

Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 26th July, 2024

Time of Issue: 1345 hours IST

Subject: 1) Isolated extremely heavy rainfall very likely to continue over Ghat areas of Madhya Maharashtra during next 2 days; Konkan & Goa and Gujarat region on today, the 26th July, reduce gradually in subsequent days.
2) Very heavy rainfall likely to continue over Central India during next 2 days.

During past 24 hours till 0830 hours IST of today 25th July: (details in Annexure I)

- ✓ **Heavy to very heavy rainfall** at some places with **extremely heavy falls at isolated** places over Ghat areas of Madhya Maharashtra, Konkan & Goa, Uttarakhand; **Heavy to very heavy rainfall** at isolated places over Tamil Nadu, West Madhya Pradesh, Gujarat Region, South Interior Karnataka, Chhattisgarh, East Rajasthan, Coastal Karnataka; **Heavy rainfall** at isolated places over Kerala & Mahe, North Interior Karnataka, East Madhya Pradesh, Jharkhand, Vidarbha, Haryana-Chandigarh, East Uttar Pradesh, Assam, West Bengal & Sikkim and Odisha.

Weather Systems

- ✓ Under the influence of the cyclonic circulation over Gangetic West Bengal & adjoining Bangladesh a **Low-Pressure Area** has formed over North Bay of Bengal and adjoining Coastal areas of Bangladesh and Gangetic West Bengal. Associated cyclonic circulation extends upto 7.6 km above mean sea level tilting southwestwards with height. It is likely to move west-northwestwards across Gangetic West Bengal & Jharkhand during next 2 days.
- ✓ The **Monsoon trough** is active and lies near to its normal position. It is likely to continue to remain near to its normal position during next 4-5 days.
- ✓ The **shear zone** lies along 18°N over Indian region in middle & upper tropospheric levels tilting southwards with height.
- ✓ The **off-shore trough** at mean sea level runs along west coast from South Gujarat to north Kerala coasts.

Forecast & Warnings: (Annexure II)

❖ **West & Central India**

- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over the region during next 5 days.
- ✓ **Isolated extremely heavy rainfall very likely over Konkan & Goa, Gujarat Region on 26th; Ghat areas of Madhya Maharashtra on 26th & 27th July.**
- ✓ **Very heavy rainfall very likely at isolated places over Madhya Pradesh, Chhattisgarh on 26th & 27th; Vidarbha on 27th; Konkan & Goa on 27th & 28th; Madhya Maharashtra on 28th; Saurashtra & Kutch on 26th, 28th & 29th; Gujarat Region during 27th - 29th July.**
- ✓ **Heavy rainfall** very likely at isolated places over Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Gujarat State during 26th-30th; Vidarbha, Chhattisgarh during 26th - 28th; Marathwada on 27th July.

❖ **Northwest India**

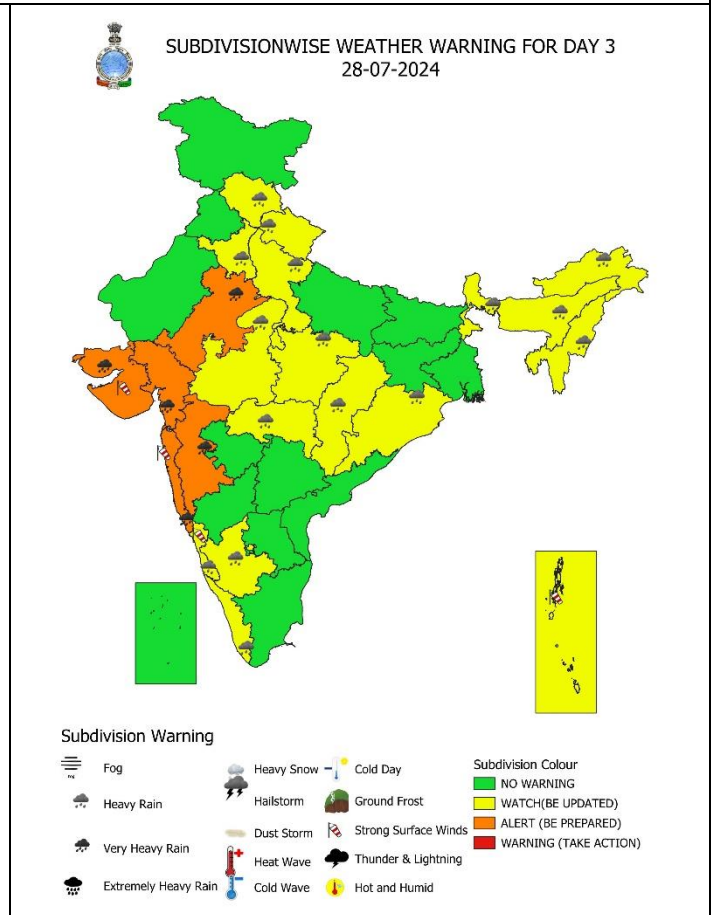
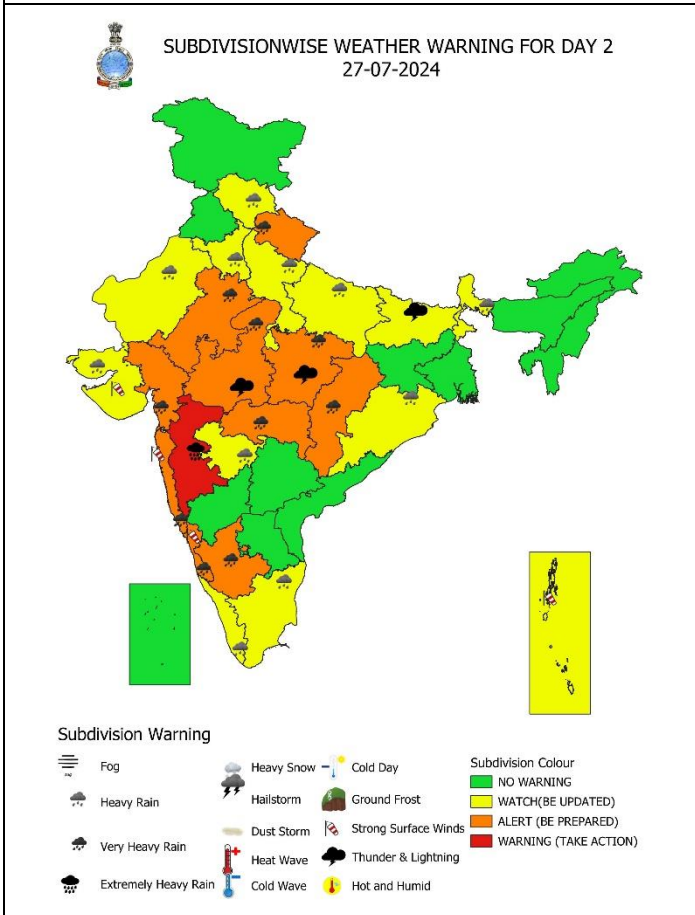
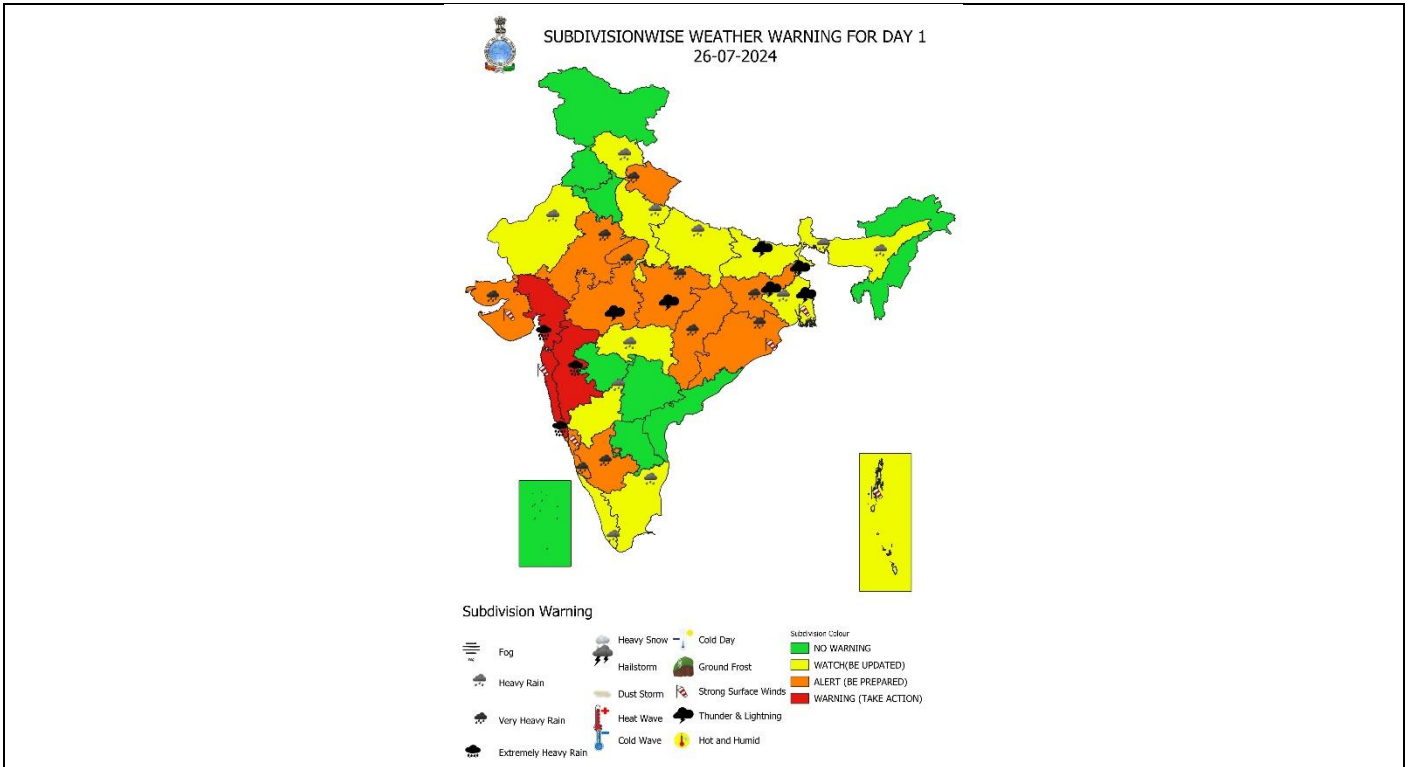
- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm & lightning** very likely over Himachal Pradesh, Uttarakhand, East Rajasthan; scattered to fairly widespread rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan during next 5 days.

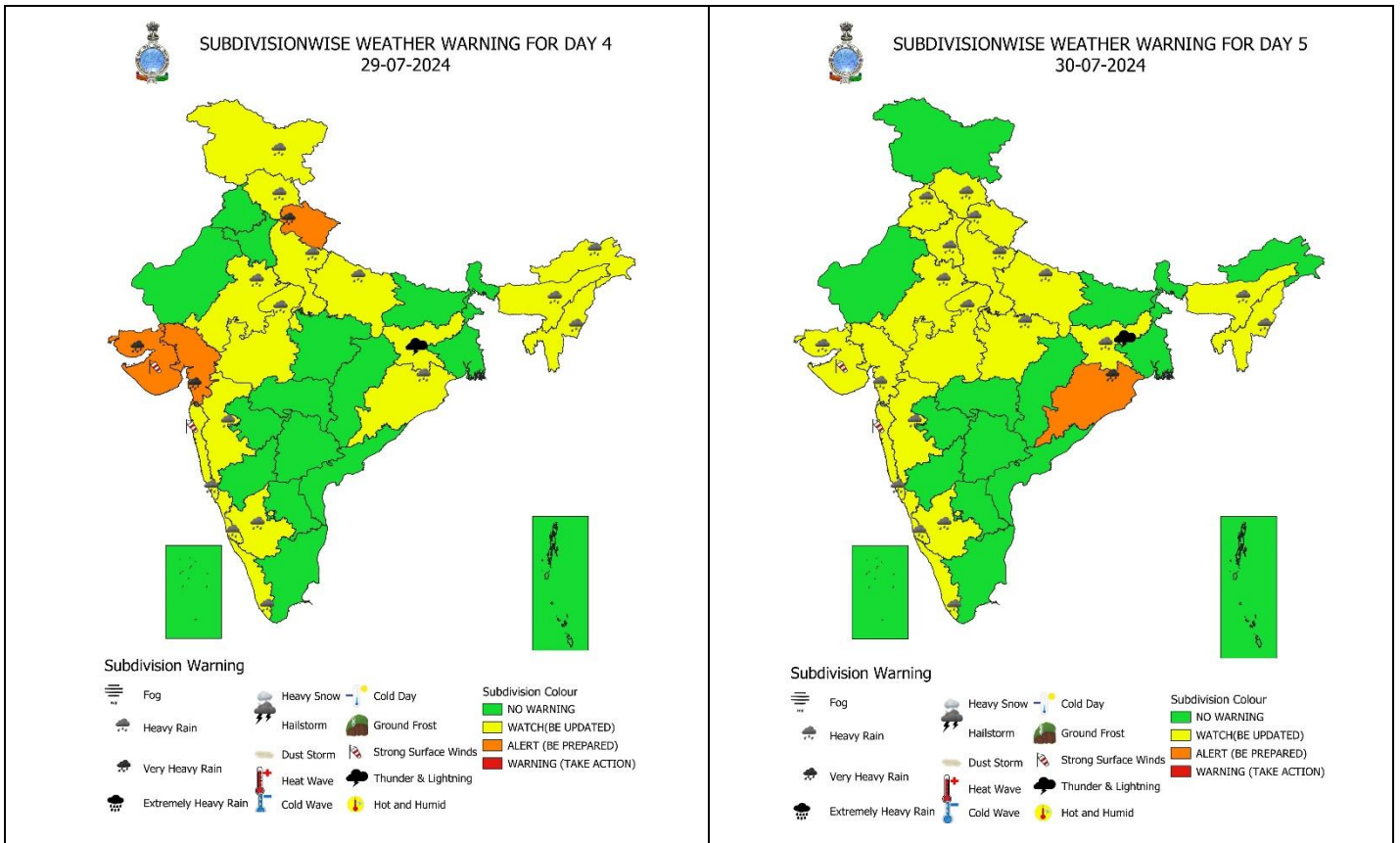
- ✓ **Isolated very heavy rainfall also likely over Uttarakhand on 26th, 27th & 29th; East Rajasthan during 26th – 28th July.**
- ✓ Isolated **heavy rainfall** very likely over Himachal Pradesh, Uttarakhand, Uttar Pradesh during 26th–30th; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 29th; West Rajasthan during 26th – 28th; Haryana-Chandigarh on 27th, 28th & 30th; Punjab on 30th July.
- ❖ **South Peninsular India:**
 - ✓ Scattered to fairly widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Kerala & Mahe, Karnataka, Lakshadweep, Telangana and isolated to scattered rainfall over Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal during next 5 days.
 - ✓ **Very heavy rainfall very likely at isolated places over Coastal & South Interior Karnataka on 26th & 27th July.**
 - ✓ **Heavy rainfall** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, North Interior Karnataka on 26th & 27th; Kerala & Mahe, Coastal & South Interior Karnataka during 26th – 30th July.
- ❖ **East & Northeast India**
 - ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm, lightning** very likely over East & Northeast India during next 5 days.
 - ✓ **Very heavy rainfall very likely at isolated places over Jharkhand on 26th; Odisha on 26th & 30th July.**
 - ✓ Isolated **heavy rainfall** very likely over Arunachal Pradesh on 28th & 29th; Assam, Gangetic West Bengal on 26th; Assam & Meghalaya, Nagaland & Manipur on 28th & 30th July; Odisha during 26th-30th; Jharkhand on 26th & 30th; Sub-Himalayan West Bengal & Sikkim during 26th – 28th July.
 - ✓ Hot & Humid conditions are likely to prevail over Assam & Tripura during next 2 days.

For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 26th July (in cm):

- ❖ **Madhya Maharashtra:** Mahabaleshwar-(dist Satara) 28, Lonavala_agri (dist Pune) 24, Shahuwadi (dist Kolhapur) 19, Chandgad (dist Kolhapur) 19, Gaganbawada (dist Kolhapur) 17, Vadgaon Maval (dist Pune) 13, Ajra (dist Kolhapur) 12, Panhala (dist Kolhapur) 12, Surgana (dist Nashik) 11, Hatkanangale (dist Kolhapur) 11, Paud Mulshi (dist Pune) 11, Kokrud (dist Sangli) 11,
- ❖ **Konkan & Goa:** Karjat_agri (dist Raigad) 27, Matheran (dist Raigad) 20, Murbad (dist Thane) 18, Sudhagad Pali (dist Raigad) 16, Dapoli_agri (dist Ratnagiri) 14, Sangameshwar Devrukh (dist Ratnagiri) 13, Poladpur (dist Raigad) 13, Lanja (dist Ratnagiri) 13, Khalapur (dist Raigad) 12, Ulhasnagar (dist Thane) 12, Rajapur (dist Ratnagiri) 12, Panvel_agri (dist Raigad) 12, Ratnagiri - Imd Obsy (dist Ratnagiri) 11, Ambernath (dist Thane) 11, Wakwali_agri (dist Ratnagiri) 11, Wada (dist Palghar) 11, Bhiwandi (dist Thane) 10, Chiplun (dist Ratnagiri) 10, Mahad (dist Raigad) 10, Mandangad (dist Ratnagiri) 10, Thane (dist Thane) 10, Vikramgad (dist Palghar) 10, Khed (dist Ratnagiri) 10,
- ❖ **Uttarakhand:** Sama (Bageshwar) 27, Chamoli (Chamoli) 11, Mussoorie (Dehradun) 9, Ukhimath (Rudraprayag) 8, Kotdwar (Pauri Garhwal) 7
- ❖ **Tamil nadu:** Avalanche (dist The Nilgiris) 20, Upper Bhavani (dist The Nilgiris), Vint Worth Estate (dist The Nilgiris) 10 each,
- ❖ **Gujarat Region:** Uchchhal (dist Tapi) 20, Subir (dist Dangs) 18, Dolvan (dist Tapi) 18, Navsari (dist Navsari) 16, Mahuva (dist Surat) 14, Navasari_aws (dist Navsari) 13, Jalalpor (dist Navsari) 13, Gandevi (dist Navsari) 13, Songadh (dist Tapi) 11, Valod (dist Tapi) 11, Vyara (dist Tapi) 9, Dang (dist Dangs) 8, Ukai (dist Surat) 8, Vansda (dist Navsari) 8, Waghai (dist Dangs) 8, Dangs (dist Dangs) 8, Dharampur (dist Valsad) 7,
- ❖ **West Madhya Pradesh:** Bajna (dist Ratlam) 18, Ratlam (dist Ratlam) 15, Sheopur-aws (dist Sheopur) 13, Raoti (dist Ratlam) 9, Sitamau (dist Mandsaur) 8, Mandsaur (dist Mandsaur) 8, Meghnagar (dist Jhabua) 7, Alirajpur (dist Alirajpur) 7, Bhikangaon (dist Khargone) 7, Dhundhadaka (dist Mandsaur) 7, Sultanpur (dist Raisen) 7,
- ❖ **South Interior Karnataka:** Bhagamandala (dist Kodagu) 18, Agumbe Emo (dist Shivamogga) 16, Kottigehara (dist Chikkamagaluru) 14, Napoklu (dist Kodagu) 13, Somwarpet (dist Kodagu) 12, Koppa (dist Chikkamagaluru) 11, Kalasa (dist Chikkamagaluru) 11, Sringeri Hms (dist Chikkamagaluru) 9, Kammardi (dist Chikkamagaluru) 9, Murnadu (dist Kodagu) 9, Hunchadakatte (dist Shivamogga) 8, Tyagarthi (dist Shivamogga) 7, Jayapura (dist Chikkamagaluru) 7, Ponnampet (dist Kodagu) 7, Tarikere (dist Chikkamagaluru) 7,
- ❖ **Chhattisgarh:** Bhatapara (dist Baloda Bazar) 18, Simga (dist Baloda Bazar) 17, Lawan (dist Baloda Bazar) 9, Wandrafnagar (dist Balrampur) 8, Poudi Uparora (dist Korba) 8, Gidam (dist Dantewada) 8,
- ❖ **East Rajasthan:** Kesarpura Sr (dist Banswara) 16, Khushalgarh (dist Banswara) 15, Sallopat Sr (dist Banswara) 14, Nainwa (dist Bundi) 12, Beir Sr (dist Bharatpur) 12, Sajjangarh Sr (dist Banswara) 11, Sapotra (dist Karauli) 10, Uniara / Aligarh (dist Tonk) 10, Chothkabarwara Sr (dist Sawai Madhopur) 10, Jaipur Aero (dist Jaipur) 9, Danpur (dist Banswara) 9, Gangdhar Sr (dist Jhalawar) 8, Ladpura Sr (dist Kota) 8, Bijoliya Sr (dist Bhilwara) 8, Deeg Sr (dist Bharatpur) 7, Dug (dist Jhalawar) 7, Phagi (dist Jaipur) 7,
- ❖ **Coastal Karnataka:** Castle Rock (dist Uttara Kannada) 15, Yellapur (dist Uttara Kannada) 10, Gersoppa (dist Uttara Kannada) 10, Siddapur (dist Uttara Kannada) 8, Mani (dist Dakshina Kannada) 8, Kollur (dist Udupi) 8,
- ❖ **Odisha:** Athmalik (Angul) 10, Binika (Sonepur) 7, Sonepur (Sonepur) 7, Phiringia (Kandhamal) 7,
- ❖ **Kerala & Mahe:** Vyttiri (dist Wynaad) 9, Vellarikkundu (dist Kasargod) 9, Munnar Kseb (dist Idukki) 8, Panathur (dist Kasargod) 7,
- ❖ **North Interior Karnataka:** Londa (dist Belagavi) 9, Belagavi Pto (dist Belagavi) 8,
- ❖ **East Madhya Pradesh:** Satna (raghurajnagar) (dist Satna) 9, Kusmi (dist Sidhi) 7,
- ❖ **Jharkhand:** Hariharganj (dist Palamu) 9, Maithon Dvc (dist Dhanbad) 7,
- ❖ **Vidarbha:** Bhamragad (dist Gadchiroli) 9, Etapalli (dist Gadchiroli) 7,
- ❖ **Haryana-Chandigarh:** Hathin (dist Palwal) 8, Panchkula (dist Panchkula) 7, Palwal (dist Palwal) 7,
- ❖ **East Uttar Pradesh:** Fatehpur Tehsil (dist Barabanki) 8, Karchhana (dist Prayagraj) 7,
- ❖ **Assam:** Raha (dist Nagaon) 7,





IMPACT & ACTION SUGGESTED due to

- ✓ **Isolated extremely heavy rainfall very likely over Konkan & Goa, Gujarat Region on 26th; ghat areas of Madhya Maharashtra during 26th & 27th July.**
- ✓ **Very heavy rainfall very likely at isolated places over Jharkhand on 26th; Madhya Pradesh, Chhattisgarh, Coastal & South Interior Karnataka on 26th & 27th; Uttarakhand on 26th, 27th & 29th; East Rajasthan during 26th – 28th; Odisha on 26th & 30th; Vidarbha on 27th; Konkan & Goa on 27th & 28th; Madhya Maharashtra on 28th; Saurashtra & Kutch on 26th, 28th & 29th; Gujarat Region during 27th – 29th July.**

- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutcha roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- Damage to horticulture and standing crops in some areas due to inundation.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

Action Suggested

- Check for traffic congestion on your route before leaving for your destination.
- Follow any traffic advisories that are issued in this regard.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

Agromet advisories for Heavy Rainfall likely over various parts of the country

- Make provision for draining out excess water from crop fields to avoid water stagnation in Assam & Meghalaya, Sub Himalayan West Bengal, Odisha, Jharkhand, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh, Vidarbha, Konkan Goa, Ghat areas of Madhya Maharashtra, Gujarat State, Tamil Nadu, Kerala and Karnataka.
- Postpone transplanting of rice in South Gujarat; rice, finger millet and vegetables in Konkan and ghat areas of Madhya Maharashtra.
- Provide mechanical support to horticultural crops & staking to vegetables.

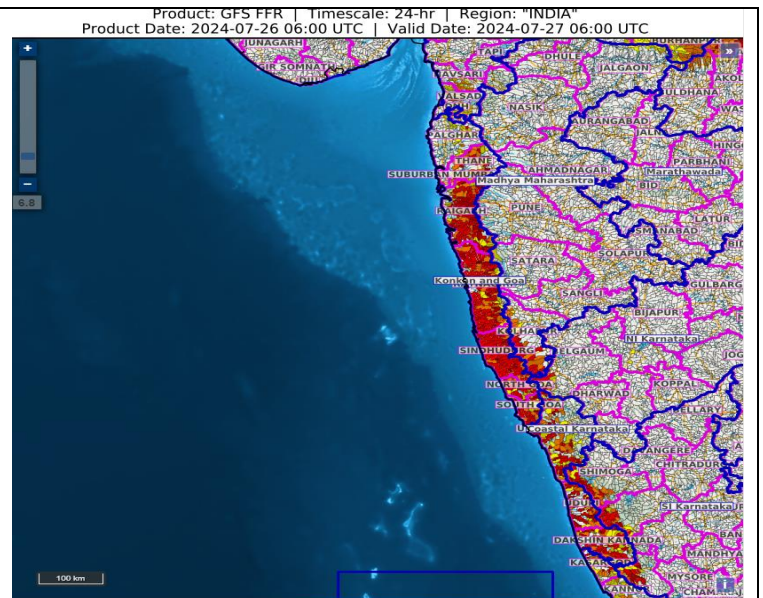
FLASH FLOOD GUIDANCE:

<p>24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 27-07-2024 :</p> <p>Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Uttarakhand Met Sub-divisions during next 24 hours.</p> <p>Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.</p>	
<p>24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 27-07-2024 :</p> <p>Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Telangana, Chhattisgarh, East Madhya Pradesh, Vidarbha and West Madhya Pradesh Met Sub-divisions during next 24 hours.</p> <p>Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.</p>	

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 27-07-2024 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Coastal Karnataka, NI Karnataka, SI Karnataka, Telangana, Madhya Maharashtra and Konkan & Goa Met Sub-divisions during next 24 hours.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **Region wise classification of meteorological Sub-Divisions:**
 - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
 - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
 - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
 - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
 - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
 - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

SPATIAL DISTRIBUTION			
(% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

 Fog
 Heavy Rain
 Very Heavy Rain
 Extremely Heavy Rain

 Heavy Snow
 Hailstorm
 Dust Storm
 Heat Wave
 Cold Wave

 Cold Day
 Ground Frost
 Strong Surface Winds
 Thunder & Lightning
 Hot and Humid

Subdivision Colour

NO WARNING

WATCH(BE UPDATED)

ALERT (BE PREPARED)

WARNING (TAKE ACTION)

Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

LEGENDS

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75



Rain/ Snow *

Heavy: 64.5 to 115.5 mm/cm *	
Very Heavy: 115.6 to 204.4 mm/cm*	
Extremely Heavy: > 204.4 mm/cm *	



Heat Wave

When maximum temperature of a station reaches $\geq 40^{\circ}\text{C}$ for plains and $\geq 30^{\circ}\text{C}$ for hilly regions

(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .	
Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^{\circ}\text{C}$	

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$.	
Severe Heat Wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$	

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is $> 4.5^{\circ}\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^{\circ}\text{C}$



Warm Night

When maximum temperature remains 40°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°C .	
Severe Warm Night: When minimum temperature departure $> 6.4^{\circ}\text{C}$.	



Cold Wave

When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions.

(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C .	
Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$	

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is $\leq 4.0^{\circ}\text{C}$	
Severe Cold Wave: When Minimum Temperature is $\leq 2.0^{\circ}\text{C}$	

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^{\circ}\text{C}$ & actual Minimum Temperature is $\leq 15^{\circ}\text{C}$



Cold Day

When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions

Based on departure

Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C .	
Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$	



Fog

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres	
Dense Fog: when the visibility between 50-200 metres	
Very Dense Fog: when the visibility < 50 metres	



Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



Frost

Ice deposits on ground

Air temperature $\leq 4^{\circ}\text{C}$ (over Plains)	
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Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph	
Severe: Wind speed 62-87 kmph	
Very Severe: Wind speed > 87 kmph	



Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre	
High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre	
Phenomenal: Wind speed > 117 kmph (> 63 knots) & Wave height > 14 metre	



Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)	
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)	
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)	
Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)	
Super Cyclone Storm: Wind speed > 220 kmph (> 119 knots)	