



Government of India
Earth System Science Organization
Ministry of Earth Sciences
India Meteorological Department

Press Release

Date: 11th June, 2021

Time of Issue: 1630 hrs IST

Subject: Update on Southwest Monsoon advance and intense wet spell over east & central India and along the west coast during next 5-6 days.

Southwest Monsoon 2021:

- Southwest Monsoon has further advanced into some parts of North Arabian Sea and some more parts of south Gujarat, south Madhya Pradesh and Chhattisgarh and most parts of North Bay of Bengal and more parts of West Bengal today, the 11th June 2021.
- The Northern Limit of Monsoon (NLM) passes through lat. 20.5°N/ Long. 60°E, Diu, Surat, Nandurbar, Raisen, Damoh, Umaria, Pendra Road Bolangir, Puri, 21.0°N/88.0°E, Canning, Krishnanagar Malda and 26.5°N/88.0°E (**Annexure 1**).
- Conditions are favourable for further advance of southwest monsoon into some more parts of Gujarat, Madhya Pradesh, remaining parts Chhattisgarh and Odisha, entire West Bengal, Jharkhand and Bihar and some parts of east Uttar Pradesh and remaining parts of North Bay of Bengal during next 48 hours.
- **Southwest monsoon is likely to advance over remaining parts of the country outside south Rajasthan and Kutch region of Gujarat during subsequent 3-4 days.**

Meteorological Conditions:

- A **Low Pressure Area** lies over Northwest Bay of Bengal and adjoining Odisha & Gangetic West Bengal coasts with the associated cyclonic circulation extending upto mid-tropospheric levels persists. It is likely to become more marked during next 24 hours and move west-northwestwards across Odisha, Jharkhand & north Chhattisgarh during next 3-4 days.
- An east-west trough at lower tropospheric levels runs from south Punjab to center of **low pressure area over Northwest Bay of Bengal and adjoining Odisha & Gangetic West Bengal coasts. The east-west trough is very likely to persist during next 4-5 days.**

* Red color warning does not mean "Red Alert" Red color 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

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- In addition, strong southwesterly winds are prevailing along the west coast at lower levels and an off-shore trough lies off the west coast. These conditions are likely to persist during next 5-6 days.
- Under above favourable meteorological conditions, **southwest monsoon is likely to advance over entire country outside south Rajasthan and Kutch region of Gujarat during next 5-6 days.**

Forecast & Warnings:

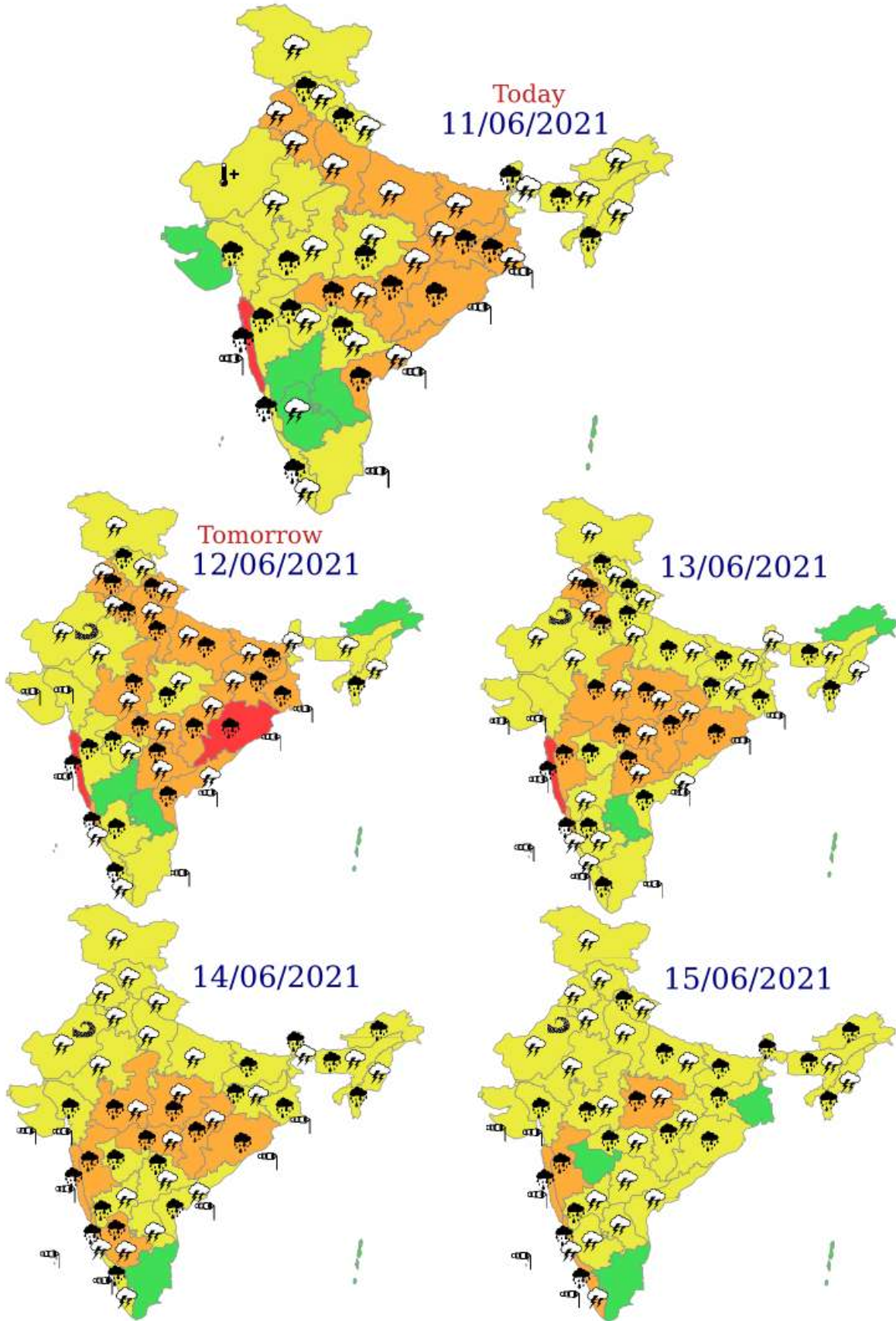
- Due to above mentioned meteorological conditions, fairly widespread to widespread rainfall activity with **isolated heavy to very heavy falls** very likely over Odisha, Chhattisgarh, West Bengal & Sikkim, Jharkhand, Madhya Pradesh, Vidharbha, Telangana during next 5-6 days. **Isolated extremely heavy falls (≥ 20 cm) also very likely over Odisha on 12th; over Chhattisgarh during 12th & 13th; over East Madhya Pradesh on 13th & 14th; over Vidharbha on 12th & 13th, June 2021.**
- Fairly widespread to widespread rainfall with **isolated heavy falls** very likely over Bihar, Uttar Pradesh and Uttarakhand during next 4-5 days. Scattered to fairly widespread rainfall over rest parts of northwest India (excluding Rajasthan) during 11th to 14th and with isolated heavy on 12th & 13th June, 2021.
- Widespread rainfall activity with **heavy to very heavy falls** likely to continue over coastal & adjoining Ghats districts of Maharashtra and coastal Karnataka during 11th to 15th June, 2021. **Isolated heavy rainfall** is very likely over Kerala during 11th to 15th June, 2021. **Isolated extremely heavy falls also very likely over Konkan & Goa during 11th to 15th with higher intensity of rainfall on 13th & 14th June, 2021.**
- **Multi-Hazard warnings for next 5 days are given in following page:**

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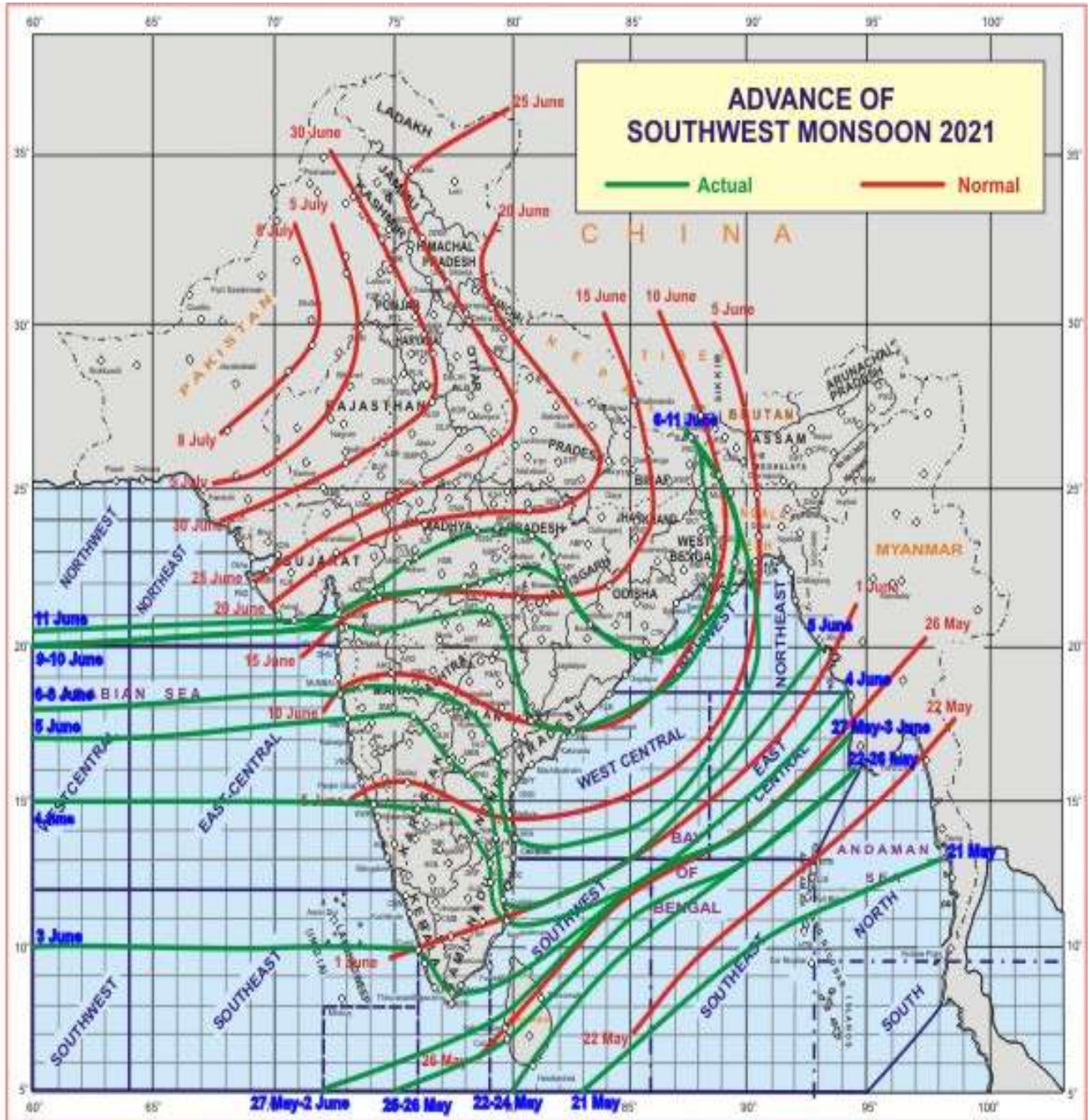
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Annexure 1



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EXPECTED IMPACT & ACTION SUGGESTED DUE TO isolated to scattered **heavy to very heavy falls** over most parts of East India & adjoining Central India from today. Isolated **extremely heavy falls (≥ 20 cm)** over Odisha on 11th; Chhattisgarh on 12th & 13th; East Madhya Pradesh on 13th & 14th; Vidarbha on 12th & 13th and Konkan during 11th to 15th June, 2021. Isolated to scattered **heavy to very heavy falls** over coastal & adjoining ghat districts of Maharashtra and coastal Karnataka during 11th to 15th June and Uttarakhand on 12th, June 2021. Isolated **heavy rainfall** over Kerala during 11th to 15th June, 2021.

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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EXPECTED IMPACT & ACTION SUGGESTED in association moderate to severe thunderstorms over West Bengal, Sikkim, Odisha, Jharkhand, Bihar, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Punjab, Haryana, Northwest Indian Himalayas and will be accompanied by frequent cloud to ground lightning and strong gusty winds.

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

- 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.

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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 *



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

(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 $\leq -4.5^{\circ}\text{C}$ or 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)

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LEGENDS

1. अंडमान और निकोबार द्वीप समूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. अरुणाचल प्रदेश, मिजोरम और त्रिपुरा
5. पश्चिम बंगाल, असम, सिक्किम
6. पश्चिम बंगाल
7. ओडिशा
8. झारखण्ड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखण्ड
13. हरियाणा, हिमाचल प्रदेश, दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर, लद्दाख
17. राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम राजस्थान
20. गुजरात
21. गुजरात
22. मध्य प्रदेश
23. मध्य प्रदेश
24. मध्य प्रदेश
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35. मध्य प्रदेश
36. मध्य प्रदेश

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, Ctd & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Maharashtra
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnada, Puducherry & Karakal
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 Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

WARNING

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Very Likely	50 - 75
Most Likely	> 75

Heavy Rain

Strong Winds

Frost

Heavy Snow

Visibility

Cold Wave

Thunderstorm

Cyclone

Heat Wave

Dust Storm

Squall/ Hail

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.

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