	Green	Major districts in rest of states.

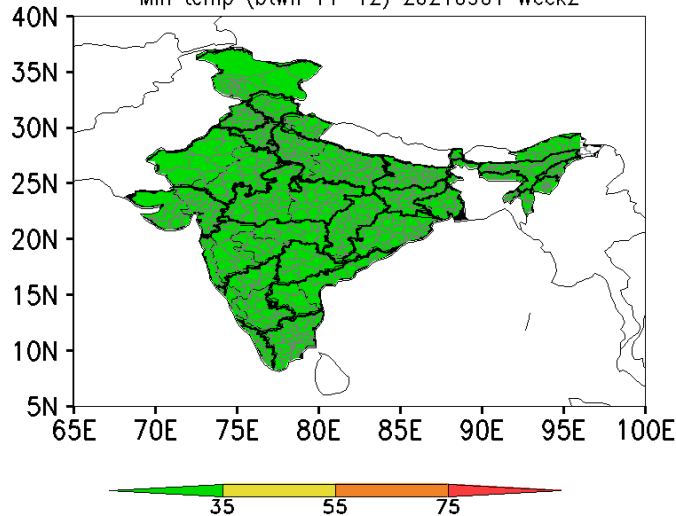
**Glossary:**

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) 20210901 Week2



**Probabilistic weekly evolution of transmission window for Dengue**

**Second week (10<sup>th</sup> to 16<sup>th</sup> Sept 2021):**

1	<b>75</b> probability level	Red	Nil.
2	<b>55-75</b> probability level	Orange	Nil.
3	<b>35-55</b> probability level	Yellow	NIL
4	<b>Less than 35</b> probability level	Green	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 27<sup>th</sup> August to 02<sup>nd</sup> September, 2021 weather warning issued for development of vector borne diseases.**

Following table provides the verification of previous week 27<sup>th</sup> August to 02<sup>nd</sup> September, 2021 temperature forecast issued in last week bulletin with realized temperature.

Week	VBD	Threshold temp.	Regions within the range of <b>predicted</b> temperatures for Tmax/Tmin or both in Threshold temperatures range.	Regions within the range of <b>realised</b> temperatures for Tmax/Tmin or both in Threshold temperatures range.
27 <sup>th</sup> Aug to 02 <sup>nd</sup> Sept 2021	Malaria ( <i>Plasmodium falciparum</i> and <i>Vivax</i> )	33-39 °C	All districts of Andhra Pradesh, major districts of Punjab, Haryana, Rajasthan, Uttar Pradesh, Chhattisgarh, Odisha, Tamil Nadu, some districts of Gujarat, Madhya Pradesh, West Bengal, Maharashtra, Telangana, few districts of Jammu & Kashmir (Samba), Bihar (Rohtas), Jharkhand (Garhwa, Paschim Singhbhum), Mizoram (Mamit, Lunglei) and Tripura (Sepahijala).	Some districts of Rajasthan, Tamil Nadu, few districts of Punjab (Muktsar, Fazilka), Haryana (Sirsa), Arunachal Pradesh (Tawang) and Assam (Baksha).
	Malaria ( <i>Plasmodium falciparum</i> )	16-19°C	Some districts of Jammu & Kashmir, few districts of Ladakh (Leh), Himachal Pradesh (Kinnaur, Kullu, Hamirpur) and West Bengal (Kalimpong).	Sikkim, major districts of Himachal Pradesh, some districts of Uttarakhand, few districts of Jammu & Kashmir (Riasi, Doda, Udhampur), West Bengal (Kalimpong, Darjeeling), Karnataka (Bangaluru, Mysore, Chamarajanagar), Kerala (Malappuram, Kozikode, Wayanad) and Tamilnadu (Nilgiri).
	Malaria ( <i>Plasmodium vivax</i> )	14-15°C	Some districts of Jammu & Kashmir.	Kishtwar and Rajouri districts of Jammu & Kashmir.
	Dengue virus	11.9°C	Tawang district of Arunachal Pradesh.	Nil.