



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release.

Date: 24th May, 2024

Time of Issue: 1415 hours IST

Subject:

- i. **The Depression lies over central Bay of Bengal. It is very likely to intensify into a Cyclonic Storm by 25th May morning and intensify into a severe cyclonic storm by 25th night. It is very likely to cross Bangladesh and adjoining West Bengal coasts between Sagar Island and Khepupara around 26th May midnight as a severe cyclonic storm.**
- ii. **Heat wave to severe heat wave conditions most likely to continue over plains of Northwest India and Heat wave conditions over Western Himalayan Region, Madhya Pradesh and Gujarat State during next 4-5 days.**

Realised weather during past 24 hours till 0830 hours IST of today: (details in Annexure I)

- ❖ **Heat wave to severe heat wave conditions** prevailed over many parts of West Rajasthan and in isolated pockets of East Rajasthan, West Madhya Pradesh. **Heat wave conditions** prevailed in some parts of Gujarat and in isolated pockets of Jammu-Division, Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh, Madhya Maharashtra. Heat wave conditions have been prevailing over Gujarat region since 15th; Saurashtra & Kutch since 16th and over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh and Rajasthan since 17th May, 2024.
- ❖ **Warm night conditions** observed in some parts of Punjab, Haryana, Uttar Pradesh and Rajasthan.
- ❖ Yesterday, **the highest maximum temperature of 48.8°C** was reported at **Barmer (Rajasthan)** over the country.
- ❖ **Heavy to very heavy rainfall** observed at isolated places over Kerala; **Heavy rainfall** at isolated places over Tamil Nadu, Puducherry & Karaikal and Interior Karnataka.
- ❖ **Hailstorm** observed at isolated places over Himachal Pradesh.
- ❖ **Gusty winds/squally winds** data reported over the country is attached in **Annexure II**.

Weather Systems and Forecast & Warnings: (Annexure III)

- ❖ Southwest Monsoon has further advanced into some more parts of Maldives & Comorin area, south Bay of Bengal, remaining parts of Andaman & Nicobar Islands, Andaman Sea and some parts of Eastcentral Bay of Bengal today, the 24th May.
- ❖ The Northern Limit of Monsoon passes through 05°N/60°E, 06°N/70°E, 7°N/75°E, 8°/80°E, 11°N/85°E, 13.5°N/90°E and 17°N/95°E. (**Annexure IV**).
- ❖ Conditions are favourable for further advance of Southwest Monsoon over some more parts of South Bay of Bengal, Central Bay of Bengal and some parts of Northeast Bay of Bengal during next 2 days.
- ❖ A cyclonic circulation lies over south Kerala & neighbourhood and extends upto 5.8 km above mean sea level. Another cyclonic circulation lies over northeast Madhya Pradesh & neighbourhood at 1.5 km above mean sea level. Under their influence:
 - Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** likely over Kerala & Mahe, Lakshadweep, Coastal Karnataka and isolated to scattered light/moderate rainfall accompanied with **thunderstorm,**

lightning & gusty winds (30-40 kmph) over Coastal Andhra Pradesh & Yanam, Rayalaseema Telangana, Interior Karnataka during 24th-26th May.

✓ ***Isolated heavy rainfall very likely over Karnataka and Coastal Andhra Pradesh & Yanam on 24th; Tamil Nadu, Puducherry & Karaikal on 24th and Kerala during 24th-27th May, 2024.***

✓ ***Isolated heavy to very heavy rainfall very likely over Kerala & Mahe on 24th May, 2024.***

➤ Widespread light to moderate rainfall very likely over Andaman & Nicobar Islands during next 7 days with ***isolated heavy rainfall very likely over Andaman & Nicobar Islands during 23rd-25th May, 2024.***

➤ Isolated light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Konkan & Goa, Vidarbha during 24th-26th; Marathwada, Madhya Maharashtra, Madhya Pradesh on 24th May, 2024.

The Depression over central Bay of Bengal:

❖ Yesterday's Well Marked Low Pressure Area over Westcentral & adjoining South Bay of Bengal concentrated into a **depression** and lay centered at 0530 hrs IST of today, the 24th May, 2024 over central Bay of Bengal. It is very likely to continue to move northeastwards and intensify further into a cyclonic storm over eastcentral Bay of Bengal by 25th May morning. Subsequently, it would move nearly northwards, intensify into a severe cyclonic storm by 25th night. Continuing to move nearly northwards, it is very likely to cross Bangladesh and adjoining West Bengal coasts between Sagar Island and Khepupara around 26th May midnight as a severe cyclonic storm. **(ANNEXURE VI)**

Heavy Rainfall Warning:

- (a) Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places is likely over coastal districts of West Bengal on 26th & 27th and isolated heavy rainfall over North Coastal Odisha on 25th & 26th May and isolated extremely heavy rainfall likely over coastal districts of West Bengal on 26th May. Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places over eastern districts of Sub-Himalayan West Bengal on 27th and 28th May.
- (a) Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places is likely over Mizoram, Tripura and South Manipur on 26th and over Assam & Meghalaya, Arunachal Pradesh, Nagaland, Mizoram, Manipur & Tripura on 27th & 28th May. Isolated extremely heavy rainfall is likely over Assam & Meghalaya on 27th & 28th May, Arunachal Pradesh on 28th May and Mizoram & Tripura on 27th May.
- (c) Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places are likely over Andaman Islands on 24th May and heavy rainfall at isolated places over north Andaman Islands on 25th May.

Wind Warning:

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail over central and adjoining South Bay of Bengal on 24th May. It would become 50-60 kmph gusting to 70 kmph over central Bay of Bengal on 24th May evening.
- It would extend to adjoining areas of North Bay of Bengal with gale wind speed reaching 60-70 kmph gusting to 80 kmph from 25th May morning. It would further increase becoming 100-110 kmph gusting to 120 kmph over North Bay of Bengal from morning and 110-120 kmph gusting to 120 kmph from evening of 26th May. Gale wind speed reaching 70-80 kmph gusting to 90 kmph is likely over adjoining central Bay of Bengal from 26th morning for subsequent 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely along & off Bangladesh, West Bengal and adjoining North Odisha coasts from 25th May evening. It is likely to increase becoming gale wind speed reaching 60-70 kmph gusting to 80 kmph from morning of 26th May and 100-120 kmph gusting to 135 kmph along & off Bangladesh and adjoining West Bengal coasts from evening of 26th evening for subsequent 12 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely over Andaman Islands and North Andaman Sea on 24th May.

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely over Mizoram and Tripura and 40-50 kmph gusting to 60 kmph is likely over South assam and Meghalaya on 27th May.

Storm surge:

Storm surge of about 1.0 meter above astronomical tide likely to inundate low lying areas of coastal West Bengal and 1.0-1.5 m over Bangladesh at the time of landfall.

Sea condition:

- Rough to very rough sea condition is likely over central and adjoining south Bay of Bengal on 24th May. It would become high over central Bay of Bengal on 25th May & 26th May and High to Very High over North Bay of Bengal from 25th evening till 27th May morning.
- Rough to very rough sea condition is likely along & off Bangladesh, West Bengal and adjoining North Odisha coasts from 25th May evening and high to very high along & off Bangladesh and West Bengal coasts from 26th morning onwards till 27th May morning.
- Rough to very rough sea condition is likely over Andaman Islands and North Andaman Sea on 24th May.

Damage Expected over South & North 24 Parganas districts of west Bengal:

- Major damage to thatched houses/ huts. Possibilities of damage to vulnerable structure.
- Unattached metal sheets may fly.
- Breaking of tree branches, uprooting of trees. Major damage to banana and papaya trees. Dead limbs may blow off from trees.
- Damage to power and communication lines due to breaking of branches and uprooting of trees.
- Damage to Kutcha and minor damage to Pucca roads due to heavy rain.
- Damage to paddy crops, horticultural crops and orchards.
- Inundation of low lying areas and localized flooding
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic due to water logging and squally winds

Action Suggested for North & South 24 Parganas districts of West Bengal:

- Total suspension of fishing operations.
- Surface transport and shipping operations need to be regulated
- Onshore & Offshore operation need to be regulated as per guidelines
- Coastal hutment dwellers to be in safer places.
- People in affected areas to remain indoors.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

Fishermen Warning:

Fishermen are advised not to venture into south Bay of Bengal and Andaman Sea till 24th May, central Bay of Bengal till 26th May and North Bay of Bengal from 25th May till 27th May. Fishermen out at sea are advised to return to the coast.

(ANNEXURE V)

Maximum temperature observation and forecast for next 5 days:

- ❖ **Areas having maximum temperatures greater than 40°C:** Yesterday, maximum temperatures were in the range of 44-47°C in many places over Rajasthan; in some places over West Madhya Pradesh & Gujarat state; in isolated pockets over southwest Uttar Pradesh, Vidarbha; in the range of 40- 44°C in many places over East Madhya Pradesh, Marathwada; in some parts of Punjab, Haryana-Chandigarh-Delhi, Chhattisgarh, Odisha; in isolated pockets of north Madhya Maharashtra. These are above normal by 2-4°C over most parts of Rajasthan; in many parts of West Madhya Pradesh and Gujarat state; in isolated pockets of Jammu division, south Haryana, Vidarbha, Marathwada and north Madhya Maharashtra
- ❖ No significant change in maximum temperatures very likely over Rajasthan during next 24 hours and rise by 2°C thereafter.

- ❖ No significant change in maximum temperatures very likely over central & west India during next 2 days hours and fall by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

Heat Wave, Warm Night and Hot & Humid weather warning for next 5 days:

- ❖ **Heat wave conditions** very likely in isolated pockets of Jammu division, Himachal Pradesh, East Madhya Pradesh and Vidarbha during 24th-28th; Gujarat state during 24th-28th; West Uttar Pradesh and Madhya Maharashtra during 24th-25th; East Uttar Pradesh during 26th-28th; West Madhya Pradesh on 27th & 28th May, 2024.
- ❖ **Heat wave to severe heat wave conditions very likely in many/most parts of Rajasthan during 24th-28th; in some/many parts of Punjab, Haryana-Chandigarh during 24th-28th; West Uttar Pradesh during 26th-28th; in isolated pockets of West Madhya Pradesh during 24th-26th; Delhi during 24th-28th; Gujarat Region on 24th May, 2024.**
- ❖ **Hot and humid weather** very likely to prevail over Assam on 24th & 25th; Sub-Himalayan West Bengal & Sikkim during 24th-26th and over Gujarat State on 27th & 28th May, 2024.
- ❖ **Warm night conditions** very likely to prevail over Rajasthan, Punjab, Haryana-Chandigarh-Delhi during 24th-28th and Uttar Pradesh during 24th -26th May, 2024.

For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

ANNEXURE I

Realised Rainfall during past 24 hours till 0830 hours IST of today:

- ❖ Light to moderate rainfall accompanied with thunderstorm & lightning observed **at most places** over Andaman & Nicobar Islands, Kerala & Mahe, Lakshadweep ; **at many places** over Coastal Karnataka; **at a few places** over Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Himachal Pradesh, Uttarakhand, Interior Karnataka and **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Madhya Maharashtra, Marathwada, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Jharkhand, Bihar, Odisha, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.

Significant amount of rainfall (in cm):

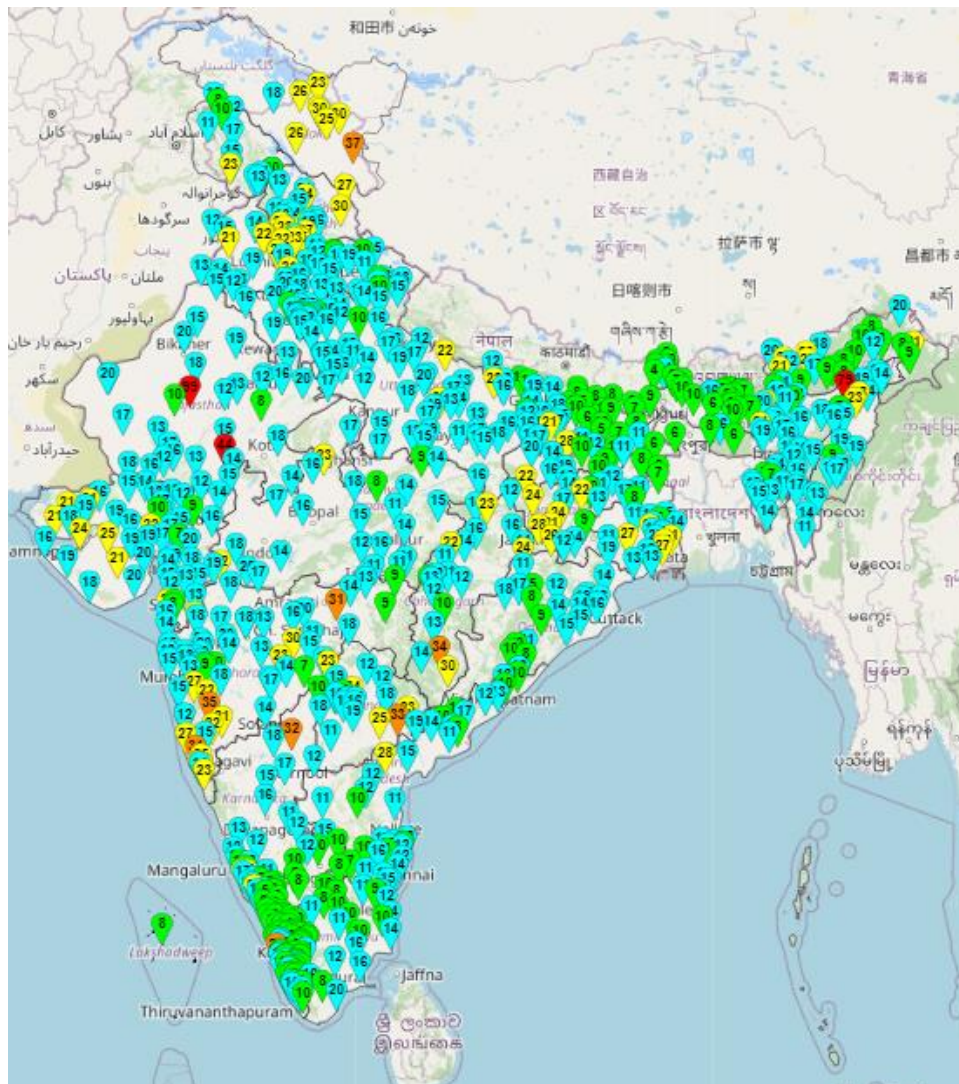
- ❖ **Kerala & Mahe:** Kalamassery (dist Ernakulam) 15, Alwaye (dist Ernakulam) 13, Ernakulam South (dist Ernakulam) 13, Kochi C.i.a.l. (dist Ernakulam) 12, Perumpavur (dist Ernakulam) 11, Neeleswaram Arg (dist Ernakulam) 11, Pinarayi (dist Cannur) 11, Ponmudi (Thiruvananthapuram) Aluva (dist Ernakulam) 10, Kannur (dist Cannur) 10, KannurIcar (dist Cannur) 10, Irikkur (dist Cannur) 9, Kannur (dist Cannur) 8, Palluruthy (dist Ernakulam) 8, Kannur Airport (dist Cannur) 8, Quilandi (dist Kozhikode) 8, Hosdurg (dist Kasargod) 7, Tellichery (dist Cannur) 7, Taliparamba (dist Cannur) 7, Kochi I.a.f. (dist Ernakulam) 7, Panniyoor (dist Cannur) 7, Peringome (dist Cannur) 7;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Nalumukku (dist Tirunelveli) 10, Oothu (dist Tirunelveli), Pechiparai (dist Kanniyakumari) 8 each, Kinnakorai (dist The Nilgiris), Kakkachi (dist Tirunelveli) 7 each, Upper Bhavani (dist The Nilgiris), Tindivanam (dist Villupuram), Adayamadai (dist Kanniyakumari) 6 each, Went Worth Estate (dist The Nilgiris), Chittar-I (dist Kanniyakumari), Perunchani Dam (dist Kanniyakumari), Puthan Dam (dist Kanniyakumari), Balamore (dist Kanniyakumari), Taluk Office Pandalur (dist The Nilgiris), Mambzhathuraiyaru (dist Kanniyakumari), Papanasam (dist Tirunelveli), Anaikedanku (dist Kanniyakumari), Suralacode (dist Kanniyakumari), Glenmorgan (dist The Nilgiris), Geddai (dist The Nilgiris), Sivalogam (Chittar II) (dist Kanniyakumari) 5 each;
- ❖ **North Interior Karnataka:** Sankeshwar (dist Belagavi) 7, Nippani (dist Belagavi) 4, Chikodi (dist Belagavi) 4;
- ❖ **South Interior Karnataka:** Napoklu (dist Kodagu) 7, Murnadu (dist Kodagu) 5, Bhagamandala (dist Kodagu) 5, Harangi (dist Kodagu) 4;

- ❖ **Telangana:** Chandrugonda (dist B. Kothagudem) 6, Mulakalapalle (dist B. Kothagudem) 6, Burgampadu (dist B. Kothagudem) 6;
- ❖ **Konkan & Goa:** Ponda (dist North Goa) 6, Sawantwadi (dist Sindhudurg) 3, Lanja (dist Ratnagiri) 3, Valpoi (dist North Goa) 3;
- ❖ **Coastal Karnataka:** Kiravatti (dist Uttara Kannada) 5;
- ❖ **Coastal Andhra Pradesh & Yanam:** Kunavaram (dist Alluri Sitharamaraju) 4;
- ❖ **Madhya Maharashtra:** Phaltan (dist Satara) 3;

ANNEXURE II

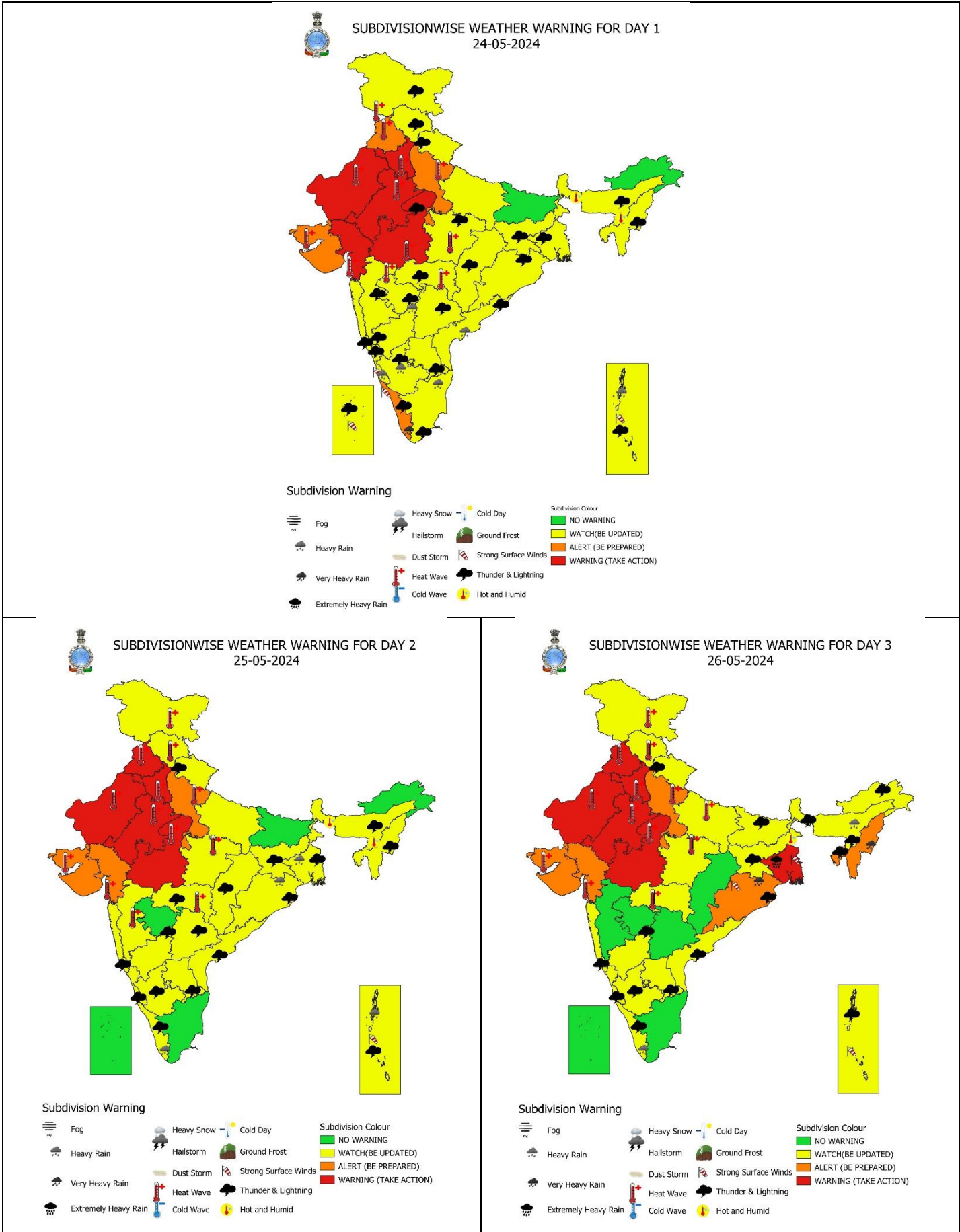
Reported maximum wind speed (kmph) during past 24 hours till 0830 hours IST of today:

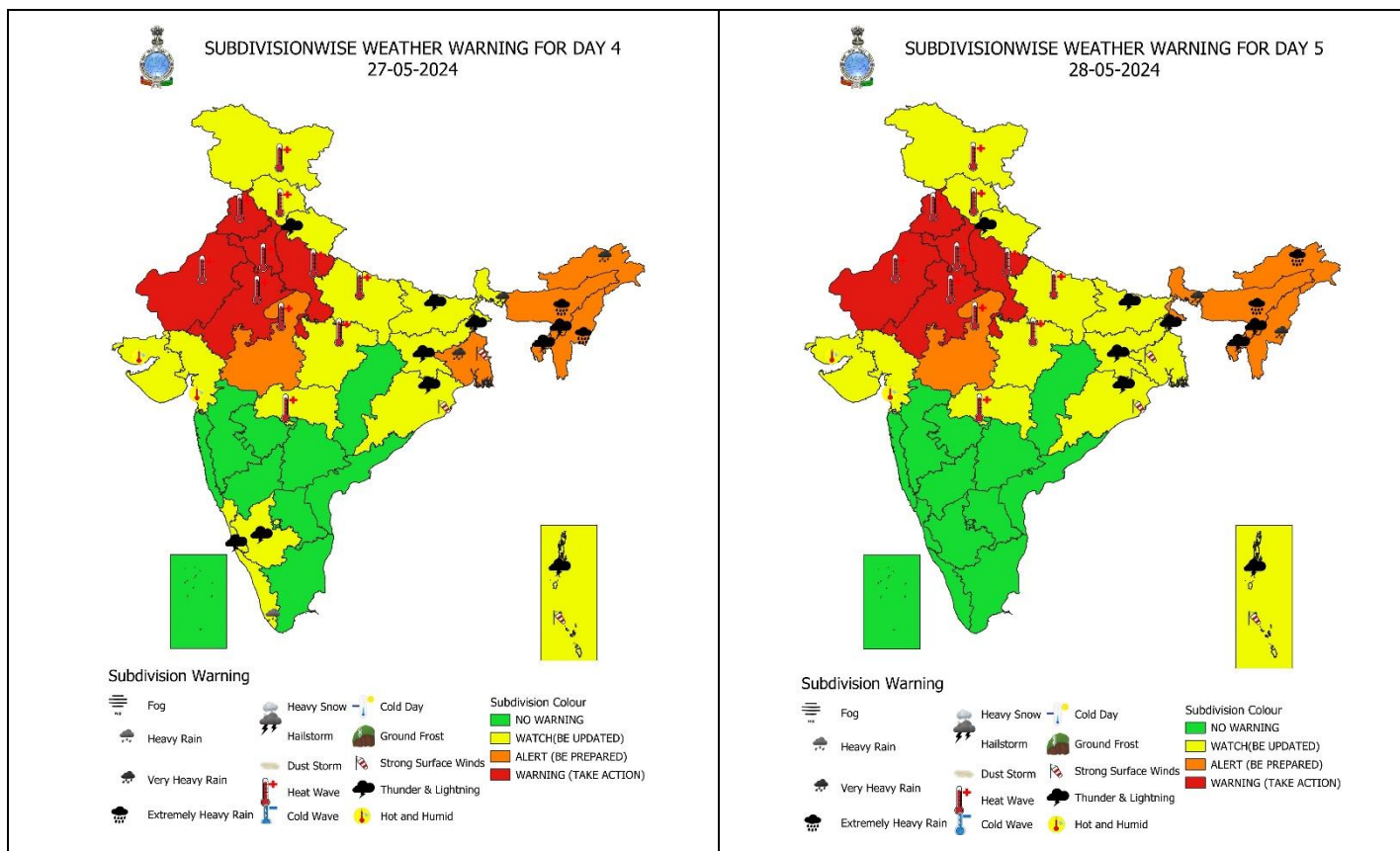
- ❖ **Bihar:** Rajgir-50, IIT Patna-40; **Chhattisgarh:** Dantewada-63, Sukma-55, Surajpur-43, Mungeli-41; **Maharashtra:** BGRL Karad-65, Yeotmal-57, Parbhani-55, Mahabaleshwar & Devgad-50, Ambejogai-43, Satara & Kolhapur-41, Kalwan-39; **Gangetic West Bengal:** Kharagpur & Raidighi-50, Nimpith-45, Canning-39; **Coastal Andhra Pradesh & Yanam:** Darsi-52; **Kerala & Mahe:** Mattancherry-67, Peringome-48, Pilicode-46, Vellayani-39; **Gujarat state:** Rajkot-46, Jamnagar-44, Arnej-41, Bhuj, Kutch_Mandvi, Bachau, Amreli & Daman-39; **East Uttar Pradesh:** Khalilabad-43, Fursatganj & Bahraich-41; **Jharkhand:** Simdega-52, Gumla & Khunti-45, Bokaro & Daltonganj-41; **Odisha:** NIT Rourkela-48, Jharsuguda-45.
- ❖ **Gusty winds reported over the country (in knots, 1 Knot = 1.85 kmph) from 0830 hrs IST of 23.05.2024 to 0830 hrs IST of 24.05.2024**



LEGEND	Knots
	0
	1 - 10
	11 - 20
	21 - 30
	31 - 40
	41+

For more details, kindly refer: <http://aws.imd.gov.in:8091/>





IMPACT & ACTION SUGGESTED due to very heavy rainfall/extremely falls over Andaman & Nicobar Islands on 24th; Odisha on 26th; Gangetic West Bengal on 27th and over Sub-Himalayan West Bengal & Sikkim on 28th; Arunachal Pradesh on 28th; Assam & Meghalaya on 27th & 28th and over Nagaland, Manipur, Mizoram & Tripura on 26th & 27th 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.

IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:

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

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

Orange alert Areas (Saurashtra & Kutch, 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 (Jammu division, Himachal Pradesh, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Madhya Maharashtra)

- ✓ 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.

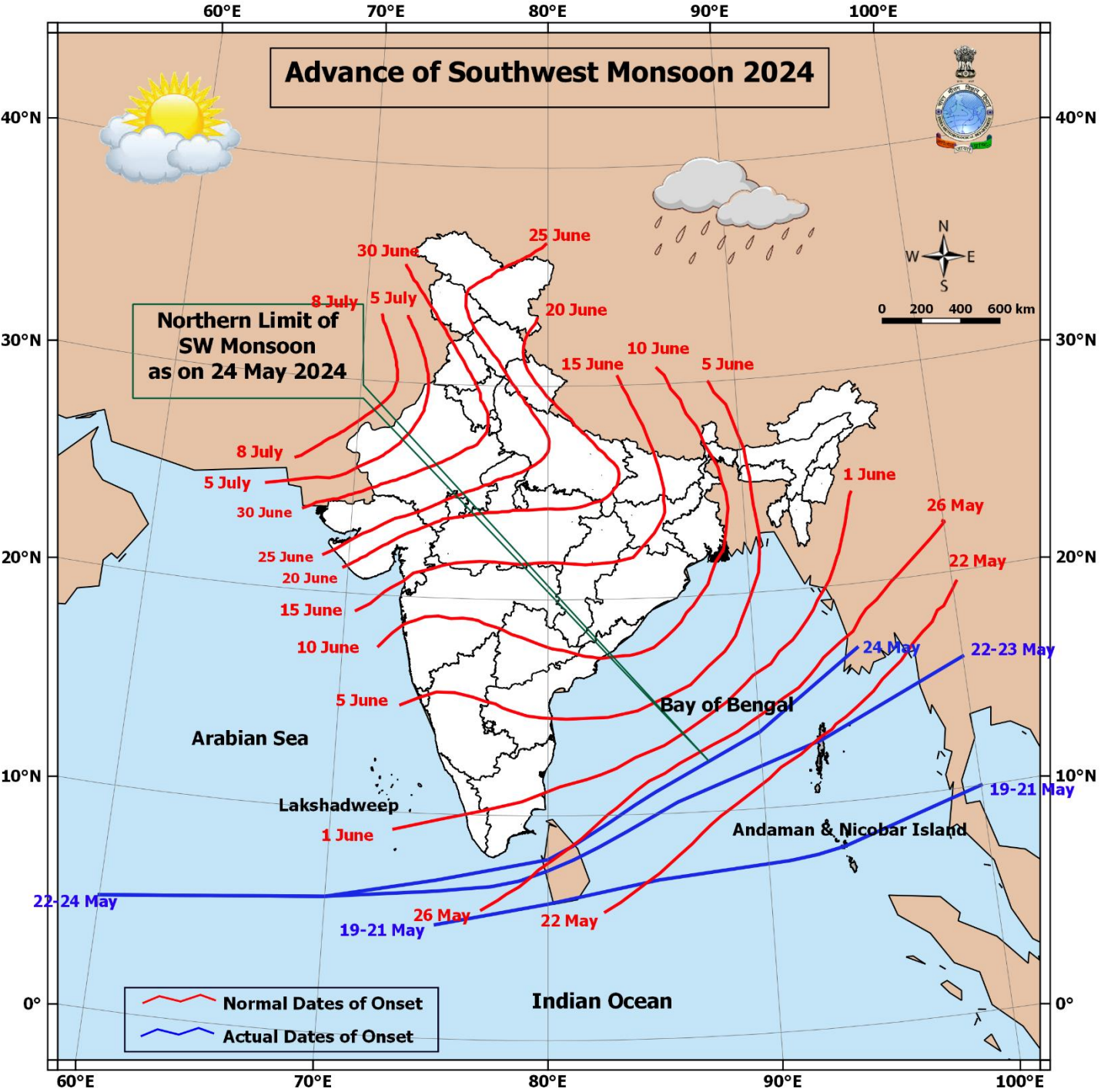
Agromet advisories for Heavy Rainfall, Gusty winds and Heat Wave likely over various parts of the country

- Make provision for draining out excess water from crop fields to avoid water stagnation in Tamil Nadu, Kerala, Karnataka, Coastal Andhra Pradesh, Gangetic West Bengal, Odisha 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 Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Madhya Maharashtra, Vidarbha and Madhya Pradesh.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

Agromet advisories in view of Depression formed over central Bay of Bengal

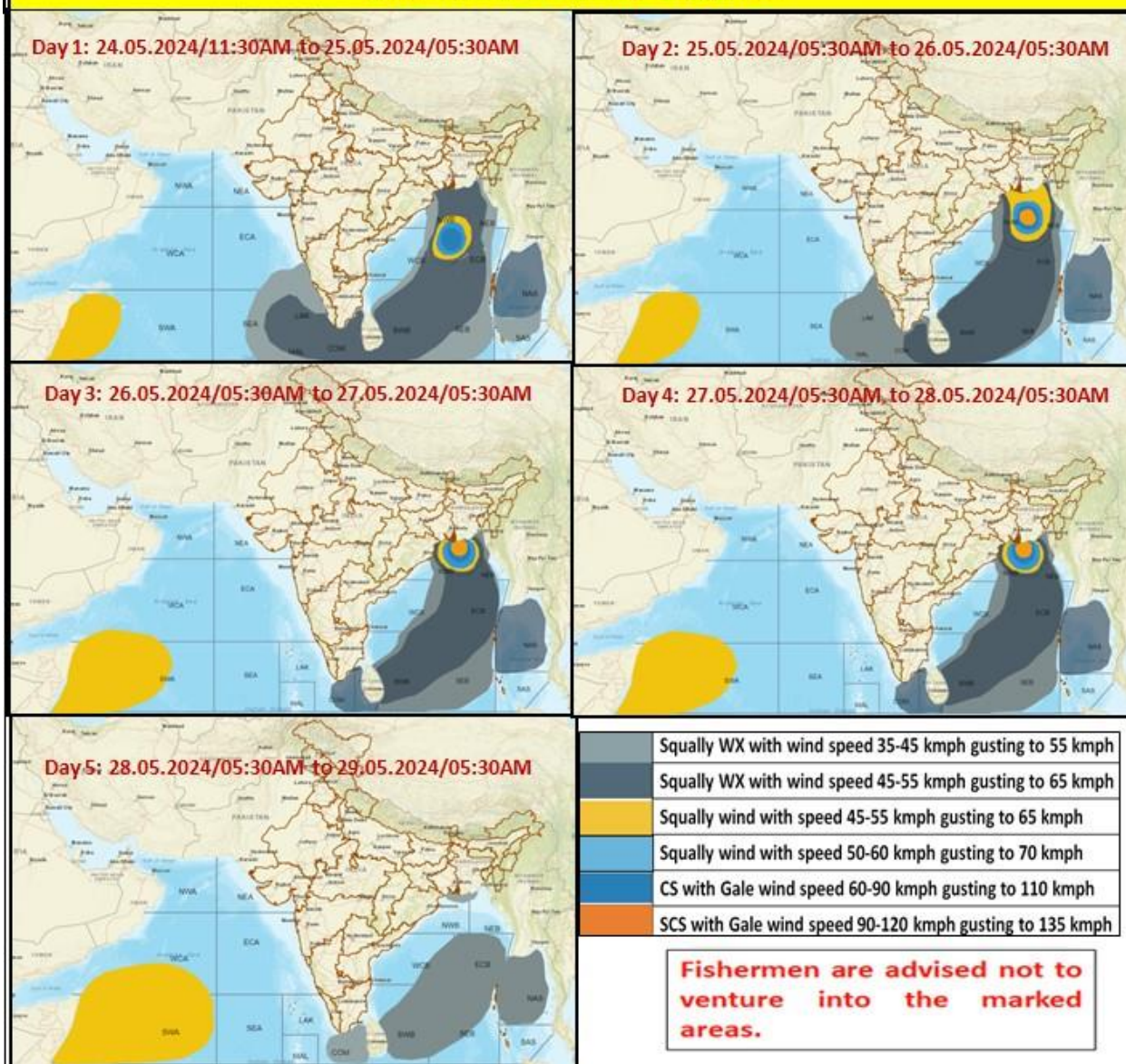
- Undertake harvesting of matured crops, fruits and vegetables and store the harvested produce in safer places.
- Make arrangements for adequate drainage to avoid water logging in crop fields.
- Provide staking to vegetables to avoid lodging.
- Postpone sowing of French bean, bhindi & rajmah and transplanting of cole crops and cucurbits in Manipur.
- Postpone application of fertilizers and plant protection measures.
- Arrange dry fodder to balance the shortage of green fodder during rainfall period and keep the fodder at a safe place to avoid spoilage.
- Keep the animals inside the shed during heavy rainfall and provide balanced feed with sufficient water.
- Provide proper drainage facilities around the animal sheds to avoid water accumulation inside the sheds. Keep bedding dry and clean and use highly absorbent materials for bedding such as straw or wood shavings.
- Remove old branches of trees around animal shelter to prevent damage. Repair the roof of the animal sheds and poultry house using locally available materials to ensure protection for animals.
- Provide a net around the fish pond to avoid escape of fish. Avoid excessive manuring and feeding which can lead to oxygen depletion during cloudy weather.

Advance of Southwest Monsoon 2024



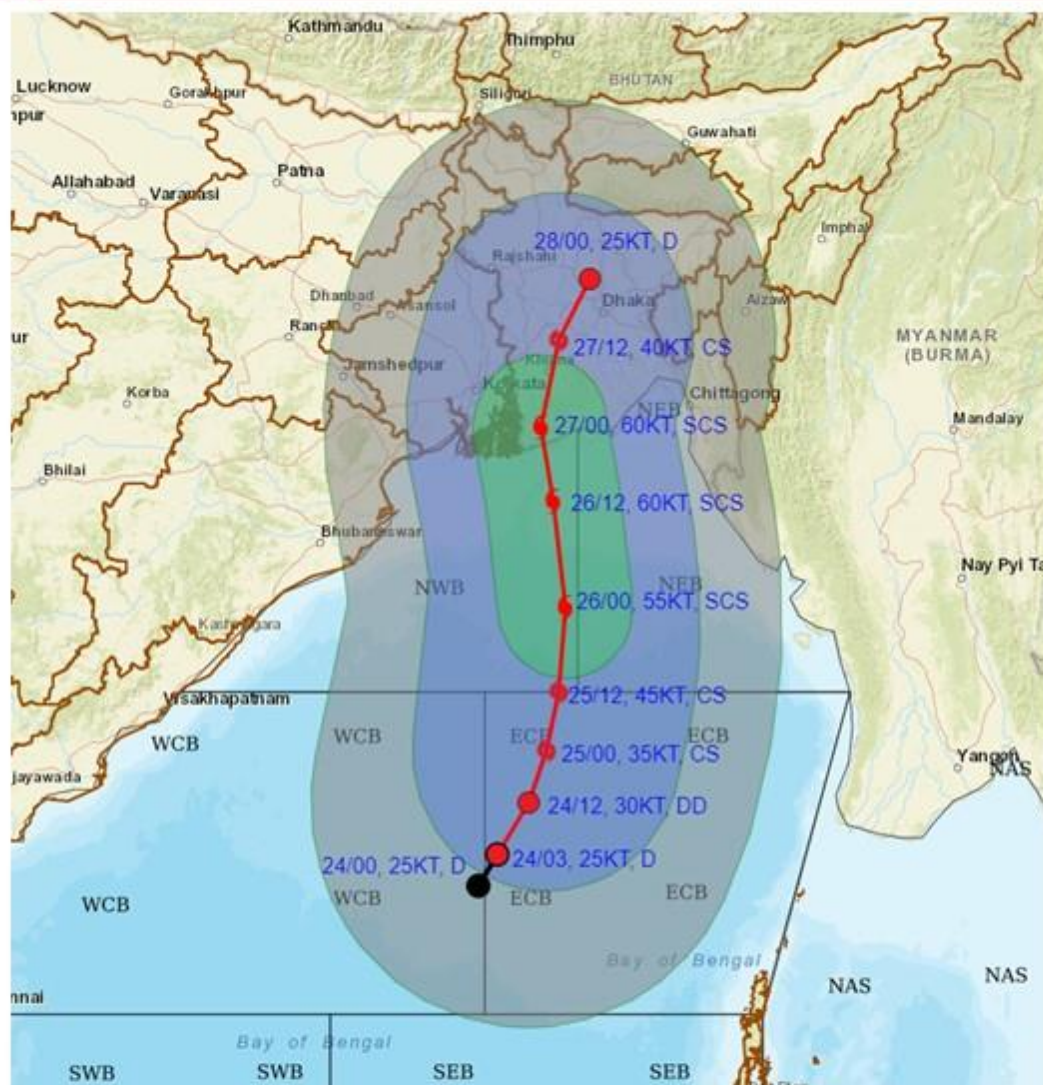


Fishermen Warning Graphics





FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH DEPRESSION OVER CENTRAL BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 24TH MAY 2024.



DATE/TIME IN UTC

IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

D: DEPRESSION (17-27 KT)

DD: DEEP DEPRESSION (28-33 KT)

CS: CYCLONIC STORM (34-47 KT)

SCS: SEVERE CYCLONIC STORM (48-63KT)

VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)

ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

● LESS THAN 34 KT

○ 34-47 KT

● ≥ 48 KT

— OBSERVED TRACK

— FORECAST TRACK

— CONE OF UNCERTAINTY

AREA OF MAXIMUM SUSTAINED WIND SPEED:

— 28-33 KT (52-61 KMPH)

— 34-49 KT (62-91 KMPH)

— 50-63 KT (92-117 KMPH)

— ≥ 64 KT (≥ 118 KMPH)

IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥ 118)	Phenomenal	Total suspension of fishing operations

Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office.
- ❖ **Region wise classification of meteorological Sub-Divisions:**
 - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
 - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
 - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
 - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
 - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
 - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and 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)



Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75













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	<p>When maximum temperature of a station reaches $\geq 40^{\circ}\text{C}$ for plains and $\geq 30^{\circ}\text{C}$ for hilly regions</p> <p>(a) Based on Departure from normal</p> <p>Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C. Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^{\circ}\text{C}$</p> <p>(b). Based on Actual maximum temperature</p> <p>Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$. Severe Heat Wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$</p> <p>(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 $\geq 37^{\circ}\text{C}$</p>
 Warm Night	<p>When maximum temperature remains 40°C</p> <p>Warm Night: When minimum temperature departure 4.5°C to 6.4°C. Severe Warm Night: When minimum temperature departure $> 6.4^{\circ}\text{C}$.</p>
 Cold Wave	<p>When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions.</p> <p>(a). Based on departure</p> <p>Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C. Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$</p> <p>(b) Based on actual Minimum Temperature (for Plains only)</p> <p>Cold Wave : When Minimum Temperature is $\leq 4.0^{\circ}\text{C}$ Severe Cold Wave: When Minimum Temperature is $\leq 2.0^{\circ}\text{C}$</p> <p>(c) For Coastal Stations When Minimum Temperature departure is $\leq -4.5^{\circ}\text{C}$ & actual Minimum Temperature is $\leq 15^{\circ}\text{C}$</p>
 Cold Day	<p>When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions</p> <p>Based on departure</p> <p>Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C. Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$</p>
 Fog	<p>Phenomenon of small droplets suspended in air and the horizontal visibility < 1km</p> <p>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</p>
 Thunderstorm	<p>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>
 Dust/Sand Storm	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</p>
 Frost	<p>Ice deposits on ground</p> <p>Air temperature $\leq 4^{\circ}\text{C}$ (over Plains)</p>
 Squall	<p>A strong wind that rises suddenly, lasts for atleast 1 minute.</p> <p>Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph Very Severe: Wind speed > 87 kmph</p>
 Sea State	<p>Effect of various waves in the sea over specific area</p> <p>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</p>
 Cyclone	<p>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)</p>