



Wednesday 12 October 2022

**MORNING**

Time of Issue: 0730 hours IST

**ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN**

**Significant Weather Features**

**Withdrawal of Southwest Monsoon:**

⇒ The withdrawal line of Southwest Monsoon continues to pass through Long. 79.0°E/ Lat. 31.7° N, Uttarkashi, Nazibabad, Agra, Gwalior, Ratlam, Bharuch and Long. 71.0°E / Lat. 20.3° N.

⇒ Conditions are very likely to become favourable for withdrawal of southwest monsoon from some more parts of northwest & central India during next 3-4 days.

**Weather systems, rainfall/thunderstorm Forecast & Warnings:**

⇒ A Western Disturbance as a trough in mid & upper tropospheric westerlies runs roughly along 72°E to the north of 30°N.

⇒ A cyclonic circulation lies over Punjab & adjoining Haryana in lower tropospheric levels.

⇒ A cyclonic circulation lies over Kerala in lower tropospheric levels and a trough runs from this cyclonic circulation to southwest Madhya Pradesh in lower tropospheric levels.

⇒ A cyclonic circulation lies over north Andaman Sea in lower tropospheric levels and is very likely to move nearly westwards during next 3-4 days.

**⇒ Under the influence of above systems;**

o Fairly widespread/widespread light/moderate rainfall with isolated heavy falls & thunderstorm/lightning very likely over Konkan & Goa and North Interior Karnataka on 12th; Tamil Nadu, Puducherry & Karaikal during 12th-16th; Rayalaseema during 12th, 13th, 15th & 16th; South interior Karnataka on 12th, 15th & 16th; Coastal Andhra Pradesh & Yanam on 13th & 14th and Kerala & Mahe 15th & 16th October, 2022.

o Fairly widespread/widespread light/moderate rainfall with isolated heavy falls very likely over Sub-Himalayan West Bengal & Sikkim and Bihar on 12th October, 2022.

o Fairly widespread/widespread light/moderate rainfall with isolated heavy falls & thunderstorm/lightning very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 12th October, 2022.

**Main Weather Observations**

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◆ **Rainfall/thundershower observed (from 0830 hours IST to 1730 hours IST of yesterday):** at most places over Arunachal Pradesh; at many places over Bihar and Himachal Pradesh; at a few places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Punjab, East Madhya Pradesh, Chhattisgarh, Odisha, Madhya Maharashtra, Konkan & Goa, Coastal Andhra Pradesh & Yanam and Andaman & Nicobar Islands and at isolated places over Gangetic West Bengal, Jharkhand, Uttar Pradesh, East Rajasthan, Uttar Pradesh, West Madhya Pradesh, Vidarbha, Marathwada, Gujarat Region, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.

◆ **Heavy Rainfall Recorded (from 0830 hours IST to 1730 hours IST of yesterday):** Nil.

◆ **Chief amount of Rainfall observed (from 0830 hours IST to 1730 hours IST of yesterday): (2 cm or more):** Malanjkhanda, Surat and Meerut-5 each; Katra-4; Silchar, Nahan, Nalganda, Matheran, Nagpur and Pasighat-3 each; Manali, Alwar, Shahjahanpur, Jharsiguda, Mahabaleshwar and Gondia-2 each.

◆ **Thunderstorm observed (from 0830 hours IST of yesterday to 0530 hours IST of today):** at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Assam & Meghalaya, East Madhya Pradesh, Vidarbha, Bihar, Jharkhand, Chhattisgarh, Odisha, Coastal Andhra Pradesh & Yanam, Konkan & Goa, Madhya Maharashtra, Marathwada, Saurashtra & Kutch, West Bengal & Sikkim, Vidarbha, Rayalaseema, Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.

◆ **Minimum Temperature Departures (as on 11-10-2022):** Minimum temperatures were appreciably above normal (3.1°C to 5.0°C) at a few places over West Rajasthan; at isolated places over West Madhya Pradesh and Saurashtra & Kutch; above normal (1.6°C to 3.0°C) at most places over Vidarbha; at many places over Haryana, Chandigarh & Delhi, Bihar, Jharkhand, Odisha, Gujarat Region, Marathwada; at a few places over Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Madhya Maharashtra and at isolated places over East Madhya Pradesh. They were below normal (-1.6°C to -3.0°C) at isolated places over Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country. Yesterday, the lowest minimum temperature of 17.2°C was reported at Nazibabad (West Uttar Pradesh) over the plains of the country.

◆ **Maximum Temperature Departures (as on 11-10-2022):** Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Kerala & Mahe; at a few places over Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura and Saurashtra & Kutch. They were markedly below normal (-5.1°C or less) at most places over Haryana, Chandigarh & Delhi; at many places over Punjab and Uttar Pradesh; at a few places over Himachal Pradesh and Vidarbha and at isolated places over West Rajasthan and East Madhya Pradesh; appreciably below normal (-3.1°C to -5.0°C) at a few places over Madhya Maharashtra and at isolated places over East Rajasthan; below normal (-1.6°C to -3.0°C) at many places over Assam & Meghalaya, Marathwada, Telangana and North Interior Karnataka; at a few places over Arunachal Pradesh and at isolated places over Coastal Andhra Pradesh & Yanam, Gujarat Region and Andaman & Nicobar Islands and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 39.2°C was reported at Bhuj (Saurashtra & Kutch) over the plains of the country.

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### Meteorological Analysis (Based on 0530 hours IST)

- ◆ Conditions are very likely to become favourable for withdrawal of southwest monsoon from some more parts of northwest & central India during next 4-5 days. The withdrawal line of **Southwest Monsoon** continues to pass through Long. 79.0°E/ Lat. 31.7°N, Uttarkashi, Nazibabad, Agra, Gwalior, Ratlam, Bharuch and Long. 71.0°E / Lat. 20.3°N.
- ◆ The **Western Disturbance** as a trough in mid & upper tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along 72°E to the north of 30°N.
- ◆ The cyclonic circulation over Punjab & adjoining Haryana extending up to 3.1 km above mean sea level persists.
- ◆ The cyclonic circulation over Kerala & neighbourhood extending upto 1.5 km above mean sea level persists.
- ◆ The cyclonic circulation over north Andaman Sea & neighbourhood extending upto 3.1 km above mean sea level persists.
- ◆ The trough from cyclonic circulation over Kerala & neighbourhood to southwest Madhya Pradesh across Interior Karnataka, Marathwada and Vidarbha extending upto 1.5 km above mean sea level persists.

### Weather Forecast for next 5 days \* upto 0830 hours IST of 17th October, 2022

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ No significant change in maximum temperatures very likely over the country during next 5 days.

### Weather Outlook for subsequent 2 days During 17th-19th October, 2022

- ◆ Scattered to fairly widespread light/moderate rainfall likely over East, Northeast & peninsular India, Islands, Vidarbha, Chhattisgarh and along the West coast.
- ◆ Dry weather is likely over rest parts of the country.

## Weather Warning during next 5 days \*

**12 Oct (Day 1): ♦ Heavy rainfall** at isolated places very likely over Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Rayalaseema, Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm accompanied with lightning** at isolated places very likely over East Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

**13 Oct (Day 2): ♦ Heavy rainfall** at isolated places very likely over Coastal Andhra Pradesh & Yanam, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm accompanied with lightning** at isolated places very likely over Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Gangetic West Bengal, Odisha, Madhya Maharashtra, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

**14 Oct (Day 3): ♦ Heavy rainfall** at isolated places very likely over Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm accompanied with lightning** at isolated places very likely over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

**15 Oct (Day 4): ♦ Heavy rainfall** at isolated places likely over Andaman & Nicobar Islands, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning** at isolated places likely over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

**16 Oct (Day 5): ♦ Heavy rainfall** at isolated places likely over Andaman & Nicobar Islands, Rayalaseema, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning** at isolated places likely over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

**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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(Created by the National since 1975)



**Table-1**  
**5 Day Rainfall Forecast (MORNING)**  
**12-October-2022**

Met-Sub-Division	12-Oct Today	13Oct Thu	14Oct Fri	15Oct Sat	16Oct Sun
1. Andaman & Nicobar Islands	WS	WS	WS	WS	WS
2. Arunachal Pradesh	FWS	FWS	SCT	SCT	ISOL
3. Assam & Meghalaya	WS	FWS	FWS	SCT	ISOL
4. N. M. M. & T.	FWS	SCT	SCT	FWS	SCT
5. S.H. West Bengal & Sikkim	WS	FWS	SCT	SCT	SCT
6. Gangetic West Bengal	FWS	FWS	FWS	FWS	SCT
7. Odisha	SCT	SCT	SCT	SCT	SCT
8. Jharkhand	FWS	FWS	SCT	SCT	SCT
9. Bihar	FWS	SCT	ISOL	ISOL	ISOL
10. East Uttar Pradesh	SCT	ISOL	ISOL	ISOL	DRY
11. West Uttar Pradesh	ISOL	ISOL	DRY	DRY	DRY
12. Uttarakhand	FWS	ISOL	ISOL	DRY	DRY
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	DRY
14. Punjab	DRY	DRY	DRY	DRY	DRY
15. Himachal Pradesh	ISOL	DRY	DRY	DRY	DRY
16. J & K and Ladakh	ISOL	DRY	DRY	DRY	DRY
17. West Rajsthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	SCT	ISOL	DRY	DRY	DRY
20. East Madhya Pradesh	FWS	ISOL	ISOL	ISOL	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	FWS	SCT	ISOL	ISOL	ISOL
24. Madhya Maharashtra	FWS	SCT	ISOL	ISOL	ISOL
25. Marathawada	SCT	ISOL	ISOL	ISOL	ISOL
26. Vidharbha	SCT	SCT	ISOL	ISOL	ISOL
27. Chhattisgarh	FWS	FWS	SCT	SCT	SCT
28. Coastal A. P. & Yanam	FWS	FWS	FWS	FWS	FWS
29. Telangana	FWS	FWS	FWS	FWS	FWS
30. Rayalaseema	FWS	FWS	FWS	FWS	FWS
31. T.N.,Puducherry & Karaikal	FWS	FWS	FWS	FWS	FWS
32. Coastal Karnataka	FWS	FWS	FWS	FWS	FWS
33. North Interior Karnataka	WS	FWS	FWS	FWS	FWS
34. South Interior Karnataka	WS	FWS	FWS	FWS	FWS
35. Kerala & Mahe	SCT	SCT	SCT	SCT	SCT
36. Lakshadweep	SCT	SCT	SCT	SCT	SCT

**% Station Reporting Rainfall**

% 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)
No Rain	Dry		

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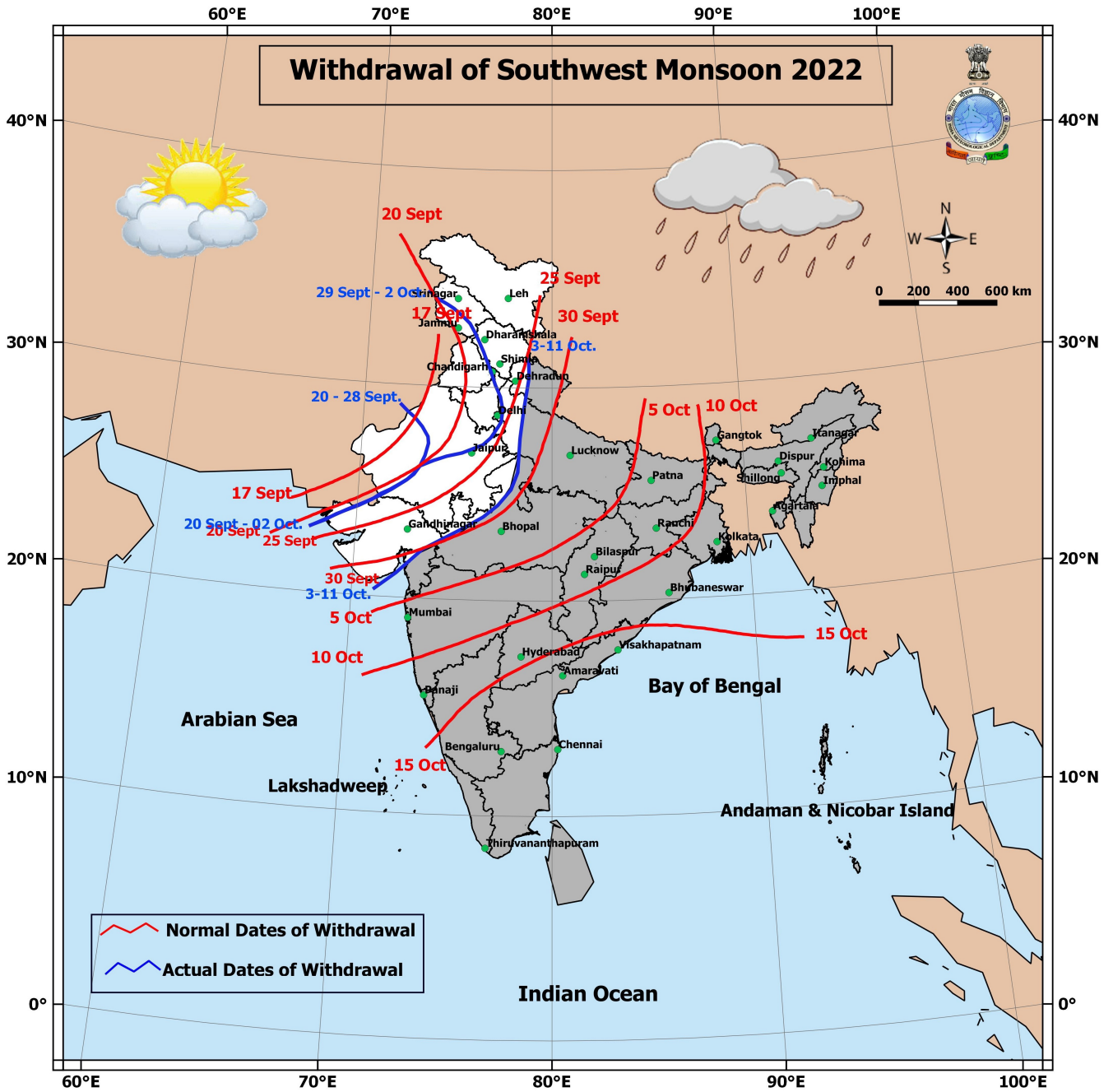
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Fig.1 Withdrawal of Southwest Monsoon 2022



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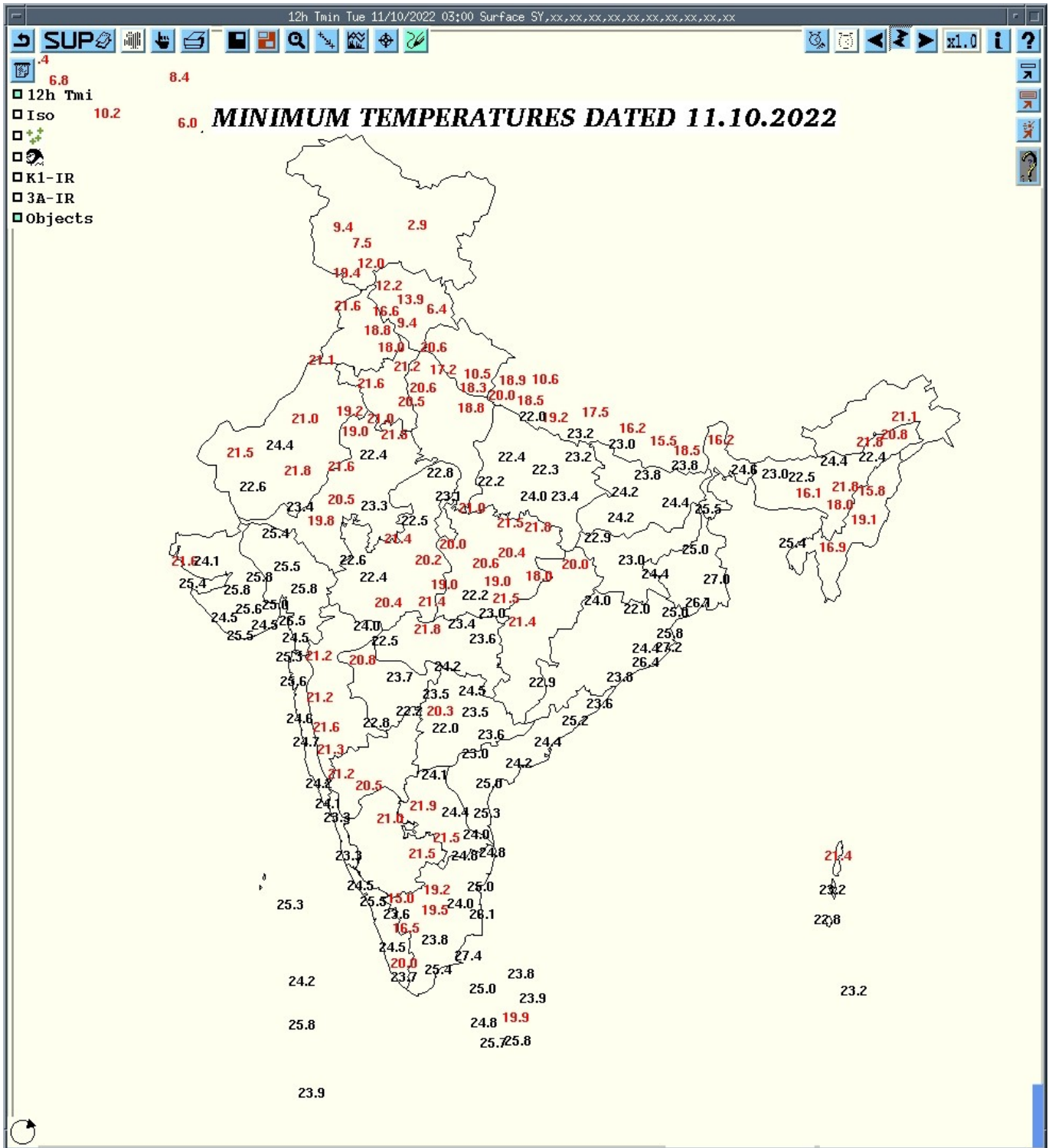
(Created by the Meteo-Info 4.07.0)







Fig. 4: Minimum Temperature during past 24 hours

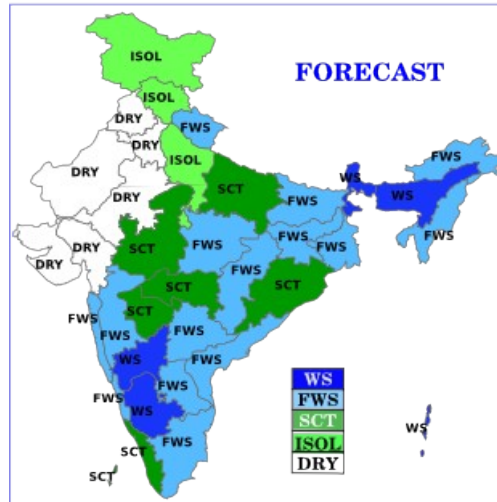


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## Wednesday 12 October 2022



**12 Oct (Day 1): ♦ Heavy rainfall** at isolated places very likely over Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Rayalaseema, Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.

**♦ Thunderstorm accompanied with lightning** at isolated places very likely over East Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

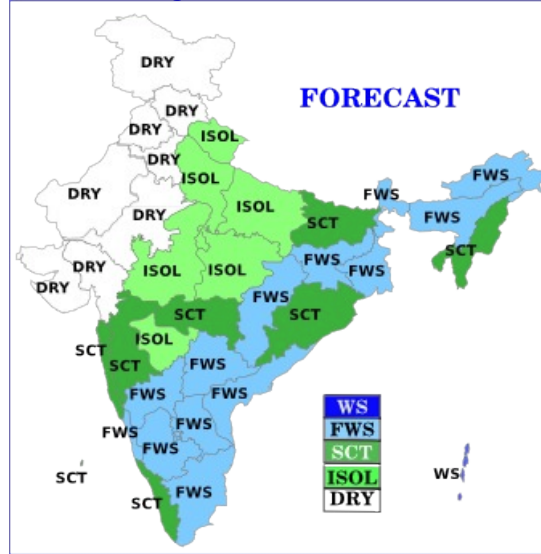
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## Thursday 13 October 2022



**13 Oct (Day 2): ♦ Heavy rainfall** at isolated places very likely over Coastal Andhra Pradesh & Yanam, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm accompanied with lightning** at isolated places very likely over Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Gangetic West Bengal, Odisha, Madhya Maharashtra, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

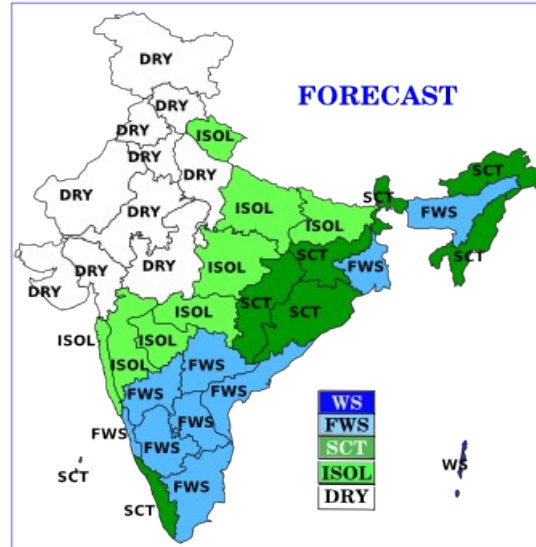
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## Friday 14 October 2022



**14 Oct (Day 3): ♦ Heavy rainfall** at isolated places very likely over Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm accompanied with lightning** at isolated places very likely over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

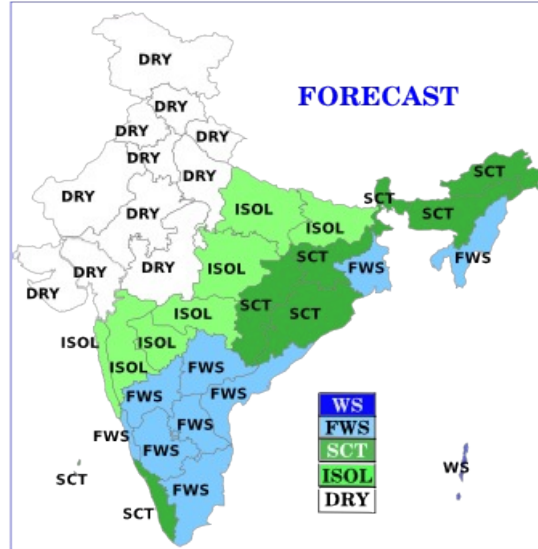
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## Saturday 15 October 2022



15 Oct (Day 4): ♦ **Heavy rainfall** at isolated places likely over Andaman & Nicobar Islands, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning** at isolated places likely over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

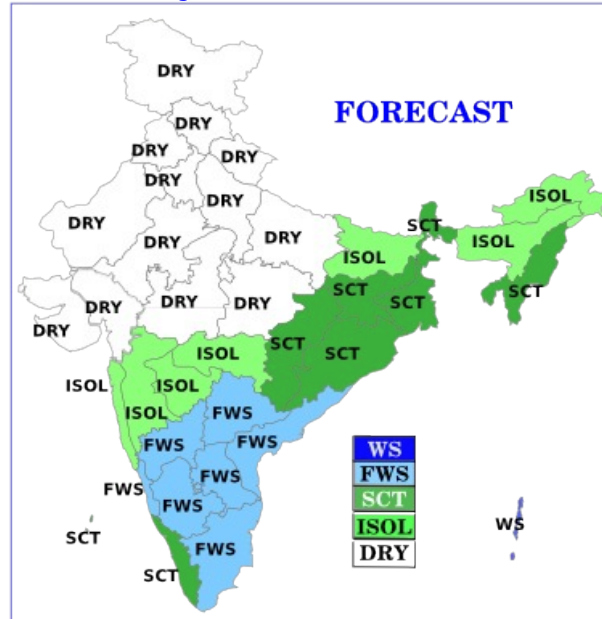
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## Sunday 16 October 2022



**16 Oct (Day 5): ♦ Heavy rainfall** at isolated places likely over Andaman & Nicobar Islands, Rayalaseema, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning** at isolated places likely over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

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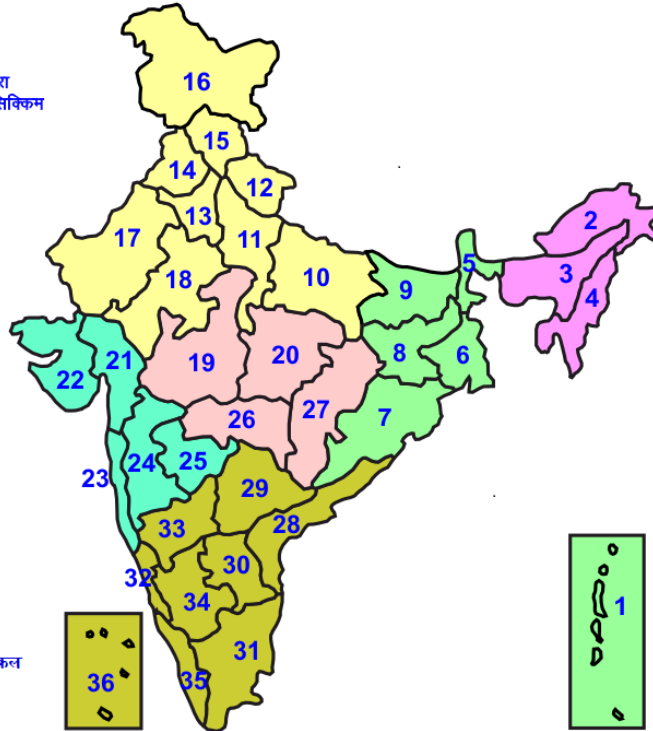
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## LEGENDS

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- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम गंगोय बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाडा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं 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 Rajasthan
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 Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

## WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

## 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

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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  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $40^{\circ}\text{C}$

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

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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



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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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)

\* 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

For more details kindly visit [www.imd.gov.in](http://www.imd.gov.in) or contact : +91 11 24631913, 24643965, 24629798

(Created by the Meteorology Deptt)