Government of India

Ministry of Earth Sciences

India Meteorological Department

Press Release

Date: 16th October, 2021

Time of Issue: 1815 hrs IST

Subject: i) Intense spell of rainfall activity over south peninsular India (Kerala & Mahe, South Interior Karnataka and Tamilnadu, Puducherry & Karaikal) likely to continue till 17th October, 2021.

ii) A fresh spell of rainfall over Northwest India on 17th & 18th October, 2021.

(i) A Low Pressure Area lies over Southeast Arabian Sea & adjoining Kerala.

Under its influence:

i) **Isolated extremely heavy falls are very likely over Kerala & Mahe today, the 16th October, 2021. Isolated heavy rainfall very likely** over Kerala & Mahe on 17th October 2021.

ii) **Isolated heavy to very heavy rainfall** also very likely over South Interior Karnataka, Telangana and Tamilnadu, Puducherry & Karaikal on 16th. **Isolated heavy rainfall very likely** over Telangana and Tamilnadu, Puducherry & Karaikal on 17th October 2021.

iii) **Squally weather (wind speed reaching 40-50 kmph gusting to 60 kmph)** very likely over Southeast Arabian Sea adjoining Lakshadweep area off Kerala coast, Maldives-Comorin areas and Gulf of Mannar. Fishermen are advised not to venture into these areas.

(ii) Another Low Pressure Area lies over north Coastal Andhra Pradesh & neighbourhood.

The above Low Pressure Area/remnant cyclonic circulation is likely to move generally northwestwards towards west Uttar Pradesh.

Under its influence;

i) Isolated **heavy rainfall** very likely over north Coastal Andhra Pradesh and Chhattisgarh on 16th; over south Odisha during 16th-18th; over Vidarbha on 16th & 17th and over Madhya Pradesh on 17th & 18th October, 2021.

ii) Squally weather (wind speed reaching 40-50 kmph) very likely over Westcentral Bay of Bengal off north Andhra Pradesh coast. Fishermen are advised not to venture into these areas.

iii) A Western Disturbance lies as a cyclonic circulation over southern parts of Afghanistan & neighbourhood in lower levels with a trough aloft in mid-tropospheric westerlies roughly along Long. 64°E to the north of Lat. 20°N.

Due to interaction between the Western Disturbance and strong lower level easterlies associated with the above remnant cyclonic circulation:

Under their influence;

i) Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places is very likely over Uttarakhand during 17th-19th; over Himachal Pradesh and Uttar Pradesh during 17th-18th; over Haryana & Chandigarh and East Rajasthan on 17th October. Isolated **extremely heavy falls** are also likely over Uttarakhand and West Uttar Pradesh on 18th October, 2021.

ii) **Thunderstorm** & **lightning** at a few places is likely over Northwest India during 17th-18th October. Isolated **hailstorm** also likely over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Himachal Pradesh on 17th and Uttarakhand on 17th & 18th October, 2021.

iii) Strong Surface winds (30-40 kmph) likely over Uttar Pradesh on 17th & 18th October, 2021.

iv) Dry weather is likely over the region from 19th October, 2021.

For detailed forecast and warning refer following page:

https://mausam.imd.gov.in/imd_latest/contents/all_india_forcast_bulletin.php

EXPECTED IMPACT & ACTION SUGGESTED due to

(i) Extremely Heavy Rainfall over Kerala & Mahe on 16th October, 2021.

(ii) Extremely heavy falls over Uttarakhand and West Uttar Pradesh on 18th October, 2021.

(iii) Very Heavy Rainfall over Tamilnadu, South Interior Karnataka and Telangana on 16th ; over Himachal Pradesh, Uttarakhand, Gangetic West Bengal and Uttar Pradesh during 17th & 18th; over Haryana and East Rajasthan on 17th October, 2021.

A. Impact Expected

- Localized Flooding of roads, inundation and 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 Mudslides/Landslides.
- 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.

EXPECTED IMPACT & ACTION SUGGESTED due to thunderstorms, lightning, hail, squall & gusty winds over Jammu, Kashmir, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh on 17th and over Uttarakhand on 17th & 18th October, 2021 and due to **thunderstorms, lightning, squall & gusty winds** over Punjab, Haryana and West Uttar Pradesh on 17th October, 2021.

A. Impact Expected:

- Damage to thatched huts and asbestos roofed houses and cars. Roof tops may blow off.
- Unattached metal sheets– may fly.
- Damage to power and communication lines due to breaking of tree branches.
- Damage to standing crops.
- Lightning strikes to ground.
- Flash flood due to associated rain

B. Action Suggested

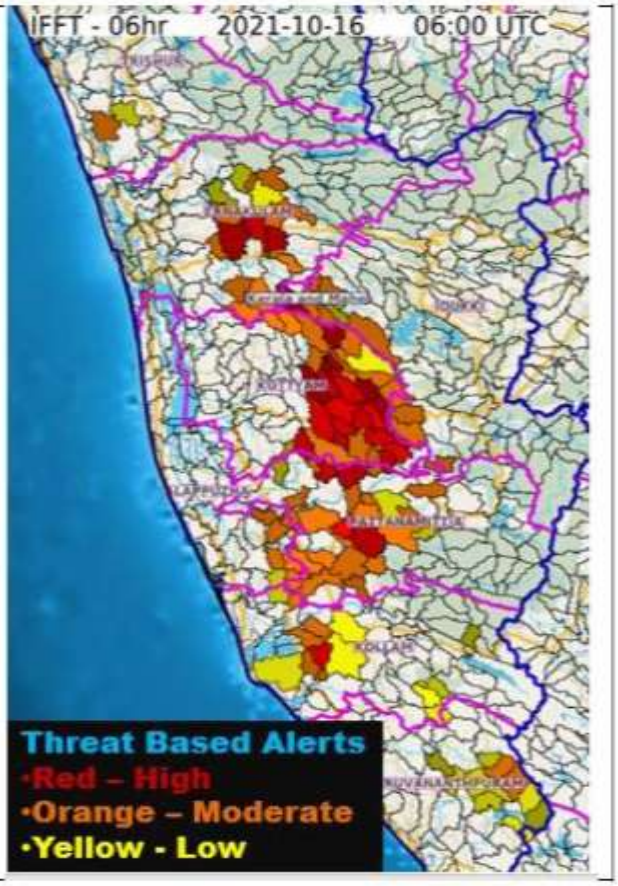
- Farmers should not go in open fields.
- Cattle grazers and animals should not be in open.
- No fishing or boat movement.
- Mango and litchi orchards should be out of bound for any activity specially by children.
- Do not take shelter under isolated trees.
- Immediately get out of and away from ponds, lakes, and outdoor watery area (e.g. paddy transplantation).
- Go indoors or seek safe pukka shelters after hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.
- If no shelter is available, immediately get into the lightning crouch**.**
- During travel, stay inside car or bus or train when thunderstorm occurs.
- Do not use electric/ electronic appliance**.**
- Stay away from downed power lines.

FLASH FLOOD GUIDENCE

Area of Concern (AoC): Few watersheds and neighborhood of Central and Southern part of Kerala & Mahe subdivision

Observed Flash Flood Threat (IFFT) till 1130 IST of 16.10.2021:

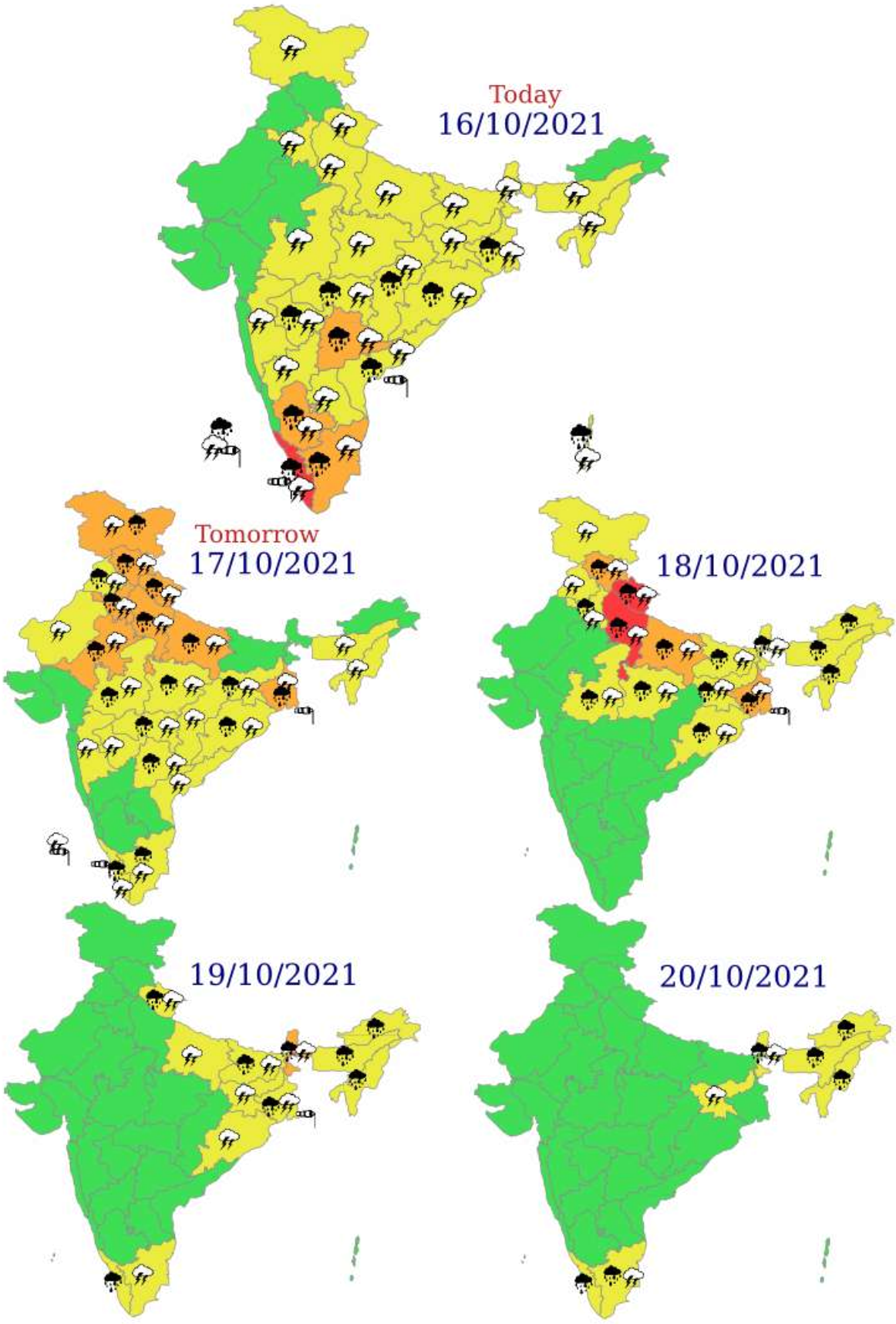
Moderate threat observed over few watersheds and neighborhood of Trissur, Ernakulam, Idukki, Kottayam, Alappuzha, Pattanamittia, Kollam and Thiruvananthpuram districts of Kerala & Mahe subdivision in last 06 hours.



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 17.10.2021:

Moderate to High Risk over few watersheds and neighborhood of Central and Southern part of Kerala & Mahe subdivision in next 24 hours.

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


Today
16/10/2021
Tomorrow
17/10/2021
18/10/2021
19/10/2021
20/10/2021

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 ≥40° C for plains and ≥30° 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 ≥6.5° C

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature ≥45°C.
Severe Heat Wave: When actual maximum temperature ≥47°C

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C.

Cold Wave

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≥ -6.5 °C

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

Cold Wave : When Minimum Temperature is ≤ 4.0 °C
Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C

(c) For Coastal Stations

When Minimum Temperature departure is ≤-4.5 °C or actual Minimum Temperature is ≤ 15 °C

Cold Day

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

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 ≤4°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

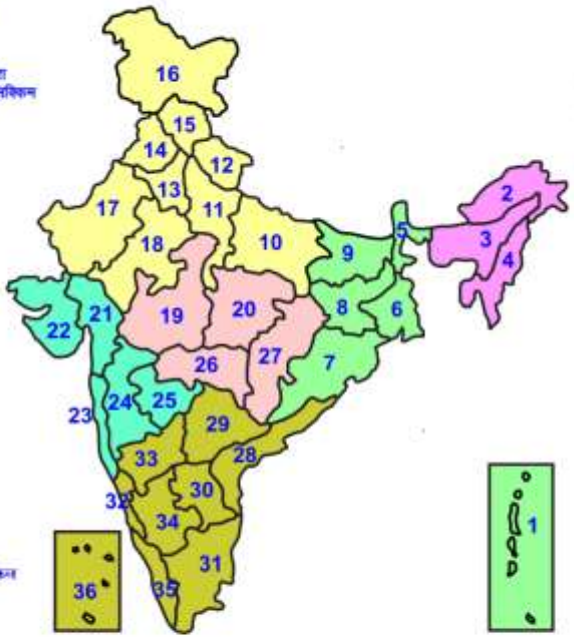
Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre
High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre
Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre

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 Strom: Wind speed >220 kmph (>119 knots)

LEGENDS

1 अंडमान और निकोबार द्वीप समूह
2 अरुणाचल प्रदेश
3 असम और मेघालय
4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
5 उप हिमालय पश्चिम बंगाल एंवम् सिक्किम
6 पश्चिम गांगेय बंगाल
7 ओडिसा
8 झारखंड
9 बिहार
10 पूर्वी उत्तर प्रदेश
11 पश्चिम उत्तर प्रदेश
12 उत्तराखंड
13 हरियाणा चंडिगढ़ एंवम् दिल्ली
14 पंजाब
15 हिमाचल प्रदेश
16 जम्मू एवंम कश्मीर एवंम लद्दाख
17 पश्चिम राजस्थान
18 पूर्वी राजस्थान
19 पश्चिम मध्य प्रदेश
20 पूर्वी मध्य प्रदेश
21 गुजरात क्षेत्र
22 सौराष्ट्र एंवम् कच्छ
23 कोंकण एंवम् गोवा
24 मध्य महाराष्ट्र
25 मराठावाडा
26 विदर्भ
27 छत्तीसगढ़
28 तटिय आंध्र प्रदेश एवं यनम
29 तेलंगाना
30 रायलसीमा
31 तमिलनाडु ,पुदुचेरी एवंम कराईकल
32 तटिय कर्नाटक
33 आंतरिक उत्तरी कर्नाटक
34 आंतरिक दक्षिणी कर्नाटक
35 केरल एवंम माहे
36 लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajsthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathawada
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. 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 Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)

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 Rain | Heavy Snow | Thunderstorm | Dust Storm
Strong Winds | Visibility | Cyclone | Squall/ Hail
Frost | Cold Wave | Heat Wave | Sea State

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.