

Tuesday, July 30, 2024
Time of Issue: 0800 hours IST
(MORNING)

All India Impact Based Weather Warning Bulletin

30 July (Day 1):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls (≥ 20 cm)** very likely at isolated places Kerala & Mahe; **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Uttarakhand, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch, Coastal & South Interior Karnataka; **Heavy rainfall (≥ 7 cm)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana-Chandigarh, Uttar Pradesh, Rajasthan, East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, ghat area of Madhya Maharashtra, Gujarat Region, North Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over northeast and adjoining northwest Arabian sea, most parts of eastcentral Arabian sea, northern parts of southeast Arabian sea, along and off south Gujarat, Maharashtra, Konkan, goa, Karnataka coasts, gulf of Mannar, off Sri Lanka coast, over many parts of south & central Bay of Bengal. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over few parts over westcentral adjoining south Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over central Arabian sea & adjoining areas of southwest Arabian sea, southern parts of north Arabian sea, along & off Somalia & Oman coasts. Fishermen are advised not to venture into these areas.

31 July (Day 2):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana-Chandigarh, West Uttar Pradesh, West Rajasthan, East Madhya Pradesh, Odisha, Kerala & Mahe, Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** at isolated places over Punjab, East Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Jharkhand, Konkan & Goa, ghat area of Madhya Maharashtra, Gujarat Region, Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over northeast and adjoining eastcentral Arabian sea, along and off Gujarat, north Maharashtra, off Sri Lanka coast, over gulf of Mannar, over many parts of south Bay of Bengal & most parts of central Bay of Bengal. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over few parts over westcentral Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over central Arabian sea & adjoining areas of southwest Arabian sea, southern parts of north Arabian sea, along & off Somalia & Oman coasts. Fishermen are advised not to venture into these areas.

01 August (Day 3):

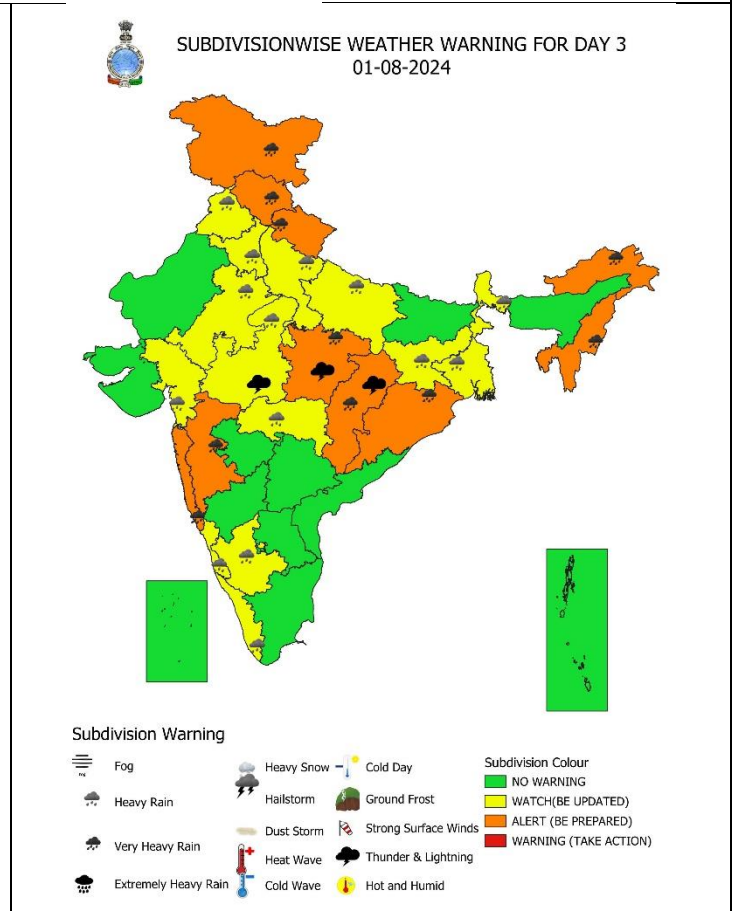
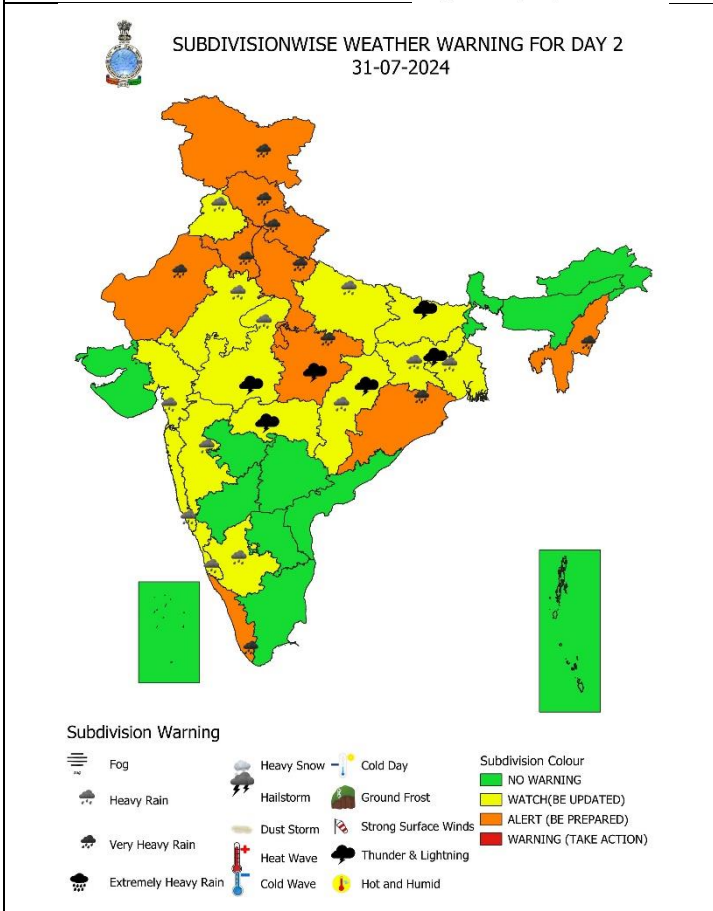
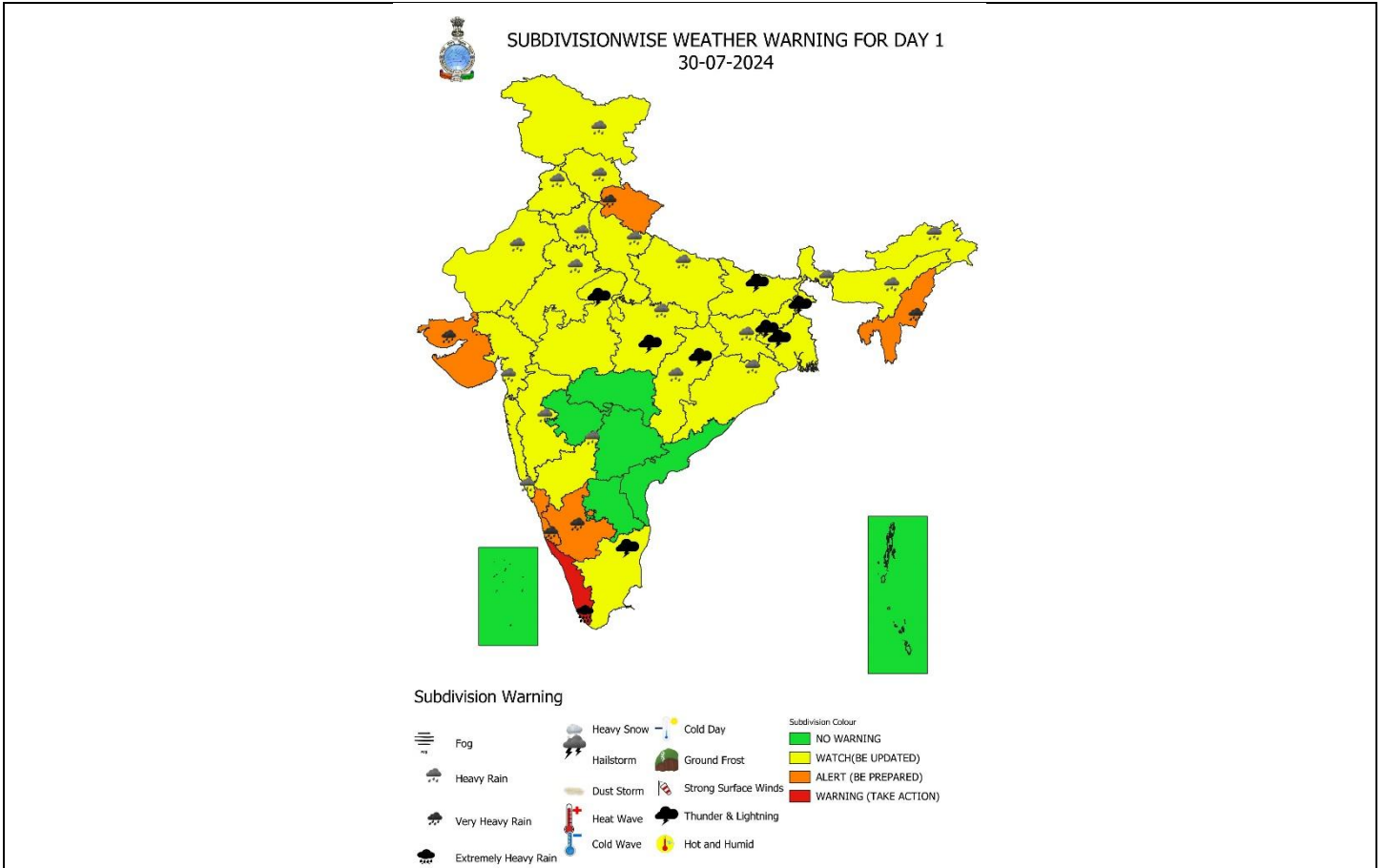
- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Madhya Pradesh, Chhattisgarh, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, ghat area of Madhya Maharashtra; **Heavy rainfall (≥ 7 cm)** at isolated places over Punjab, Haryana-Chandigarh, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, West Bengal & Sikkim, Jharkhand, Gujarat Region, Kerala & Mahe, Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Chhattisgarh.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over gulf of Mannar, off Sri Lanka coast, over many parts of south Bay of Bengal & most parts of central Bay of Bengal. **Squally weather with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail along and off Gujarat and north Maharashtra coast adjoining northeast and eastcentral Arabian sea. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over central Arabian sea & adjoining areas of southwest Arabian sea, southern parts of north Arabian sea, along & off Somalia & Oman coasts. Fishermen are advised not to venture into these areas.

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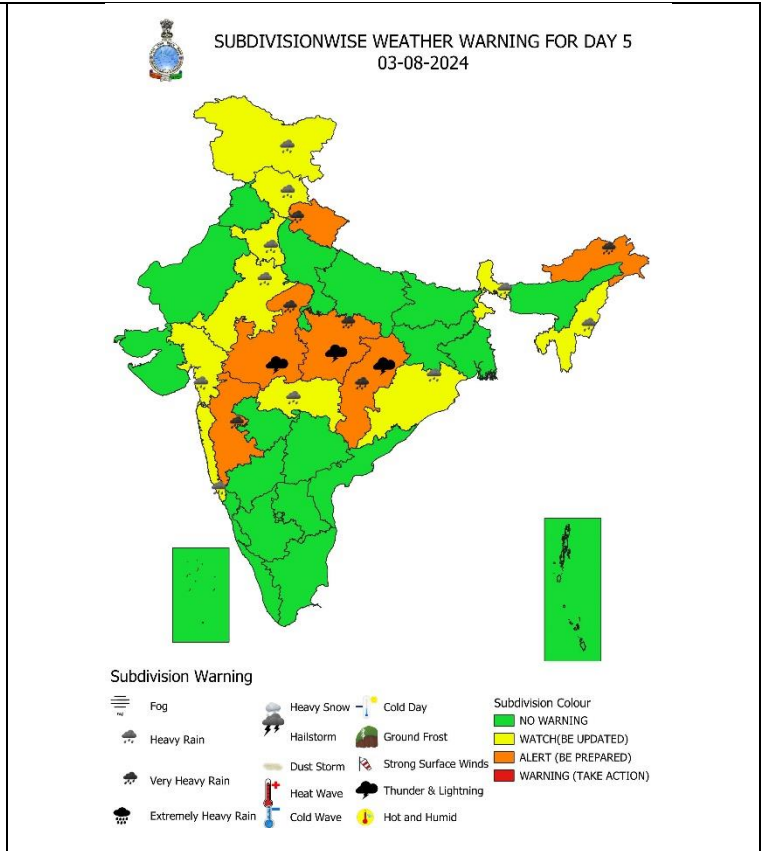
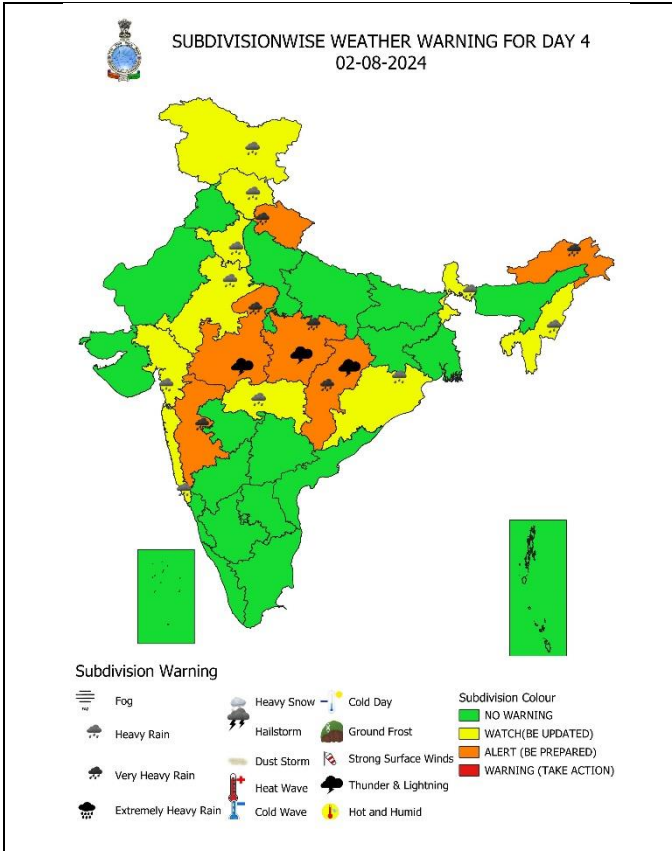
- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Uttarakhand, Madhya Pradesh, Chhattisgarh, Arunachal Pradesh, Ghat area of Madhya Maharashtra; **Heavy rainfall (≥ 7 cm)** at isolated places over Punjab, Haryana-Chandigarh, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, West Bengal & Sikkim, Jharkhand, Gujarat Region, Kerala & Mahe, Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Chhattisgarh.
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03 August (Day 5):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Uttarakhand, Madhya Pradesh, Chhattisgarh, Arunachal Pradesh, Ghat area of Madhya Maharashtra; **Heavy rainfall (≥ 7 cm)** at isolated places over Punjab, Haryana-Chandigarh, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, West Bengal & Sikkim, Jharkhand, Gujarat Region, Kerala & Mahe, Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Chhattisgarh.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over gulf of Mannar, off Sri Lanka coast, over many parts of south Bay of Bengal & most parts of central Bay of Bengal. **Squally weather with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail along and off Gujarat and north Maharashtra coast adjoining northeast and eastcentral Arabian sea. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over central Arabian sea & adjoining areas of southwest Arabian sea, southern parts of north Arabian sea, along & off Somalia & Oman coasts. Fishermen are advised not to venture into these areas.



*** Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".**
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
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IMPACT & ACTION SUGGESTED due to

- ❖ **Isolated extremely heavy rainfall very likely at isolated places over Kerala & Mahe on 30th July;**
- ❖ **Very heavy rainfall very likely at isolated places over Saurashtra & Kutch, Coastal & South Interior Karnataka on 30th; Konkan & Goa on 01st August; East Madhya Pradesh during 31st July- 02nd August; ghat areas of Madhya Maharashtra, Chhattisgarh, Arunachal Pradesh on 01st & 02nd August, West Madhya Pradesh on 02nd August, Nagaland, Manipur, Mizoram & Tripura during 30th July- 01st August, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Odisha on 31st July & 01st August, Uttarakhand during 30th July- 02nd August, Kerala & Mahe, Haryana-Chandigarh, West Uttar Pradesh, West Rajasthan on 31st 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.

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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 Arunachal Pradesh, Assam & Meghalaya, Nagaland, West Bengal, Odisha, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, East Rajasthan, West Madhya Pradesh, Konkan & Goa, Ghat areas of Madhya Maharashtra, Gujarat State, Kerala and Karnataka.
- Provide mechanical support to horticultural crops & staking to vegetables.

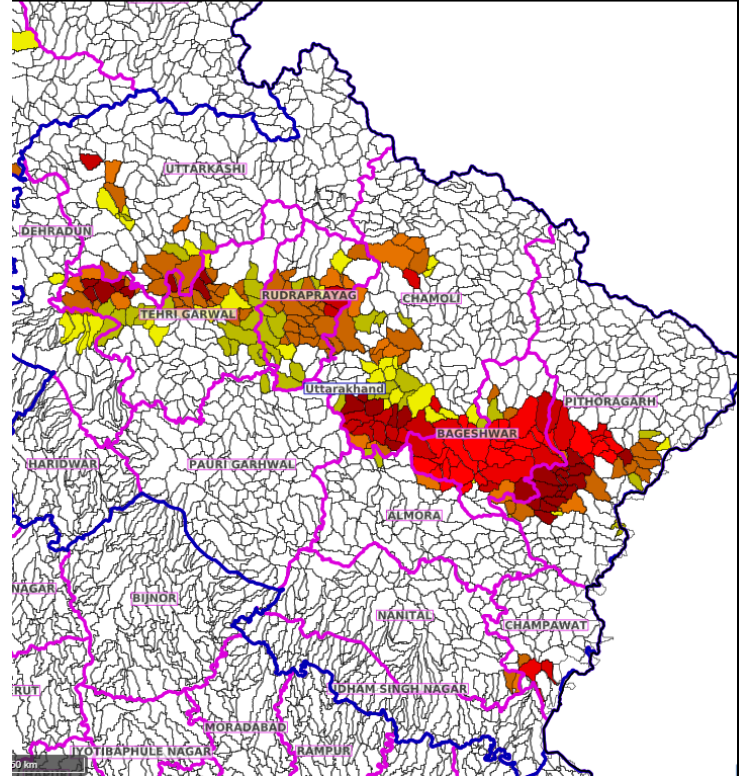
FLASH FLOOD GUIDANCE:

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 31-07-2024:

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Uttarakhand Met Sub-divisions during next 24 hours.

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

Product: NCU M FFR | Timescale: 24-hr | Region: "INDIA"
Product Date: 2024-07-30 00:00 UTC | Valid Date: 2024-07-31 00:00 UTC

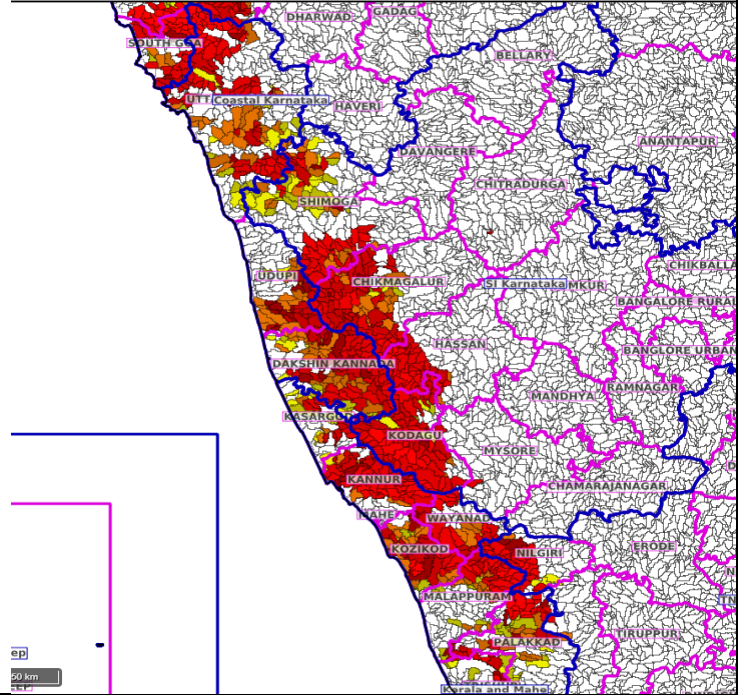


24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 31-07-2024:

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of north Kerala & Mahe adjoining Coastal Karnataka and SI Karnataka Met Sub-divisions during next 24 hours.

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

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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



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



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 $\geq 37^\circ\text{C}$



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 $> 6.4^\circ\text{C}$.



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 $\leq 15^\circ\text{C}$



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 $\leq -6.5^\circ\text{C}$



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



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



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



Ice deposits on ground

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



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



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



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)

Kindly download MAUSAM APP for location specific forecast & warning, MEGHDOOT APP for Agromet advisory and DAMINI APP for Lightning Warning & visit state MC/RMC websites for district wise warning.