

Monday, May 20, 2024
Time of Issue: 2000 hours IST
(NIGHT)

All India Impact Based Weather Warning Bulletin

20 May (Day 1):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** very likely at isolated places over Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Assam & Meghalaya, Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall** at isolated places over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Konkan & Goa, Lakshadweep and North Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & squally winds (speed reaching 50-60 kmph)** very likely at isolated places over Gangetic West Bengal; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Madhya Maharashtra, Konkan & Goa, Marathwada and South Interior Karnataka; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttarakhand, West Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and North Interior Karnataka; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, East Uttar Pradesh, East Rajasthan, Andaman & Nicobar Islands, Odisha, Arunachal Pradesh, Lakshadweep and Coastal Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** very likely to prevail in many parts over Punjab, Haryana-Chandigarh-Delhi and West Rajasthan; in some parts of Uttar Pradesh; in isolated pockets over northwest Madhya Pradesh; **heat wave conditions** in some parts of East Rajasthan; in isolated pockets over Himachal Pradesh, Uttarakhand, northeast Madhya Pradesh, Bihar and Gujarat state.
- ❖ **Hot and humid weather** very likely to prevail over Gangetic West Bengal, Jharkhand, Odisha, Konkan & Goa.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over West Uttar Pradesh, Rajasthan and Gujarat state.
- ❖ **Squally weather with wind speed 40 kmph to 45 kmph gusting to 55 kmph** very likely to prevail along and off Konkan, Goa, Karnataka, Kerala, Tamil Nadu & Sri Lanka coasts, Lakshadweep, Maldives areas, Comorin Area, Gulf of Mannar, southwest and adjoining southeast Bay of Bengal, Andaman Sea; **with wind speed 45 kmph to 55 kmph gusting to 65 kmph** prevailing along and off south Sri Lanka coast and adjoining southwest Bay of Bengal. Fishermen are advised not to venture into these areas.

21 May (Day 2):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** very likely at isolated places over Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall** at isolated places over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Lakshadweep and Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over East Madhya Pradesh, Gangetic West Bengal, Bihar, Jharkhand, Madhya Maharashtra and Interior Karnataka; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttarakhand, West Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Konkan & Goa, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema and Telangana; **with lightning** at isolated places over Andaman & Nicobar Islands, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Lakshadweep and Coastal Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** very likely to prevail in most parts over West Rajasthan; in many parts over Punjab, Haryana-Chandigarh-Delhi; in some parts of West Uttar Pradesh; in isolated pockets over northwest Madhya Pradesh; **heat wave conditions** in some parts of East Rajasthan; in isolated pockets over Himachal Pradesh, northeast Madhya Pradesh, Odisha and Gujarat state.
- ❖ **Hot and humid weather** very likely to prevail over Bihar, Jharkhand and Konkan & Goa.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over West Uttar Pradesh, Rajasthan and Gujarat state.
- ❖ **Squally weather with wind speed 40 kmph to 45 kmph gusting to 55 kmph** very likely to prevail along and off Karnataka, Kerala, Tamil Nadu & Sri Lanka coasts, Lakshadweep, Maldives areas, Comorin Area, Gulf of Mannar, south and adjoining central Bay of Bengal, adjoining eastcentral Bay of Bengal, Andaman Sea; **with wind speed 45 kmph to 55 kmph gusting to 65 kmph** prevailing along and off Kerala, Sri Lanka coasts, Comorin area, Gulf of Mannar, Southwest and adjoining Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.

22 May (Day 3):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** very likely at isolated places over Kerala & Mahe; **Heavy rainfall** at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Lakshadweep, Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand and Madhya Maharashtra; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttarakhand, Vidarbha, Chhattisgarh, Gangetic West Bengal, Odisha, Konkan & Goa, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Interior Karnataka; **with lightning** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep and Coastal Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** very likely to prevail in most parts of West Rajasthan; in many parts of Punjab, Haryana-Chandigarh-Delhi; in some parts of West Uttar Pradesh and East Rajasthan; in isolated pockets over northwest Madhya Pradesh; **heat wave conditions** in isolated pockets over Jammu division, Himachal Pradesh, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Odisha and Gujarat state.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over West Uttar Pradesh and Rajasthan.
- ❖ **Squally weather with wind speed 40 kmph to 45 kmph gusting to 55 kmph** very likely to prevail along and off Karnataka, Kerala, & Sri Lanka coasts Lakshadweep, Maldives areas, Comorin Area, Gulf of Mannar, south and adjoining central Bay of Bengal, Andaman Sea; **with wind speed 45 kmph to 55 kmph gusting to 65 kmph** prevailing along and off south Kerala, Sri Lanka coasts, Comorin Area, Gulf of Mannar, southwest and adjoining southeast Bay of Bengal, Somalia coast. Fishermen are advised not to venture into these areas.

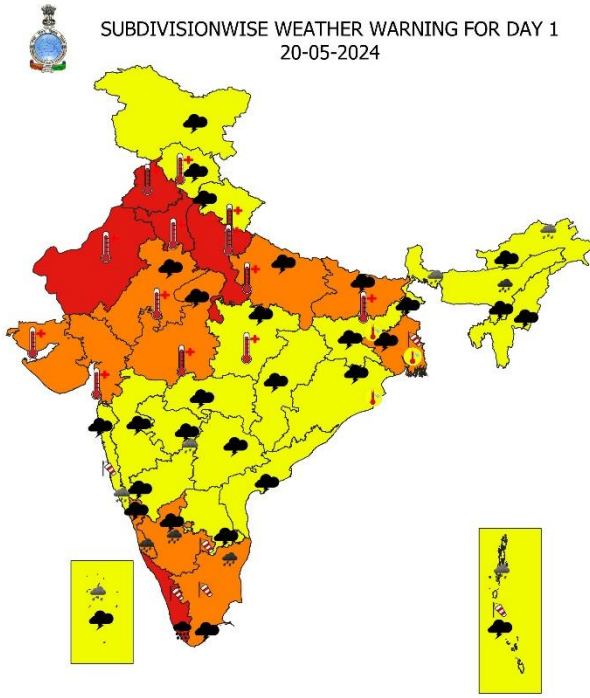
23 May (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Kerala & Mahe and **Heavy rainfall** at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Bihar; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Odisha, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka; **with lightning** at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep and Coastal Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of Punjab, Haryana-Chandigarh-Delhi; in some parts of West Uttar Pradesh and East Rajasthan; in isolated pockets over northwest Madhya Pradesh; **heat wave conditions** in isolated pockets over Jammu division, Himachal Pradesh, East Madhya Pradesh, Vidarbha, Odisha and Gujarat state.
- ❖ **Warm night conditions** likely to prevail in isolated pockets over West Uttar Pradesh and Rajasthan.
- ❖ **Squally weather with wind speed 40 kmph to 45 kmph gusting to 55 kmph** likely to prevail along and off south Karnataka, Kerala, Sri Lanka coasts, Lakshadweep, Maldives areas, Comorin Area, Gulf of Mannar, south and central Bay of Bengal, Andaman Sea; **with wind speed 45 kmph to 55 kmph gusting to 65 kmph** prevailing along and off south Kerala, Sri Lanka coasts, Comorin Area, Gulf of Mannar, south and adjoining central Bay of Bengal, Somalia coast. Fishermen are advised not to venture into these areas.

24 May (Day 5):

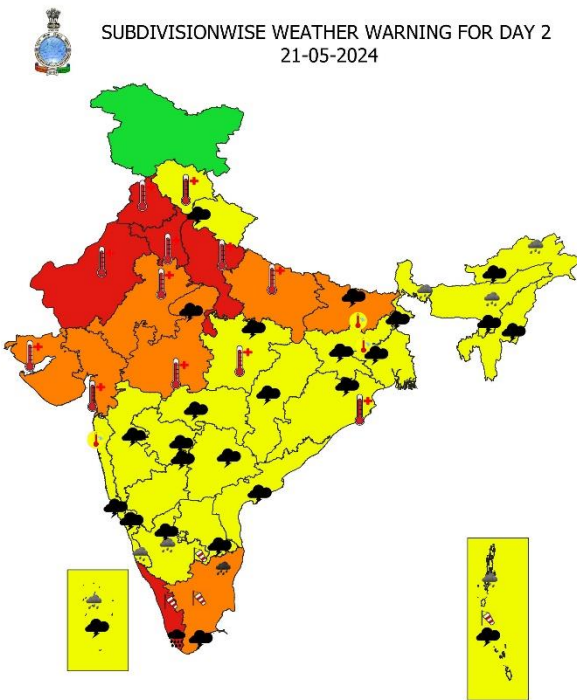
- ❖ **Heavy to very heavy rainfall** likely at isolated places over Gangetic West Bengal and north Odisha; **Heavy rainfall** at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Odisha; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka; **with lightning** at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep and Coastal Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of Punjab, Haryana-Chandigarh-Delhi; in some parts of West Uttar Pradesh and East Rajasthan; in isolated pockets over northwest Madhya Pradesh; **heat wave conditions** in isolated pockets over Jammu division, Himachal Pradesh, East Madhya Pradesh, Vidarbha and Gujarat state.
- ❖ **Warm night conditions** likely to prevail in isolated pockets over West Uttar Pradesh and Rajasthan.
- ❖ **Squally weather with wind speed 40 kmph to 45 kmph gusting to 55 kmph** likely to prevail along and off Kerala, & Sri Lanka coasts, Comorin area, Gulf of Mannar, South & Central Bay of Bengal and adjoining north Bay of Bengal, Andaman Sea with wind speed 45 kmph to 55 kmph gusting to 65 kmph likely to prevail along and off Sri Lanka coast, Comorin area, Gulf of Mannar, South and Central Bay of Bengal and along and off Somalia coast; with wind speed 50 kmph to 60 kmph gusting to 70 kmph likely to prevailing over westcentral Bay of Bengal. Fishermen are advised not to venture into these areas.

SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
 20-05-2024



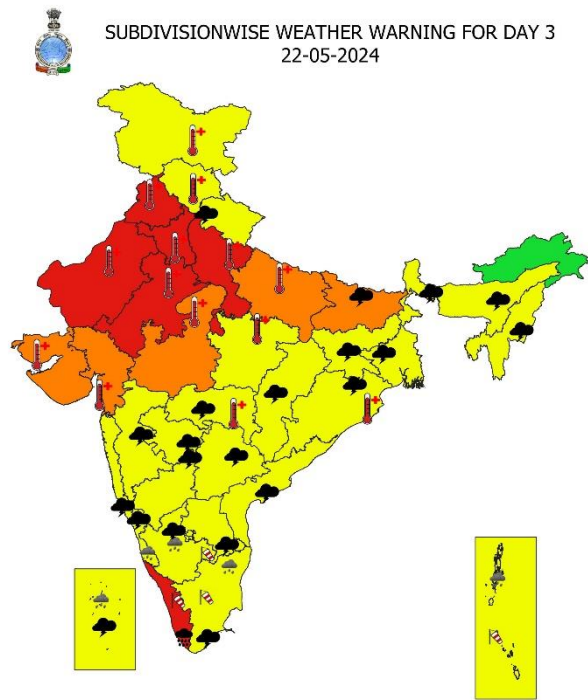
- Subdivision Warning**
- | | | | |
|----------------------|------------|----------------------|---------------------------|
| Fog | Heavy Snow | Cold Day | Subdivision Colour |
| Heavy Rain | Hailstorm | Ground Frost | NO WARNING |
| Very Heavy Rain | Dust Storm | Strong Surface Winds | WATCH (BE UPDATED) |
| Extremely Heavy Rain | Heat Wave | Thunder & Lightning | ALERT (BE PREPARED) |
| | Cold Wave | Hot and Humid | WARNING (TAKE ACTION) |

SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
 21-05-2024



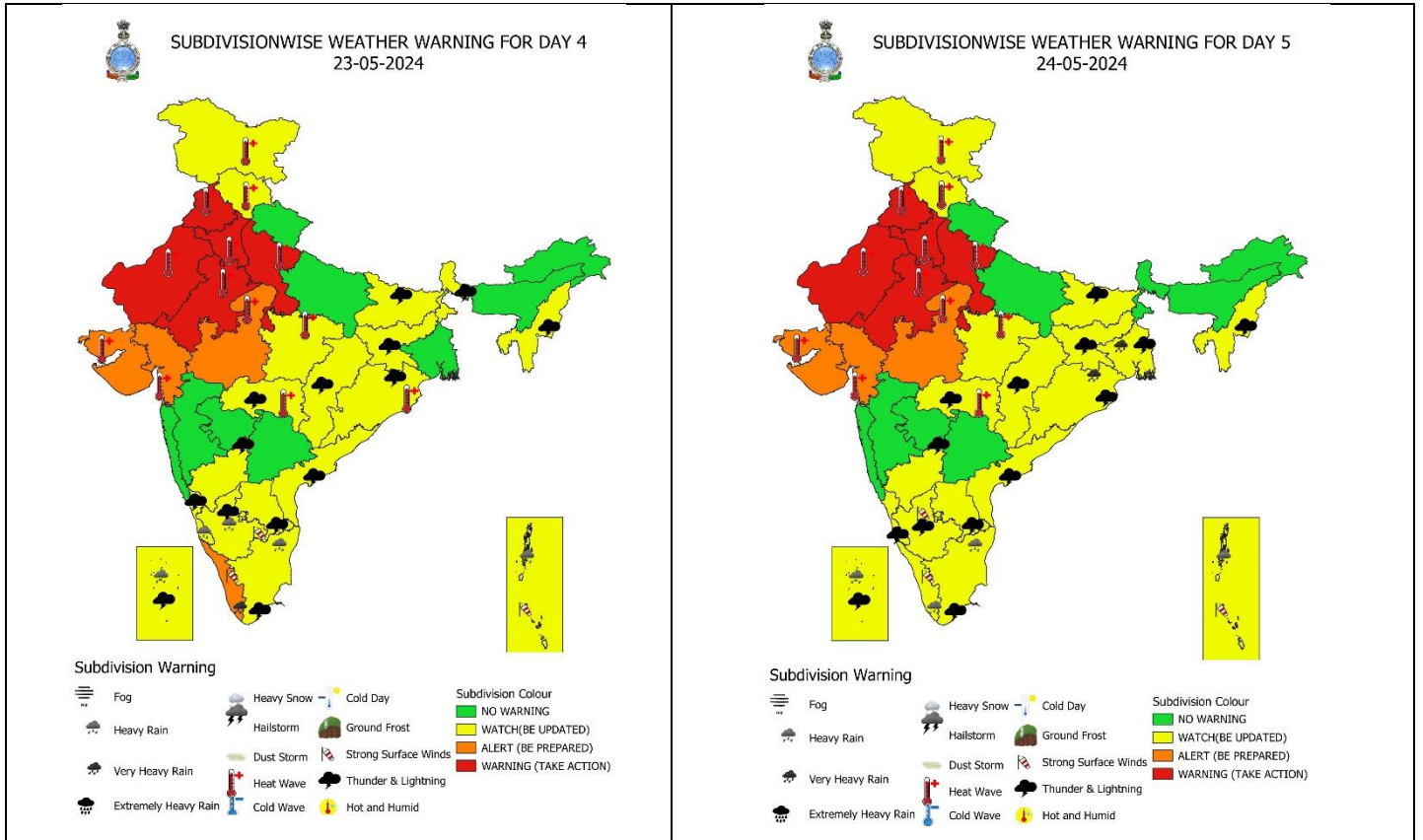
- Subdivision Warning**
- | | | | |
|----------------------|------------|----------------------|---------------------------|
| Fog | Heavy Snow | Cold Day | Subdivision Colour |
| Heavy Rain | Hailstorm | Ground Frost | NO WARNING |
| Very Heavy Rain | Dust Storm | Strong Surface Winds | WATCH (BE UPDATED) |
| Extremely Heavy Rain | Heat Wave | Thunder & Lightning | ALERT (BE PREPARED) |
| | Cold Wave | Hot and Humid | WARNING (TAKE ACTION) |

SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
 22-05-2024



- Subdivision Warning**
- | | | | |
|----------------------|------------|----------------------|---------------------------|
| Fog | Heavy Snow | Cold Day | Subdivision Colour |
| Heavy Rain | Hailstorm | Ground Frost | NO WARNING |
| Very Heavy Rain | Dust Storm | Strong Surface Winds | WATCH (BE UPDATED) |
| Extremely Heavy Rain | Heat Wave | Thunder & Lightning | ALERT (BE PREPARED) |
| | Cold Wave | Hot and Humid | WARNING (TAKE ACTION) |

*** 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
 (Service to the Nation since 1875)



IMPACT & ACTION SUGGESTED due to very heavy rainfall/extremely falls over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe during 20th-24th; Coastal & South Interior Karnataka on 20th May 2024.

A. Impact Expected

- 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
- 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)

B. 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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IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:

Red alert Areas: (Rajasthan, Punjab, Haryana, Chandigarh, Delhi, West Uttar Pradesh)

- ✓ Very high likelihood of developing heat illness and heat stroke in all ages.
- ✓ Extreme care needed for vulnerable people.

Orange alert Areas (East Uttar Pradesh, Gujarat State, West Madhya Pradesh)

- ✓ High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- ✓ High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- ✓ Avoid heat exposure- keep cool. Avoid dehydration.
- ✓ Drink sufficient water- even if not thirsty.
- ✓ Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

Yellow alert Areas (East Madhya Pradesh, Bihar, Vidarbha, Odisha, Uttarakhand, Himachal Pradesh, Jammu division)

- ✓ Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- ✓ Avoid heat exposure.
- ✓ Wear lightweight, light colour, loose, cotton clothes.
- ✓ Cover your head, use a cloth, hat or umbrella.

Agromet advisories for Heavy Rainfall, Gusty winds and Heat Wave likely over various parts of the country:

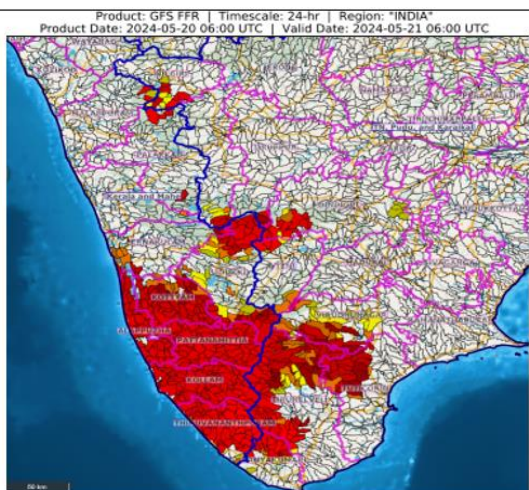
- Make provision for draining out excess water from crop fields to avoid water stagnation in Tamil Nadu, Kerala, Lakshadweep, Karnataka, Goa, Arunachal Pradesh, Assam & Meghalaya, Sub Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands.
- Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation in Himachal Pradesh, Uttarakhand, Punjab, Haryana, Uttar Pradesh, Rajasthan, Bihar, Gujarat and Madhya Pradesh.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

Flash Flood Guidance:

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 21-05-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of **Kerala & Mahe** and **Tamil Nadu - Pudu & Karaikal** 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.



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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



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)



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)

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.