



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release..

Date: 25th May, 2024

Time of Issue: 1415 hours IST

Subject:

- i. **The Deep Depression lies over East central Bay of Bengal. It is very likely to intensify into a Cyclonic Storm by 25th May evening and intensify into a severe cyclonic storm by 26th morning. 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 Madhya Pradesh and Heat wave conditions over Western Himalayan Region, Vidarbha and Chhattisgarh during next 4-5 days.**
- iii. **Southwest Monsoon further advanced into remaining parts of Southeast Bay of Bengal, some more parts of Southwest and Central Bay of Bengal, and some parts of Northeast Bay of Bengal today on 25th May.**

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 Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Gujarat Region, Madhya Maharashtra, Haryana-Chandigarh-Delhi and Vidarbha. Heat wave conditions have been prevailing over Gujarat region since 15th and over Haryana-Chandigarh-Delhi and Rajasthan since 17th May, 2024.
- ❖ **Warm night conditions** observed in some parts of Haryana-Chandigarh-Delhi, East Uttar Pradesh, Rajasthan and Madhya Pradesh.
- ❖ Yesterday, the **highest maximum temperature of 49.0°C** was reported at **Phalodi (West Rajasthan)** over the country.
- ❖ **Heavy to very heavy rainfall** observed at isolated places over Kerala and Coastal Karnataka; **Heavy rainfall** at isolated places over north coastal Andhra Pradesh, Tamil Nadu, South Interior Karnataka, Rayalaseema and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Gusty winds/squally winds** data reported over the country is attached in **Annexure II.**

Weather Systems and Forecast & Warnings: (Annexure III)

- ❖ **Further advance of Southwest Monsoon today 25th May:** Southwest Monsoon further advanced into some more parts of Southwest Bay of Bengal, remaining parts of Southeast Bay of Bengal, some more parts of Central Bay of Bengal and some parts of Northeast Bay of Bengal today on 25th May.
- ❖ The Northern Limit of Monsoon continues to pass through 05°N/60°E, 06°N/70°E, 7°N/75°E, 8°N/80°E, 13°N/85°E, 17°N/90°E, 20°N/95°E, 23°N/100°E. (**Annexure IV**).
- ❖ Conditions are favourable for further advance of Southwest Monsoon over some more parts of South west Bay of Bengal and Central Bay of Bengal and some parts of Northeast Bay of Bengal during next 24 hours.
- ❖ A cyclonic circulation lies over south Kerala & neighbourhood and extends upto 3.1 km above mean sea level.

- ❖ A cyclonic circulation lies over Vidarbha & neighbourhood at 1.5 km above mean sea level. Another cyclonic circulation lies over southeast Rajasthan & neighbourhood and extends upto 0.9 km above mean sea level. A trough runs from above cyclonic circulation over southeast Rajasthan to Telangana across Madhya Pradesh and Vidarbha at 0.9 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 and Coastal Karnataka and isolated to scattered light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** over Tamil Nadu, Puducherry & Karaikal, Telangana, Interior Karnataka during 25th-26th May.
 - ✓ **Isolated heavy rainfall very likely over Tamil Nadu, Puducherry & Karaikal during 25th- 29th; Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Coastal Karnataka May, 2024.**
 - ✓ Isolated light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Chhattisgarh on 25th & 26th; Jharkhand during 25th-28th; Bihar during 26th-28th; Uttarakhand during 25th-29th; Vidarbha on 25th May, 2024. Coastal Andhra Pradesh & Yanam.
 - ✓ **Strong surface wind** (speed 40-50 kmph) very likely over Andaman & Nicobar Islands on 25th & 26th; Strong surface wind (speed 25-35 kmph) over Rajasthan on during 26th-29th May, 2024

The Deep Depression over Eastcentral Bay of Bengal:

- ❖ Yesterday's **Depression** over central Bay of Bengal intensified into a **Deep Depression** and lay centred at 0530 hrs IST of 25th May, 2024 over Eastcentral Bay of Bengal. The **Deep Depression** over Eastcentral Bay of Bengal moved nearly northwards with a speed of 17 kmph during past 06 hours and lay centred at 0830 hrs IST of 25th May, 2024 over the same region near latitude 18.0°N and longitude 89.7°E, about 440 km south-southwest of Khepupara (Bangladesh), 440 km south-southeast of Sagar Islands (West Bengal) and 480 km south-southeast of Canning (West Bengal). It is very likely to continue to move nearly northwards and intensify into a Cyclonic Storm over Eastcentral & adjoining north Bay of Bengal around 25th May evening. Continuing to move further northwards, it would intensify into a Severe Cyclonic Storm by 26th May morning and cross Bangladesh & adjoining West Bengal coasts between Sagar Island and Khepupara by 26th May midnight as a Severe Cyclonic Storm with wind speed of 110-120 gusting to 135 kmph. [\(ANNEXURE VI\)](#)

Heavy Rainfall Warning:

- (a) **West Bengal:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places is likely over coastal districts of West Bengal and eastern districts of Gangetic West Bengal adjacent to Bangladesh on 26th & 27th with isolated **extremely heavy rainfall** over these districts on 26th May. Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places likely over eastern districts of Sub-Himalayan West Bengal on 27th and 28th May.
- (b) **Odisha:** Light to moderate rainfall at most places with isolated **heavy rainfall** likely over North Coastal Odisha on 25th & 26th May.
- (c) **Northeastern States:** 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 also likely over Assam, Meghalaya on 27th & 28th May, Arunachal Pradesh on 28th May and Mizoram & Tripura on 27th May.
- (d) **Andaman Islands:** Light to moderate rainfall at most places with **heavy rainfall** at isolated places over north Andaman Islands on 25th May.

Wind Warning:

(a) Bay of Bengal:

- **Squally wind speed reaching 50-60 kmph gusting to 70 kmph** is prevailing over central Bay of Bengal. It is likely to become **Gale wind speed reaching 60-70 kmph gusting to 80 kmph** from evening to today, the 25th May.

- It would increase further and extend to adjoining areas of North Bay of Bengal becoming **Gale wind speed reaching 70-80 kmph gusting to 90 kmph** from evening of today, the 25th May and **100-110 kmph gusting to 120 kmph** over North Bay of Bengal from morning and **110-120 kmph gusting to 135 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 and decrease thereafter.

(b) Along & off Bangladesh and West Bengal coasts:

- **Squally wind speed reaching 40-50 kmph gusting to 60 kmph** is likely along & off Bangladesh and West Bengal & 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 May for subsequent 12 hours.
- **Squally wind speed reaching 40-50 kmph gusting to 60 kmph** is likely to commence over Howrah, Hooghly, Kolkata and East Medinipur districts from evening of 26th May. It will increase gradually becoming **Gale wind speed reaching 70-80 kmph gusting to 90 kmph** over these districts during night of 26th May except East Medinipur where the wind speed may reach up to **60-70 kmph gusting to 80 kmph** during the same period.

(c) Along & off Odisha coasts:

Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely from 25th May evening to 27th May morning

(d) South Bay of Bengal, Andaman Islands and Andaman Sea:

Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely over Andaman Islands and North Andaman Sea during next 12 hours.

(e) Northeastern States:

Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely over Mizoram Tripura & south Manipur on 26th & 27th May and **40-50 kmph gusting to 60 kmph** is likely over South Assam and Meghalaya on 27th May.

Storm surge warning:

Storm surge of about 1 meter above astronomical tide is likely to inundate low lying areas of coastal West Bengal and 3-4 m above astronomical tide likely to inundate low lying areas of coastal Bangladesh around the time of landfall.

Sea condition warning:

(a) Central and North Bay of Bengal:

Rough to very rough sea condition is prevailing over central Bay of Bengal. 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.

(b) Along & off Bangladesh and West Bengal coasts

Rough to very rough sea condition is likely along & off Bangladesh and West Bengal coasts from 25th May evening. It would become high to very high along & off Bangladesh and West Bengal coasts from 26th morning onwards till 27th May morning.

(c) Along & off North Odisha coast:

Rough to very rough sea condition is likely over along & off North Odisha coast from 25th May evening to 27th May morning.

(d) Along & off Andaman Islands:

Rough to very rough sea condition is likely over Andaman Islands and North Andaman Sea during next 12 hours.

Damage Expected over South & North 24 Parganas, Howrah, Hooghly, Kolkata & adjoining East Medinipur 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 Kutchha 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 South & North 24 Parganas, Howrah, Hooghly, Kolkata & adjoining East Medinipur 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 27th 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 44-48°C in most parts of West Rajasthan; in some parts of West Madhya Pradesh & Gujarat region and Vidarbha and in isolated pockets of East Rajasthan and Saurashtra & Kutch; in the range of 40-44°C in many parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, East Madhya Pradesh, Madhya Maharashtra, Marathwada; in some parts of Odisha, Telangana and Rayalaseema; in isolated pockets of Chhattisgarh and Coastal Andhra Pradesh & Yanam. These were above normal by 2-4°C over many parts of Rajasthan, Gujarat state, West Madhya Pradesh and interior Maharashtra; in some parts of Punjab.
- ❖ Rise in maximum temperatures by 3-4°C very likely over northwest India during next 3 days and no significant change thereafter except Rajasthan where rise by 1-2°C during next 3 days and then fall by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures very likely over Maharashtra during next 24 hours and fall by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures very likely over Gujarat during next 2 days 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, and Vidarbha during 25th-29th; Punjab, Assam & Meghalaya and Madhya Maharashtra on 25th; West Uttar Pradesh on 25th & 29th; East Uttar Pradesh during 26th-28th; Chhattisgarh 27th-29th; Gujarat State on 25th & 26th; East Madhya Pradesh on 25th, 26th & 29th May, 2024.
- ❖ **Heat wave to severe heat wave conditions very likely in many/most parts of Rajasthan during 25th-29th; in some/many parts of Punjab during 26th-29th; Haryana-Chandigarh during 25th-29th; West Uttar Pradesh during 26th-28th; in isolated pockets of West Madhya Pradesh during 24th-26th; East Madhya Pradesh on 27th & 28th; Delhi during 25th-29th May, 2024.**
- ❖ **Hot and humid weather** very likely to prevail over Tripura and Sub-Himalayan West Bengal & Sikkim on 25th and over Gujarat State on 25th-27th May, 2024.
- ❖ **Warm night conditions** very likely to prevail over Rajasthan, Punjab, Haryana-Chandigarh-Delhi during 25th-29th and Uttar Pradesh during 25th -27th May, 2024.

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

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 Kerala & Mahe; **at many places** over Lakshadweep, Coastal Andhra Pradesh & Yanam, South Interior Karnataka; **at a few places** over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Coastal Karnataka, North Interior Karnataka, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and **at isolated places** over Konkan & Goa, Madhya Maharashtra, Marathwada, Telangana, Uttarakhand, Punjab, Vidarbha, Chhattisgarh and Assam & Meghalaya.

Significant amount of rainfall (in cm):

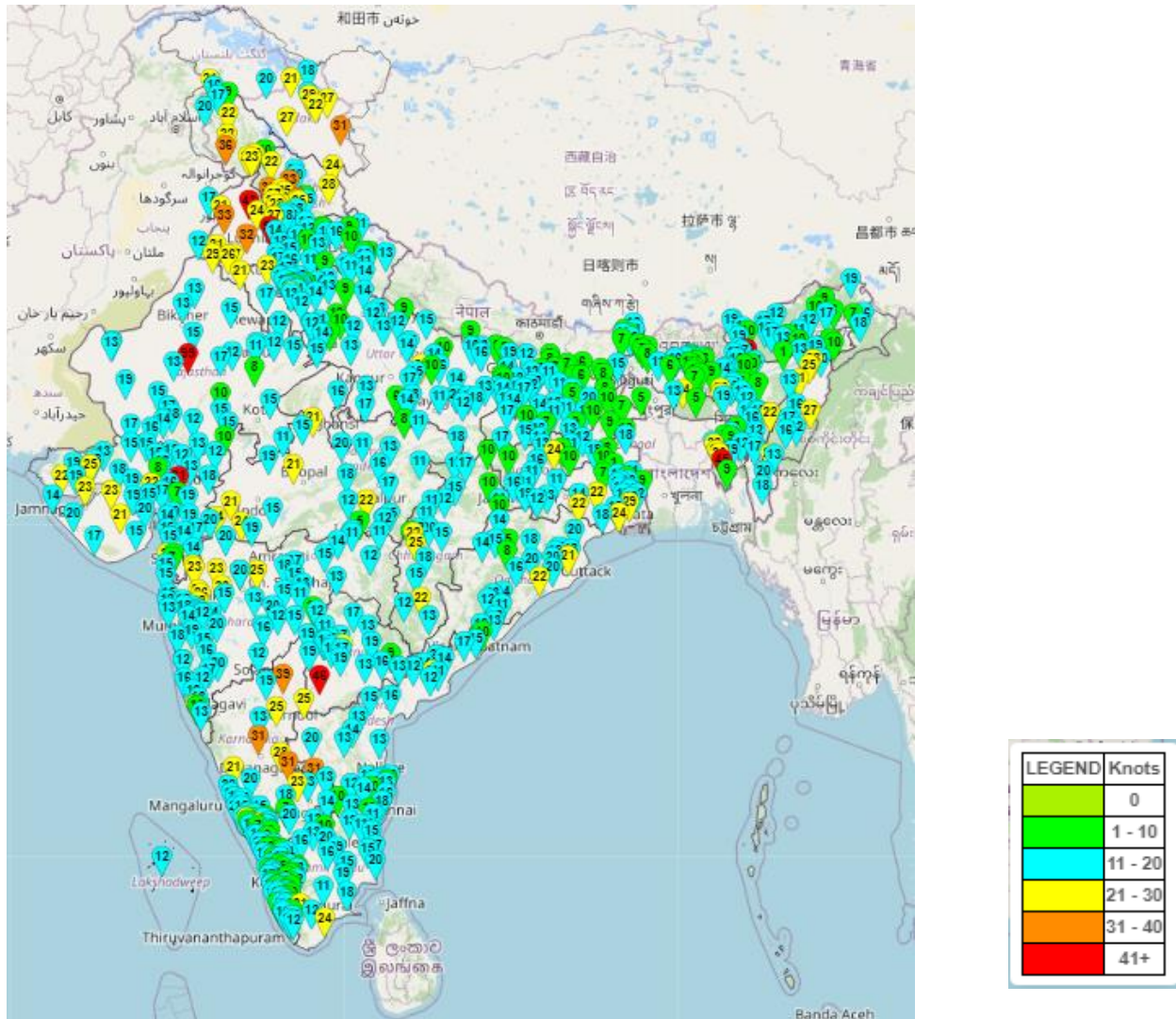
- ❖ **Coastal Karnataka:** Mulki (dist Dakshina Kannada) 19, Udupi (dist Udupi) 13, Panambur Obsy (dist Dakshina Kannada) 8, Siddapura (dist Udupi) 8
- ❖ **Kerala & Mahe:** Palluruthy (dist Ernakulam) 14, Alwaye Pwd (dist Ernakulam) 13, Hosdurg (dist Kasargod) 13, Aluva Aws (dist Ernakulam) 12, Perumpavur (dist Ernakulam) 11, Athirappalli Aws (dist Thrissur) 11, Karumadi Aws (dist Alapuzha) 11, Thiruvalla (dist Pathanamthitta) 11, Kurudamannil (dist Pathanamthitta) 11, Neeleswaram (dist Ernakulam) 11, Mavelikara (dist Alapuzha) 10, Laha (dist Pathanamthitta) 10, Ranni (dist Pathanamthitta) 10, Haripad (dist Alapuzha) 10, Ernakulam South (dist Ernakulam) 10, Konni (dist Pathanamthitta) 9, Kochi C.i.a.l. (dist Ernakulam) 9, Cherthala (dist Alapuzha) 9, Kochi I.a.f. (dist Ernakulam) 9, Konni (dist Pathanamthitta) 8, Idukki (dist Idukki) 8, Choondy (dist Ernakulam) 8, Vaikkom (dist Kottayam) 8, Piravam (dist Ernakulam) 8, Peermade To (dist Idukki) 8, Ulanad (dist Pathanamthitta) 8, Nooranad (dist Alapuzha) 7, Kunnathanam (dist Pathanamthitta) 7, Vaikom (dist Kottayam) 7, Venkurinji (dist Pathanamthitta) 7, Alapuzha (dist Alapuzha) 7, Poonjar (dist Kottayam) 7, Pilicode (dist Kasargod) 7, Kayamkulam (dist Alapuzha) 7, Kudulu (dist Kasargod) 7;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Mylaudy (dist Kanniyakumari) 10, Mambzhathuraiyaru (dist Kanniyakumari) 9, Anaikedanku (dist Kanniyakumari), Balamore (dist Kanniyakumari), Thuckalay (dist Kanniyakumari), Periyar (dist Theni) 8 each, Kottaram (dist Kanniyakumari), Nalumukku (dist Tirunelveli), Nagercoil (dist Kanniyakumari), Perunchani Dam (dist Kanniyakumari), Oothu (dist Tirunelveli), Puthan Dam (dist Kanniyakumari), Suralacode (dist Kanniyakumari) 7 each;
- ❖ **South Interior Karnataka:** Kushalnagar (dist Kodagu) 10, Kalasa (dist Chikkamagaluru) 9, Agumbe Emo (dist Shivamogga) 8, Tarikere (dist Chikkamagaluru) 7, Sringeri Hms (dist Chikkamagaluru) 7, Nayakanahatty (dist Chitradurga) 7;
- ❖ **Coastal Andhra Pradesh & Yanam:** Kakinada (dist Kakinada) 11, Paderu (dist Alluri Sitharamaraju) 9;
- ❖ **Rayalaseema:** Kalyandrug (dist Anantapuramu) 9, Madakasira (dist Sri Sathyasai District) 7, Kanekal (dist Anantapuramu) 7.
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Amarapur (dist Gomati) 7;

ANNEXURE II

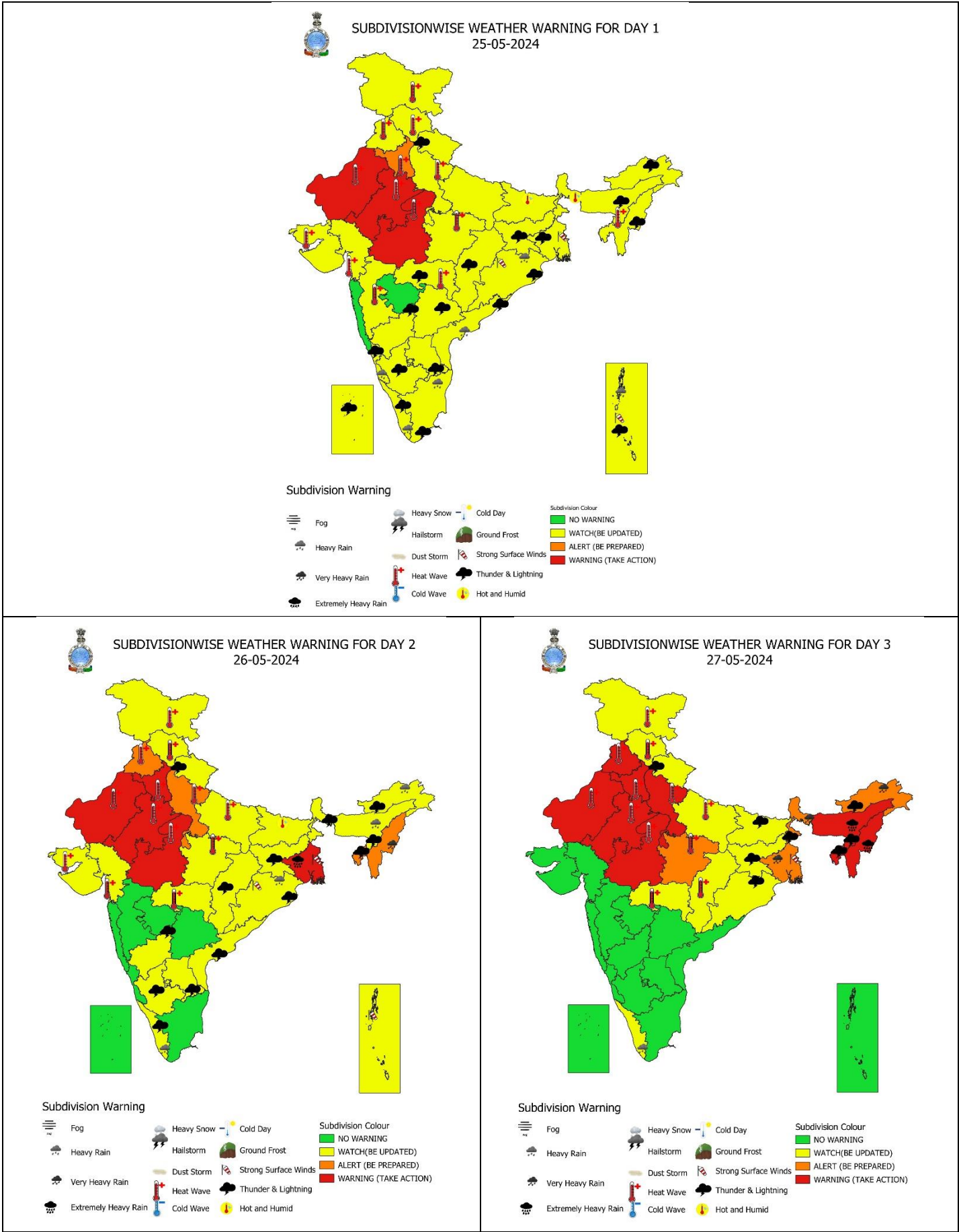
Reported maximum wind speed (kmph) during past 24 hours till 0830 hours IST of today:

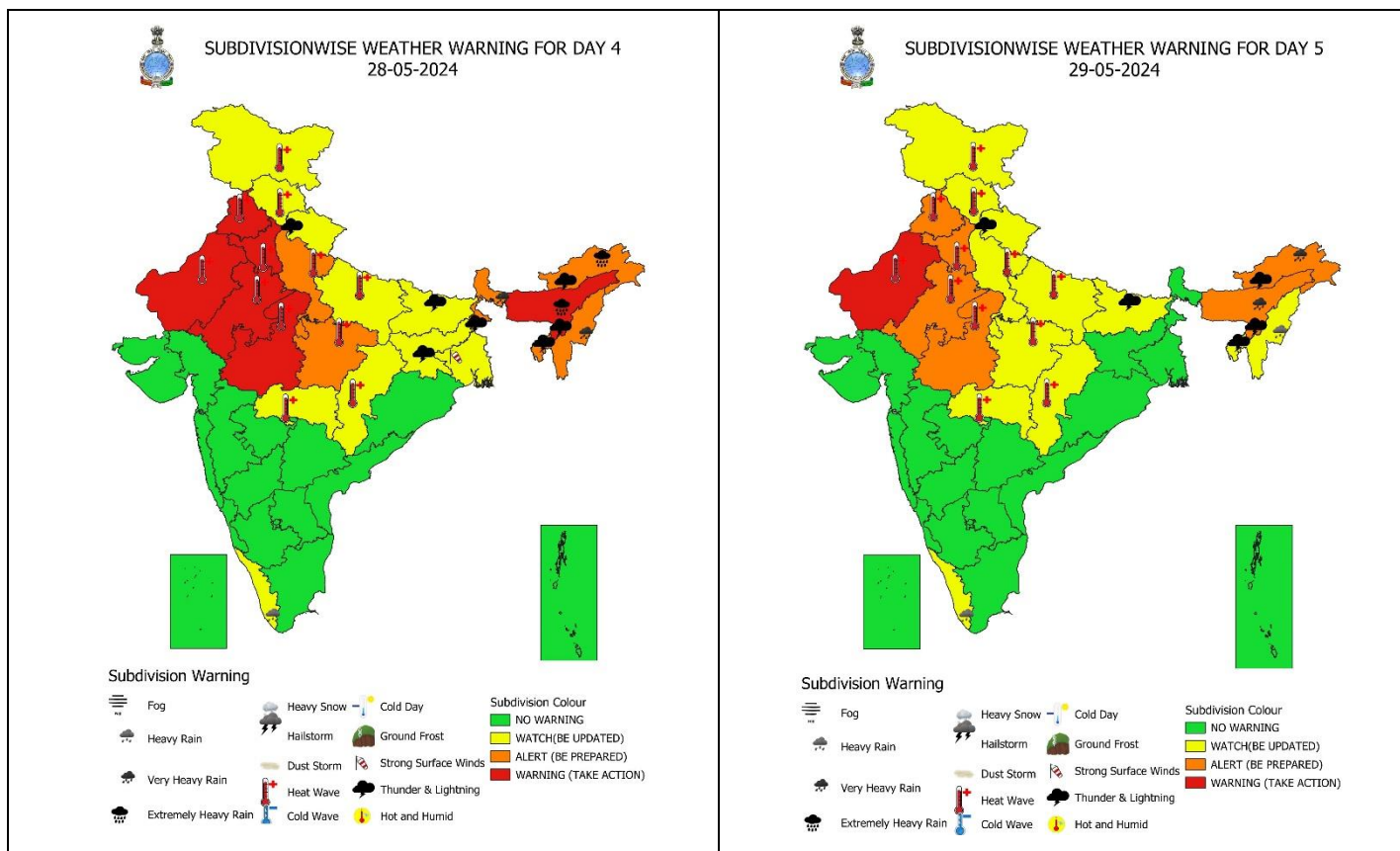
- ❖ **Punjab:** Patiala-95, Jalandhar-77, Barnala-58, Faridkot-59; **Haryana:** Sirsa-49, Jind-41, Balod-45, Rajnandangaon-40; **Jharkhand:** Bokaro-43; **Gangetic West Bengal:** South 24 Parganas-52, South Medinipur-40; **Odisha:** Mayurbhanj-40, Jagatsinghpur-38, Puri-40, **Telangana:** Wanaparthy 83, Ranga Reddy-47, **Karnataka:** Yadgir 63, Devanagere-56, Tunkur-56, Chikballapur-56; **Kerala:** Kannur-54, Wayanad-49; **Tripura:** South Tripura-81, **Meghalaya:** West Khasi Hills-45; **Maharashtra:** Pune-47.

❖ *Gusty winds reported over the country (in knots, 1 Knot = 1.85 kmph) from 0830 hrs IST of 24.05.2024 to 0830 hrs IST of 25.05.2024*



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





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 (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

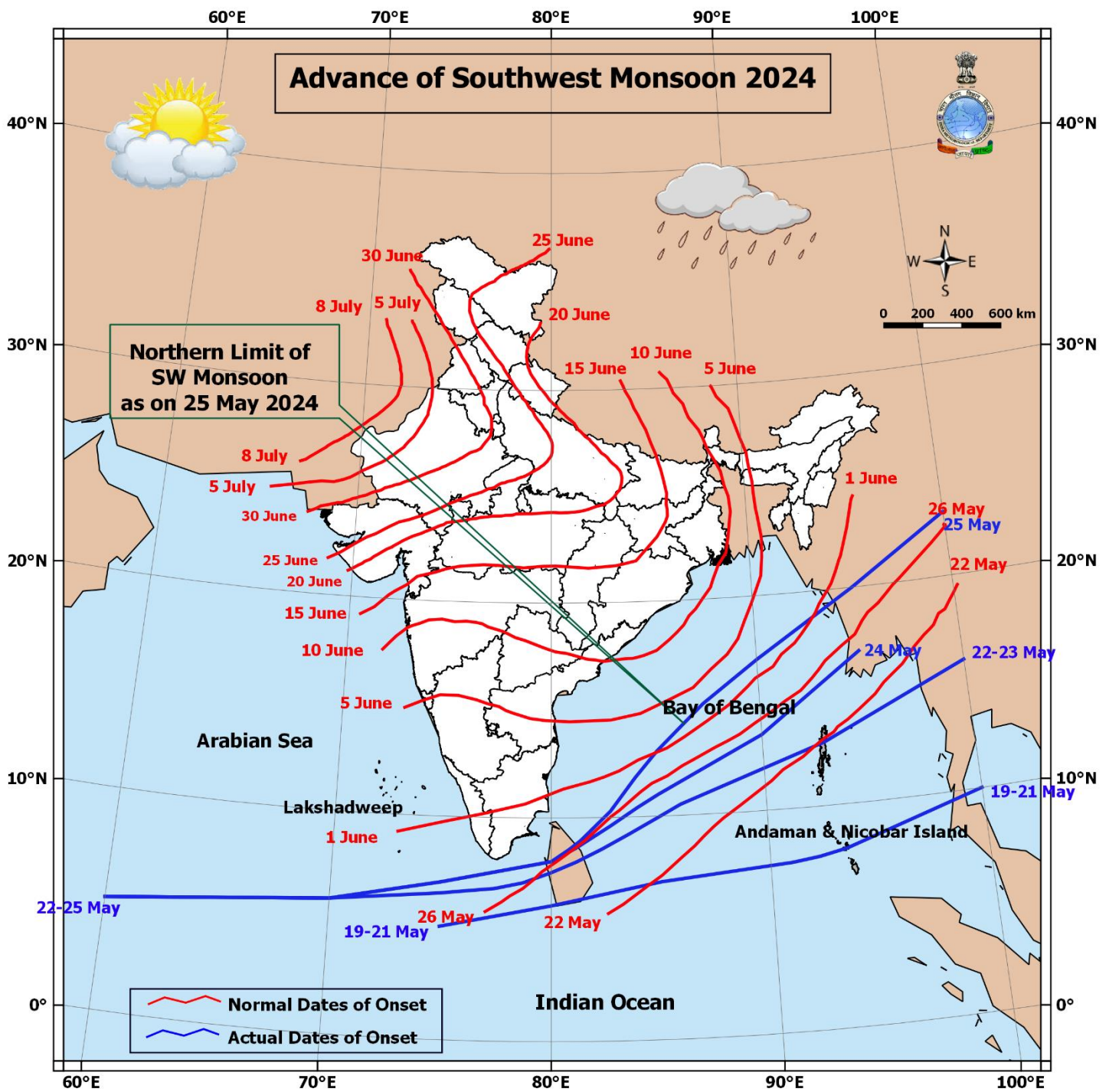
Make provision for draining out excess water from crop fields to avoid water stagnation in Tamil Nadu, Kerala, Coastal Karnataka, South Interior Karnataka, Andhra Pradesh, Gangetic West Bengal, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya and NMMT.

- 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, North 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 Deep Depression formed over Eastcentral Bay of Bengal

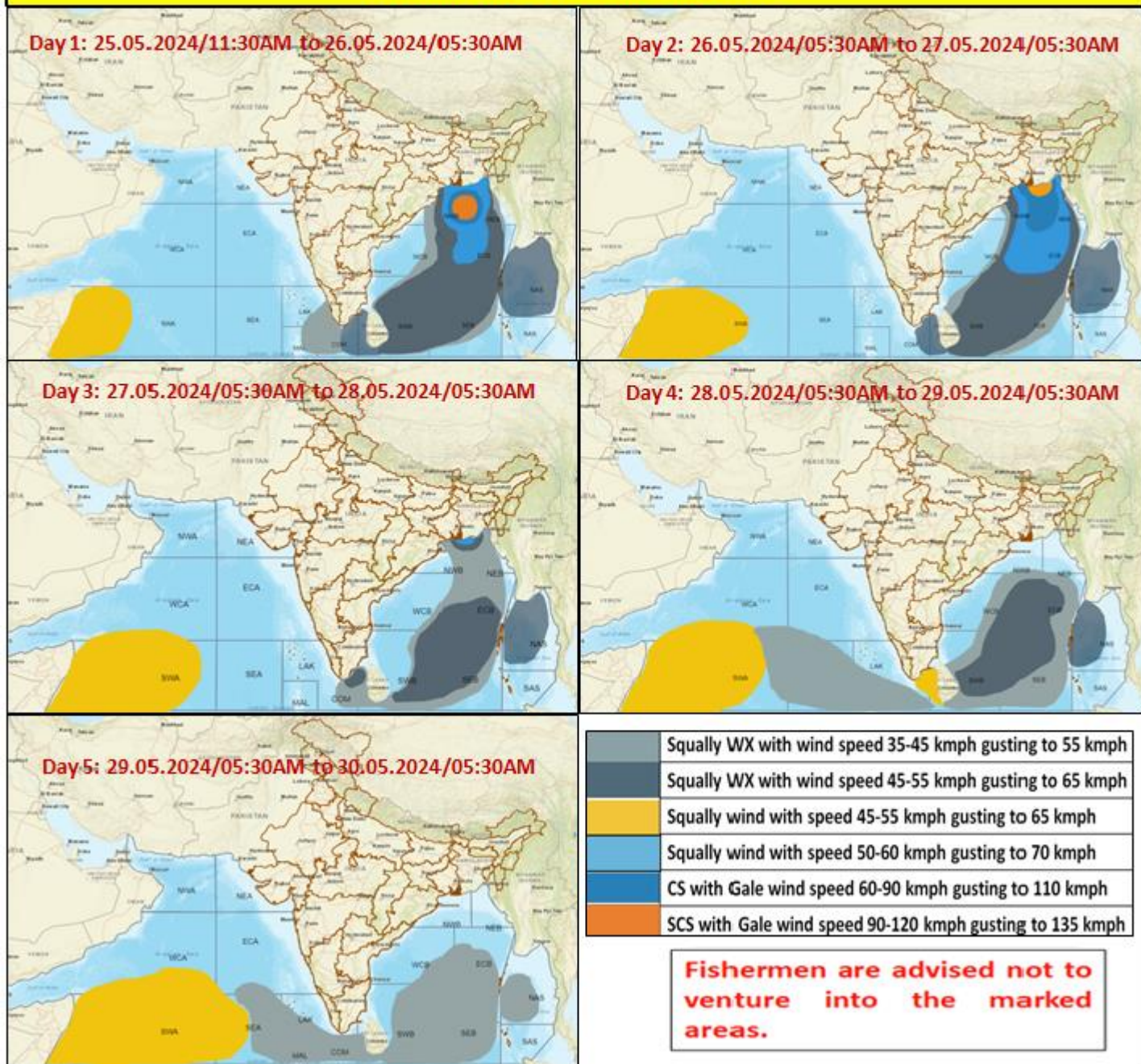
- Undertake harvesting of matured crops, fruits and vegetables and store the harvested produce in safer places.
- Make arrangements for adequate drainage to avoid water logging in crop fields.
- Provide staking to vegetables to avoid lodging.
- Postpone sowing of French bean, bhindi & rajmah and transplanting of cole crops and cucurbits in Manipur.
- Postpone sowing of *sali* rice seed in the seed bed in Assam.
- 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



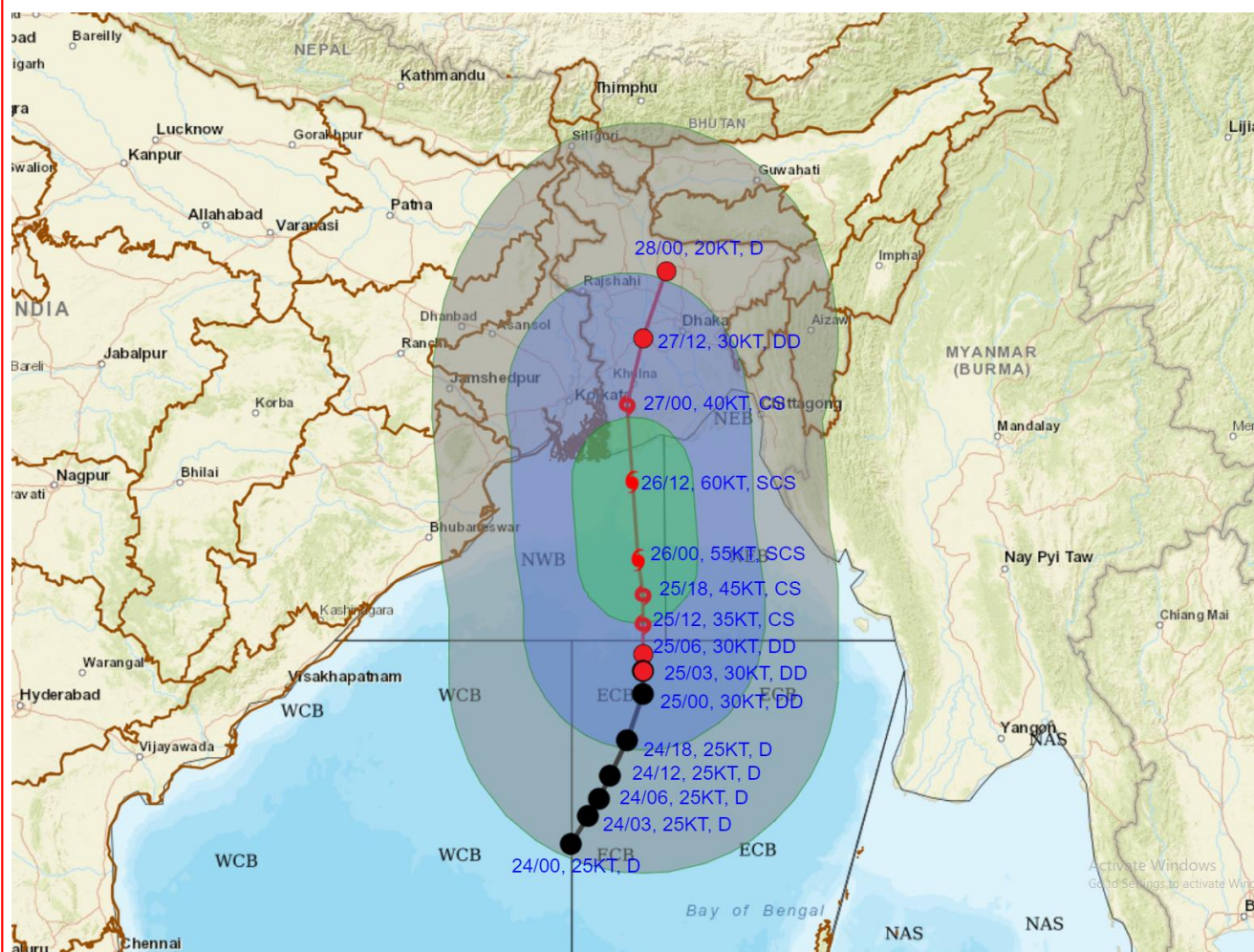


Fishermen Warning Graphics





FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 25TH 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 (48-63 KT)

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

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