



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release.

Date: 27th May, 2024

Time of Issue: 1330 hours IST

Subject:

- i. **Severe Cyclonic Storm “Remal”** (pronounced as “Re-Mal”) crossed the Bangladesh and adjoining West Bengal Coasts between Sagar Islands and Khepupara, close to southwest of Mongla near Latitude 21.75°N and Longitude 89.2°E between 2230 hrs IST of 26th May to 0030 hrs IST of 27th May 2024 as a Severe Cyclonic Storm with wind speed of 110 to 120 Kmph gusting to 135 Kmph.
- ii. **Heat wave to severe heat wave** conditions most likely to continue over plains of Northwest India, West Madhya Pradesh;
Heat wave conditions over Western Himalayan Region, East Madhya Pradesh, Vidarbha and Chhattisgarh during next 3 days; Heat wave to severe heat wave conditions are **likely to reduce above regions after 3 days**.
- iii. Conditions are likely to become favorable for **Onset of Monsoon over Kerala** during next 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 most parts of Rajasthan; in some parts of Delhi. **Heat wave conditions** prevailed in some parts of Punjab, Haryana, interior Maharashtra, West Madhya Pradesh; in isolated pockets of Himachal Pradesh, Uttar Pradesh and East Madhya Pradesh. **Heat wave conditions** have been prevailing over Haryana, Chandigarh & Delhi and Rajasthan since 17th and over West Madhya Pradesh & West Uttar Pradesh since 18th May, 2024.
- ❖ **Warm night conditions** observed in some parts of West Rajasthan, East Uttar Pradesh; in isolated pockets of Haryana, East Rajasthan, West Uttar Pradesh and East Madhya Pradesh.
- ❖ Yesterday, **the highest maximum temperature of 49.8°C** was reported at **Phalodi (West Rajasthan)** over the country.
- ❖ **Heavy to very heavy rainfall** observed at isolated places over Gangetic West Bengal, Assam & Meghalaya; **Heavy rainfall** at isolated places over Kerala, Sub-Himalayan West Bengal, Arunachal Pradesh and Mizoram & Tripura.
- ❖ **Gusty winds/squally winds** data reported over the country is attached in **Annexure II**.

Weather Systems and Forecast & Warnings: (Annexure III)

- ❖ 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/84°E, 16°N/87°E, 18.5°N/89.5°E, 21°N/93°E. (Annexure IV).
- ❖ **The conditions are likely to become favorable for Monsoon onset over Kerala during next 5 days.**
- ❖ The conditions are also likely to become favourable for further advance of Southwest Monsoon into some more parts of South Arabian Sea, remaining parts of Maldives and Comorin area; some parts of Lakshadweep area, Kerala; some more parts Southwest & Central Bay of Bengal, Northeast Bay of Bengal and some parts of Northeastern states during the same period.

- ❖ Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** likely over Kerala & Mahe, Lakshadweep, Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim during 27th-31st; and isolated to scattered light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh, Telangana, Rayalaseema, Karnataka on 27th May.
- ❖ **Isolated heavy rainfall very likely over Kerala & Mahe during 27th-31st; Lakshadweep on 29th; over Andaman & Nicobar Islands on 30th & 31st May, 2024.**
- ❖ **Strong surface wind** (speed 25-35 kmph) over Gujarat State on 27th & 28th May, 2024
- ❖ Isolated to scattered light rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Uttarakhand during 27th-31st; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh on 30th & 31st May, 2024.

Cyclonic Storm “Remal” (pronounced as “Re-Mal”) over Coastal Bangladesh and adjoining Coastal West Bengal

The **Severe Cyclonic Storm “Remal”** (pronounced as “Re-Mal”) crossed the Bangladesh and adjoining West Bengal Coasts between Sagar Islands and Khepupara close to southwest of Mongla near Latitude 21.75°N and Longitude 89.2°E between 2230 hrs IST of 26th May to 0030 hrs IST of 27th May as a **Severe Cyclonic Storm** with wind speed of 110 to 120 Kmph gusting to 135 Kmph. It weakened into **Cyclonic Storm** at 0530 hours IST of today, the 27th May over Coastal Bangladesh & adjoining Coastal West Bengal. It lay centered at 0830 hrs IST of today, the 27th May over the same region, near **latitude 22.8°N** and **longitude 89.3°E** about 40 km northwest of Mongla (Bangladesh), 90 km east of Kolkata (West Bengal), 90 km northeast of Canning (West Bengal), 130 km northwest of Khepupara (Bangladesh) and 140 km southwest of Dhaka (Bangladesh). It is very likely to move north-northeastwards, and gradually weaken into Deep Depression by afternoon of today, the 27th May, 2024.

Warnings (Graphics Attached):

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 and eastern districts of Gangetic West Bengal adjacent to Bangladesh on 27th May. Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places likely over eastern districts of Sub-Himalayan West Bengal on 27th and 28th May.
- (b) **Northeastern States:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places is likely over Assam, Meghalaya, Arunachal Pradesh, Nagaland, Mizoram, Manipur & Tripura on 27th & 28th May. Isolated **extremely heavy rainfall** (≥ 20 cm) is also likely over Assam, Meghalaya, Mizoram & Tripura on 27th, and Arunachal Pradesh on 28th May.

Wind Warning:

(a) Bay of Bengal

- **Gale wind speed reaching 70-80 kmph gusting to 90 kmph** is prevailing over North Bay of Bengal. It is likely to decrease becoming squally wind speed reaching 45-55 kmph gusting to 65 kmph by evening of 27th May.
- **Squally wind speed reaching 40-50 kmph gusting to 60 kmph** will continue to prevail over adjoining central Bay of Bengal till afternoon of 27th May.

(b) Along & off Bangladesh and West Bengal coasts

- **Gale wind speed reaching 70-80 kmph gusting to 90 kmph** will continue to prevail along & off Bangladesh and adjoining West Bengal coasts during next 3 hours. It is likely to decrease becoming squally wind reaching 45-55 kmph gusting to 65 kmph by evening of 27th May and decrease gradually thereafter.
- **Gale wind speed reaching 60-70 kmph gusting to 80 kmph** will continue to prevail over Howrah, Hoogly, Kolkata & Nadia and squally wind speed reaching 50-60 gusting to 70 kmph over East Medinipur during next 3 hours. The wind speed would decrease over these regions gradually thereafter.

(c) Along & off North Odisha coasts

Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail during next 6 hours and decrease thereafter.

(d) Northeastern States

Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely over South Assam and Meghalaya, Tripura and **40-50 kmph gusting to 60 kmph** is likely over & Mizoram, Manipur and remaining parts of Assam on 27th May. It would reduce to 40-50 gusting to 60 kmph over Assam & Meghalaya till noon of 28th May.

Sea condition warning:

(a) North Bay of Bengal

High Sea condition is likely over North Bay of Bengal till afternoon and gradually improve becoming very rough to rough thereafter till night of 27th May. It would improve thereafter.

(b) Along & off Bangladesh and West Bengal coasts

High sea condition is likely along & off Bangladesh and West Bengal coasts till afternoon and gradually improve becoming very rough to rough thereafter till 27th May night. It would improve thereafter.

(c) Along & off North Odisha coast

Rough sea condition is likely along & off North Odisha coast during next 6 hours and improve thereafter.

(d) Central Bay of Bengal

Rough sea condition is likely to prevail over central Bay of Bengal during next 6 hours and improve thereafter.

Damage Expected over West Bengal (South & North 24 Parganas, Howrah, Hoogly, Kolkata, Nadia, Murshidabad districts) and Northeastern States (Assam, Meghalaya, Manipur, Tripura, Mizoram)

- Damage to vulnerable structures and thatched houses/ huts.
- Unattached metal sheets may fly.
- Breaking of tree branches, uprooting of small trees. Damage to banana and papaya trees.
- Partial damage to power and communication lines due to breaking of branches and uprooting of small 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 Damage Expected over West Bengal (South & North 24 Parganas, Howrah, Hoogly, Kolkata, Nadia, Murshidabad districts) and Northeastern States (Assam, Meghalaya, Manipur, Tripura, Mizoram) on 27th May:

- People in vulnerable areas to move to safer places.
- People in affected areas to remain indoors.
- Total suspension of fishing operations on 27th May.
- Surface transport and shipping Onshore & Offshore operations over North Bay of Bengal need to be regulated till afternoon of 27th May
- Avoid going to areas that face the water logging problems often.

Fishermen Warning (graphics attached):

Fishermen are advised not to venture into North Bay of Bengal along and off West Bengal and Bangladesh coasts till 27th May evening. **(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 47-49°C in most parts of Rajasthan; in the range of 44- 46°C in many places over Punjab, Haryana-Chandigarh-Delhi, in some parts of Madhya Pradesh, Vidarbha and in isolated pockets of Madhya Maharashtra, Telangana; in the range of 40- 44°C in some parts of Marathwada, Telangana, North Interior Karnataka, Coastal Andhra Pradesh & Yanam, Chhattisgarh, Saurashtra & Kutch, Uttar Pradesh; in isolated pockets of Odisha, East Madhya Pradesh, Jharkhand, Bihar. These were above normal by 4-6°C over many parts of Rajasthan, Punjab, Haryana, Chandigarh, Delhi; in some parts of Jammu-Kashmir, Assam & Meghalaya and in isolated pockets of Himachal Pradesh, Uttarakhand, East Uttar Pradesh, West Madhya Pradesh, Gujarat state, Vidarbha, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh.
- ❖ No significant change in maximum temperatures very likely over Northwest & Central India during next 2 days and fall by about 2°C thereafter.
- ❖ No significant change in maximum temperatures very likely over Maharashtra & Gujarat during next 24 hours and fall by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures very likely over East India during next 24 hours and gradually rise by 2-4°C thereafter.
- ❖ Fall in maximum temperatures by 2-3°C very likely over Maharashtra during next 3 days and no significant change 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 to severe heat wave conditions** very likely in many/most parts of Rajasthan; in some/many parts of Punjab, Haryana-Chandigarh-Delhi; in isolated/some parts of West Uttar Pradesh, West Madhya Pradesh during 27th-29th and gradual reduction thereafter.
- ❖ **Heat wave conditions** very likely in isolated pockets of Himachal Pradesh, East Uttar Pradesh, during 27th-30th; Chhattisgarh during 28th-30th; East Madhya Pradesh, Vidarbha, Jammu division during 27th-29th May, 2024.
- ❖ **Hot and humid weather** very likely to prevail over some parts of Gujarat state during 27th-31st; Bihar on 27th & 28th May, 2024.
- ❖ **Warm night conditions** in isolated pockets very likely to prevail over Punjab, Haryana-Chandigarh-Delhi during 27th-31st; Rajasthan, Uttar Pradesh and Madhya Pradesh on 27th & 28th May, 2024.

For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forcast_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 Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Lakshadweep, West Bengal & Sikkim; **at many places** over Arunachal Pradesh; **at a few places** over Andaman & Nicobar Islands, Uttarakhand, Coastal Karnataka, North Interior Karnataka, Coastal Andhra Pradesh & Yanam and **at isolated places** over East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Bihar, Jharkhand, Odisha, Jammu-Kashmir, Himachal Pradesh, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal. Telangana and Rayalaseema.

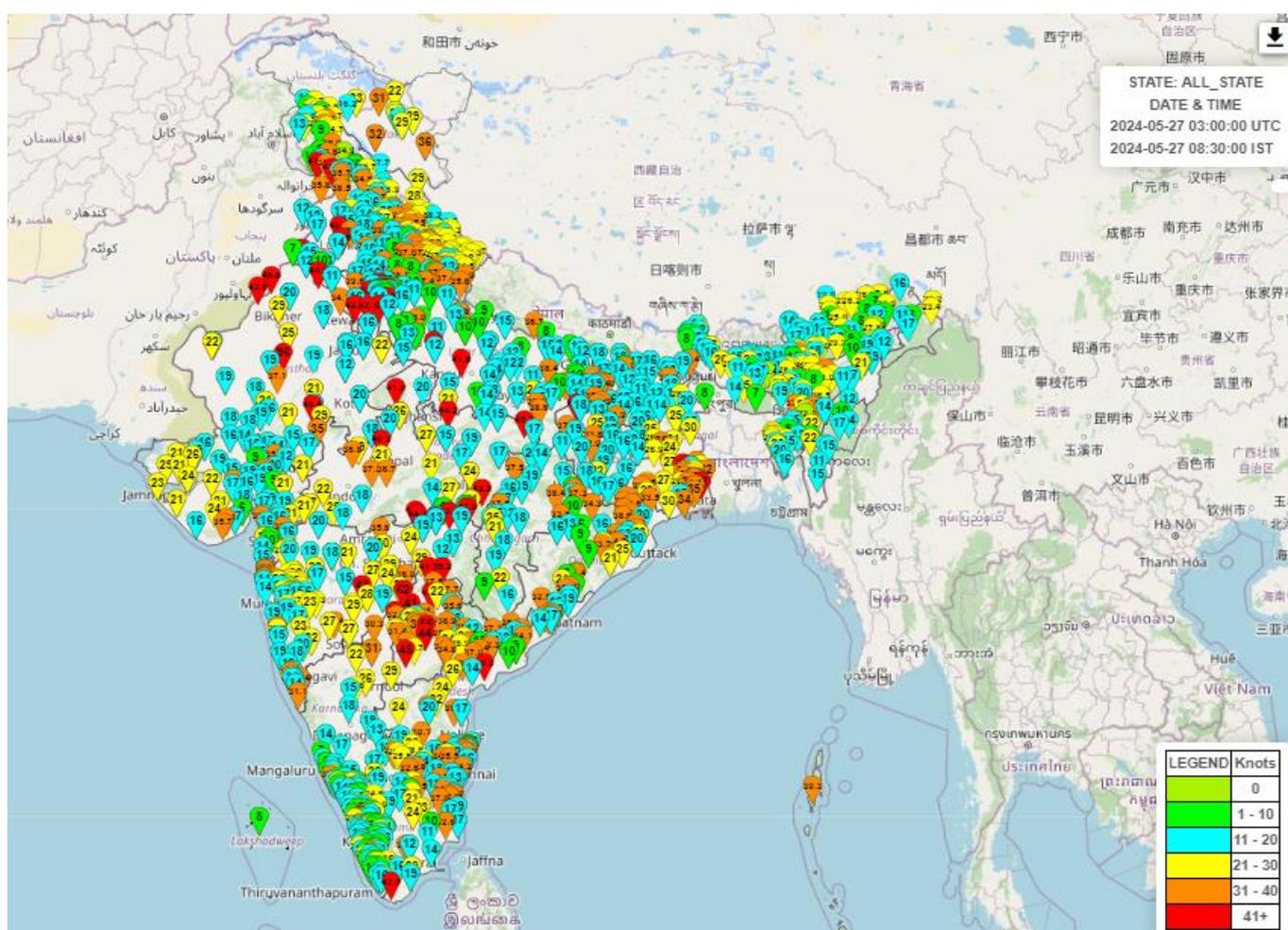
Significant amount of rainfall (in cm):

- ❖ **Assam & Meghalaya:** Shella (dist East Khasi Hills) 17, Beki Mathungari (dist Barpeta) 10, N.lakhimpur/lilabari (dist Lakhimpur) 10, Mawsynram (dist East Khasi Hills) 8, Cherrapunji(rkm) (dist East Khasi Hills) 7, Cherrapunji (dist East Khasi Hills) 7, Majuli (dist Jorhat) 7, Tezpur (dist Shonitpur) 7, Kheronighat (dist Karbi Anglong) 6, Dhekiajuli (dist Shonitpur) 6, Resubelpara (dist North Garo Hills) 6, Dalgaon Arg (dist Darrang) 5, Mawkyrwat_arg (dist South West Khasi Hills) 5,
- ❖ **Nalbari/pagladia (dist Nalbari) 5, Gangetic West Bengal:** Alipore (dist Kolkata) 15, Durgachack (dist East Midnapore) 14, Contai (dist East Midnapore) 13, Uluberia (dist Howrah) 13, Diamond Harbour (dist South 24 Parganas) 12, Mo Saltlake (dist North 24 Parganas) 10, Canning (dist South 24 Parganas) 10, Dum Dum (dist North 24 Parganas) 9, Amfu Kakdwip (dist South 24 Parganas) 9, Kalyani Smo (dist Nadia) 9, Barrackpur(Iaf) (dist North 24 Parganas) 8, Basirhat(pt) (dist North 24 Parganas) 8, Bagati (dist Hooghly) 7, Digha (dist East Midnapore) 7,
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Mizoram University (dist Aizawal) 8, Kolasib Agri (dist Kolasib) 8, Kolasib_aws (dist Kolasib) 8, Aizwal (dist Aizawl) 8, Ukhrul (dist Ukhrul) 7, Chandel_aws (dist Chandel) 7, Sabroom (dist South Tripura) 6, Lengpui (dist Aizawl) 6,
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Barobhisha (dist Jalpaiguri) 7, Champasari (dist Darjeeling) 7, Sevoke (dist Darjeeling) 6, Hasimara (dist Jalpaiguri) 5, Gajoldoba (dist Jalpaiguri) 5, Rongo (dist Darjeeling) 5, Bagrakote (dist Darjeeling) 4,
- ❖ **Arunachal Pradesh:** Hollongi (dist Papumpara) 7, Daparijo (dist Upper Subansiri) 6, Itanagar (dist Papumpara) 5, Yupia (dist Papumpara) 5,
- ❖ **Andaman & Nicobar Islands:** Maya Bandar (dist North & Middle Andaman) 5;
- ❖ **Kerala & Mahe:** Alapuzha (dist Alapuzha) 7, Haripad (dist Alapuzha) 6, Ernakulam South(dist Ernakulam) 5, Karumadi Aws (dist Alapuzha) 5, Kayamkulam (dist Alapuzha) 5, Vaikom (dist Kottayam) 5, Kollam Rly (dist Kollam) 5, Palluruthy Arg (dist Ernakulam) 4, Thycauttussery Aws (dist Alapuzha) 4, Mavelikara (dist Alapuzha) 4, Vaikkom Aws (dist Kottayam) 4, Munakkal Aws (dist Thrissur) 4,

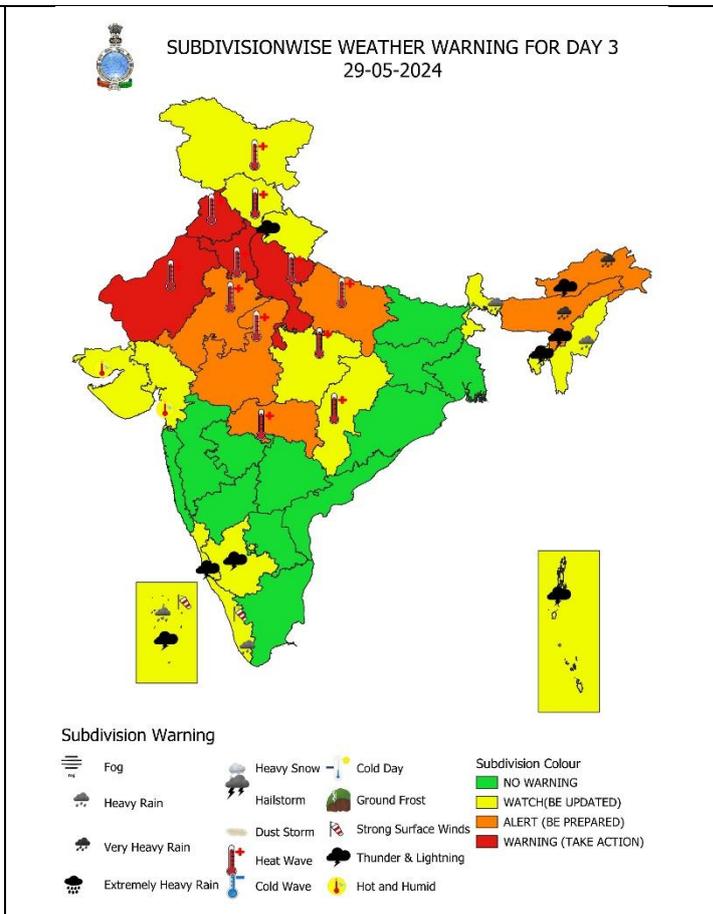
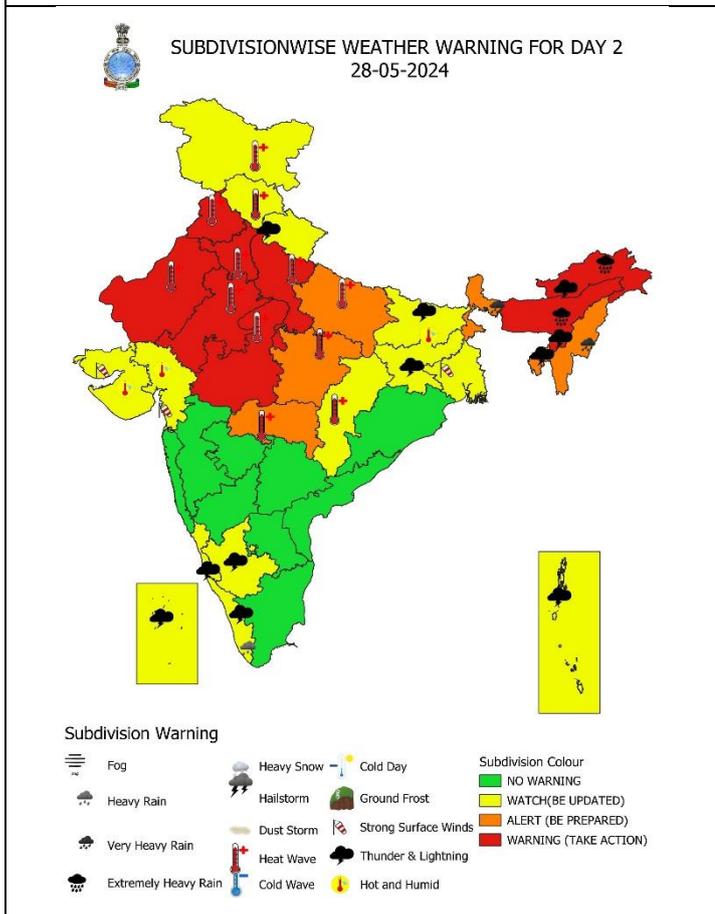
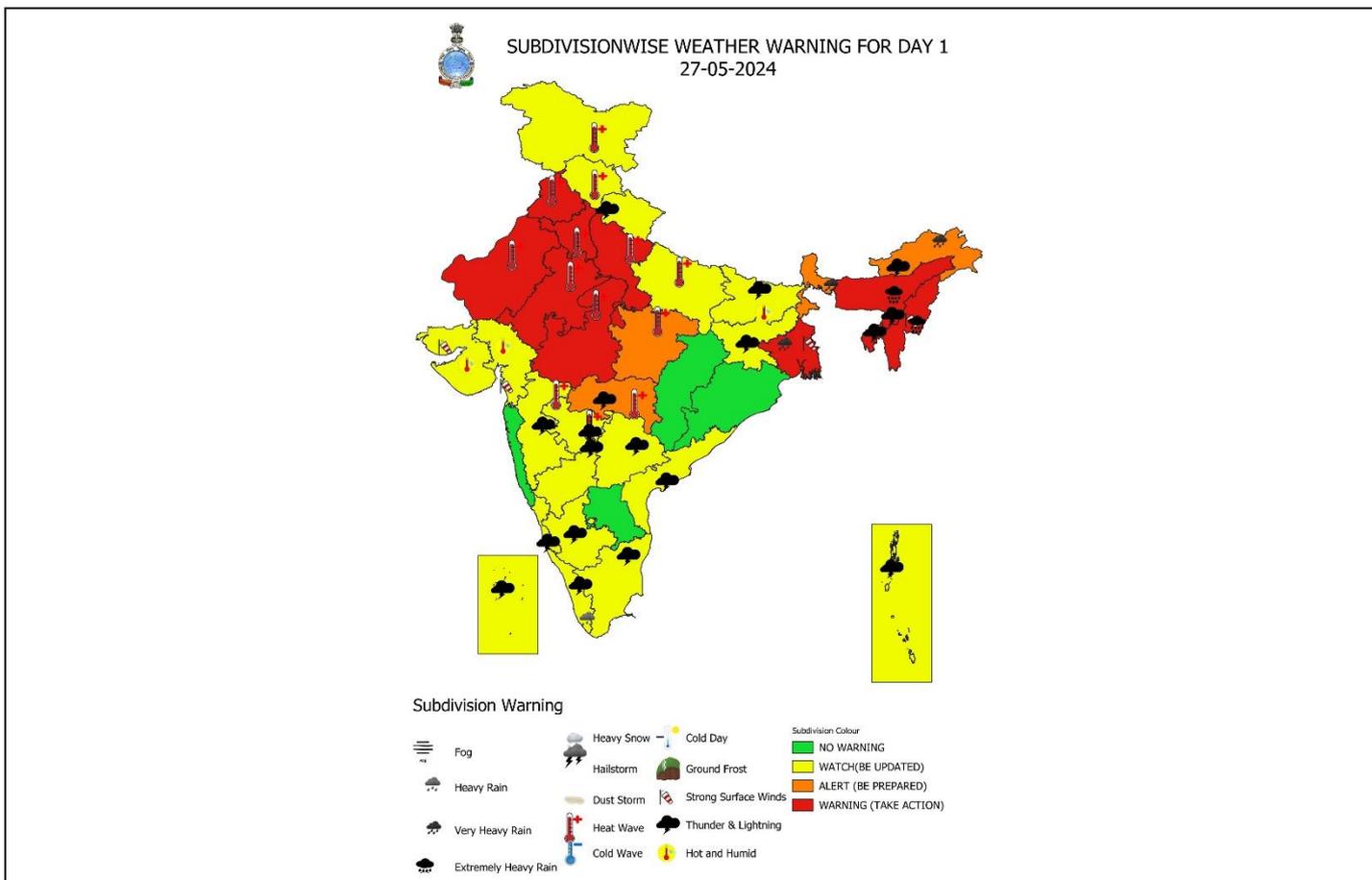
Reported maximum wind speed (kmph) during past 24 hours till 0830 hours IST of today:

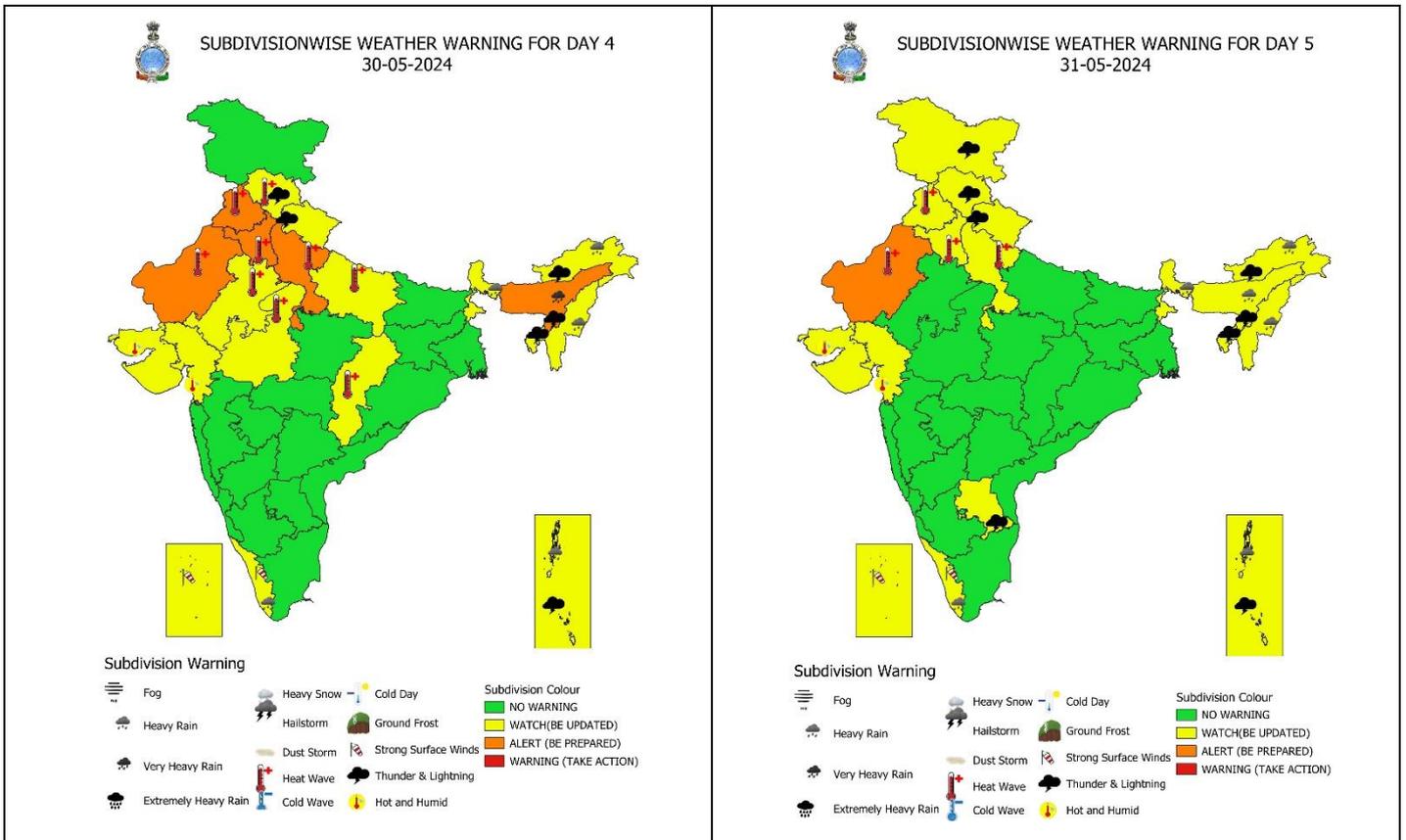
- ❖ **Telangana:** Kamareddy 75, Adilabad 53, Hyderabad 48, Nalgonda, Vikarabad 44 each, Karimnagar 40;
- ❖ **Gangetic West Bengal:** South_Twenty_Four_Parganas 77, Hoogly 75, Howrah 72, Nadir, Durgapur 64 each, North_Twenty_Four_Parganas 59, Murshidabad 55;
- ❖ **Jammu & Kashmir:** Leh 66, Kargil 59;
- ❖ **Interior Karnataka:** Yadgir 57, Koppal 48, Bagalkot, Mysore, Kolar 40 each;
- ❖ **Tamil Nadu:** Thoothukudi 55, Tenkasi 46, Karur 44, Sirugamani, Ranipet 42 each, Namakkal 38;
- ❖ **Royalaseema:** Kurnool 53, Anantapur 44;
- ❖ **Odisha:** Mayurbhanj 53, Puri, Nayagarh 46 each, Kendrapara 42;
- ❖ **Madhya Pradesh:** Shajapur 53, Sagar 50, Ashoknagar 48, Jalgaon 46, Barwani 40, Balaghat, Chhatarpur 38 each;
- ❖ **Rajasthan:** Bikaner 53, Nagaur 46, Jaisalmer, Karauli 40 each, Bhilwara, Sirohi, Udaipur 38 each;
- ❖ **Himachal Pradesh:** Lahul_and_Spiti 53, Kinnaur 51, Solan 50, Shimla 44;
- ❖ **Sub Himalayan West Bengal:** Cooch_Behar 48, Jalpaiguri 42;
- ❖ **Coastal Andhra Pradesh:** Prakasam 48, Kadapa 40;
- ❖ **Gujarat:** Kachchh 48, Jamnagar, Amreli 44 each, Dwarka 42, Rajkot 40, Amreli, Porbandar, Chhotaudepur, Dahod 38 each;
- ❖ **Chhattisgarh:** Rajnandgaon 46, Dantewada 40, Balod 38;
- ❖ **Jharkhand:** Jamtara, Chatra, Pakur 46 each, Simdega 40;
- ❖ **Uttar Pradesh:** Bhadohi 44;
- ❖ **Kerala:** Pathanamthitta 42, Kannur 40, Palakkad, Wayanad 38 each;

Gusty winds reported over the country (in knots, 1 Knot = 1.85 kmph) from 0830 hrs IST of 26.05.2024 to 0830 hrs IST of 27.05.2024



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





IMPACT & ACTION SUGGESTED due to **very heavy rainfall/extremely falls** Gangetic West Bengal on 27th; Sub-Himalayan West Bengal & Sikkim, Nagaland, Mizoram, Manipur & Tripura 27th & 28th; Assam, Meghalaya during 27th-30th; Arunachal Pradesh during 27th-29th 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, West Madhya Pradesh)

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

Orange alert Areas (Vidarbha, East Madhya Pradesh, East Uttar 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, Chhattisgarh)

- 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

(Based on the IBF and advisories issued by different AMFUs)

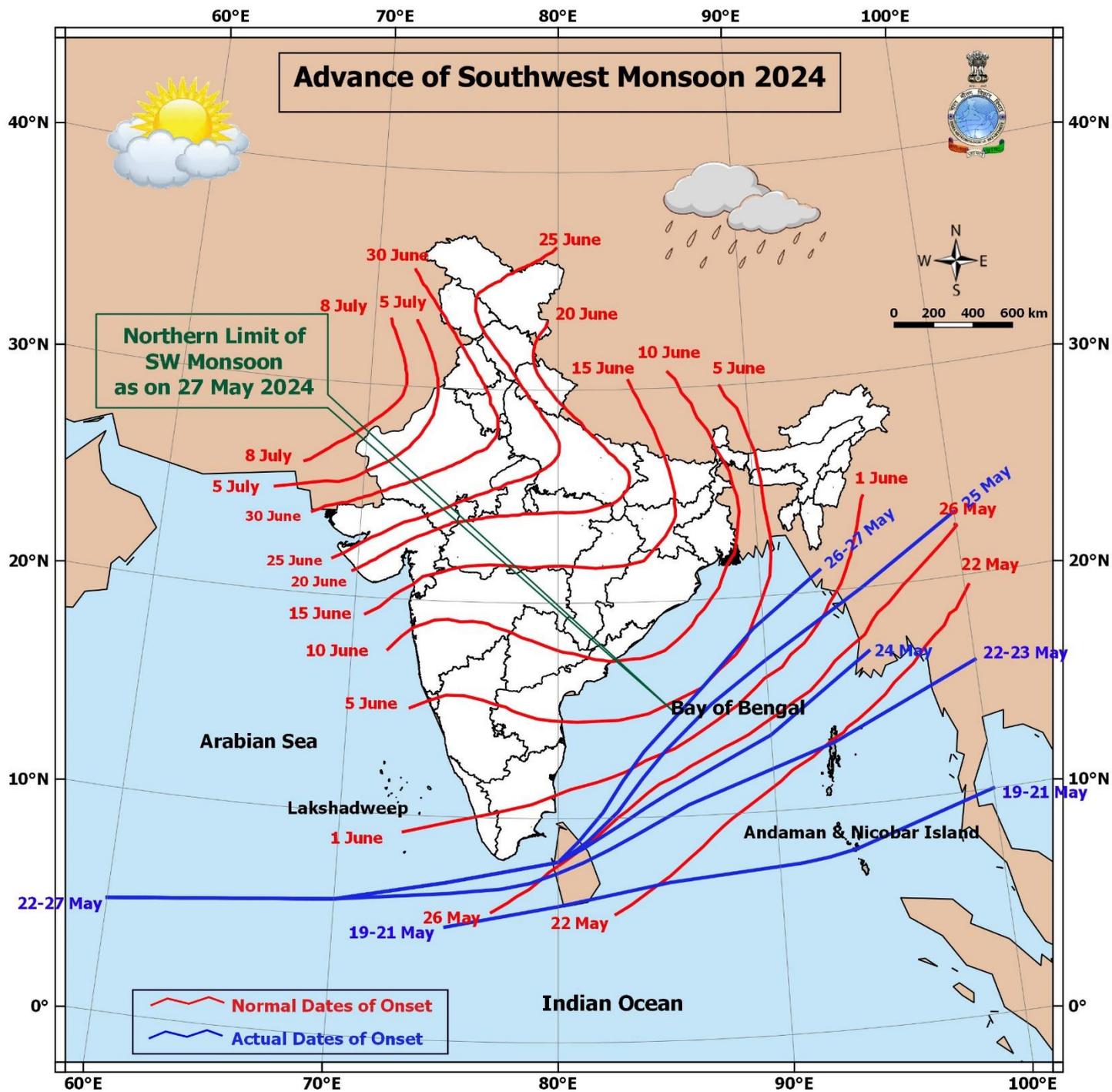
- Drain out excess water from crop fields to avoid water stagnation in Kerala, West Bengal and North-Eastern States.
- Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation in Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha and Chhattisgarh.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

Agromet advisories in view of Cyclonic Storm “REMAL”

(Based on the IBF and advisories issued by different AMFUs and DAMUs)

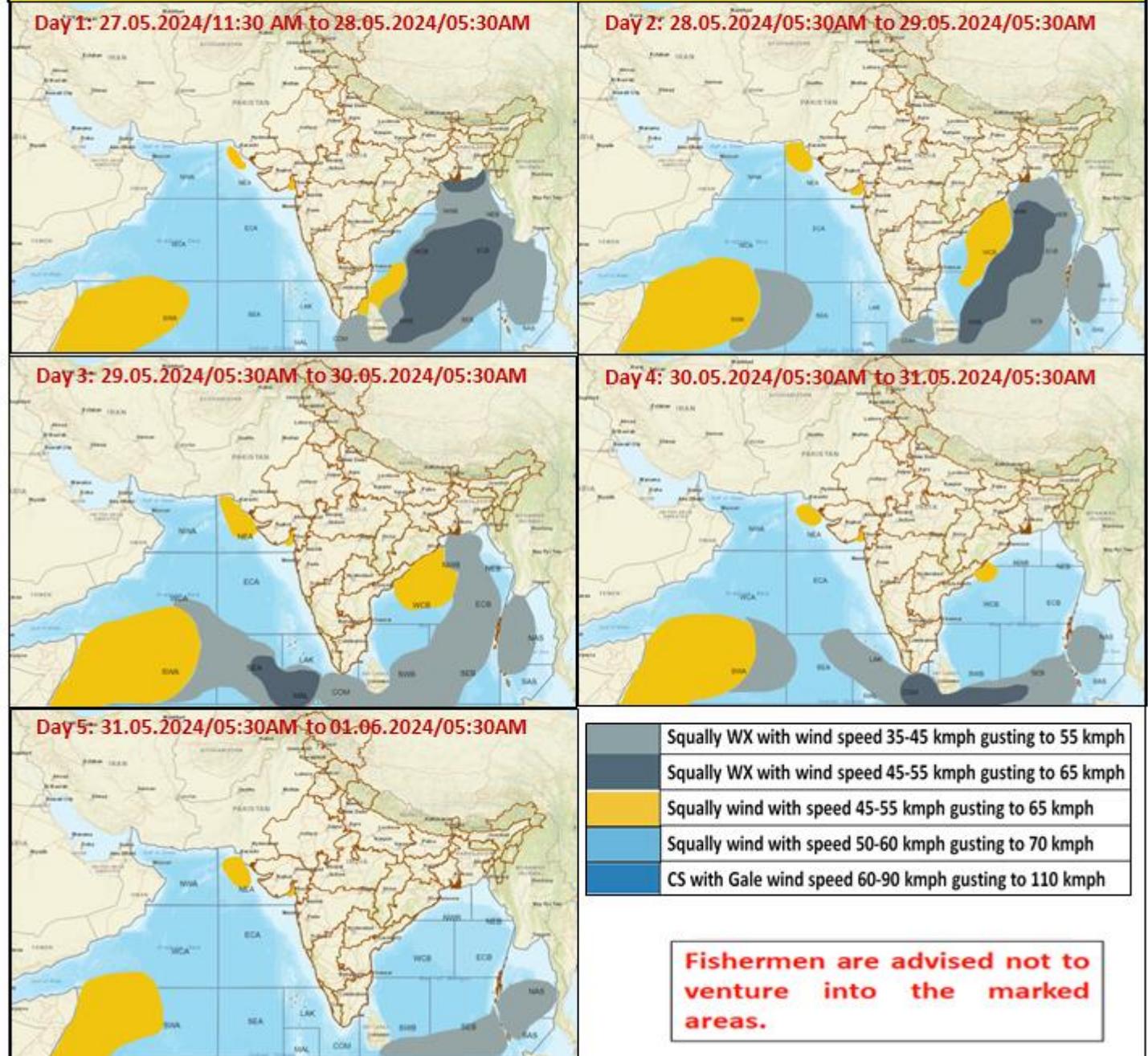
- Postpone harvesting of matured crops, fruits and vegetables and store the harvested produce in safer places.
- Drain out excess water to avoid water logging in crop fields.
- Provide staking to vegetables to avoid lodging.
- Postpone sowing of French bean, bhindi & rajmah and transplanting of cole 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



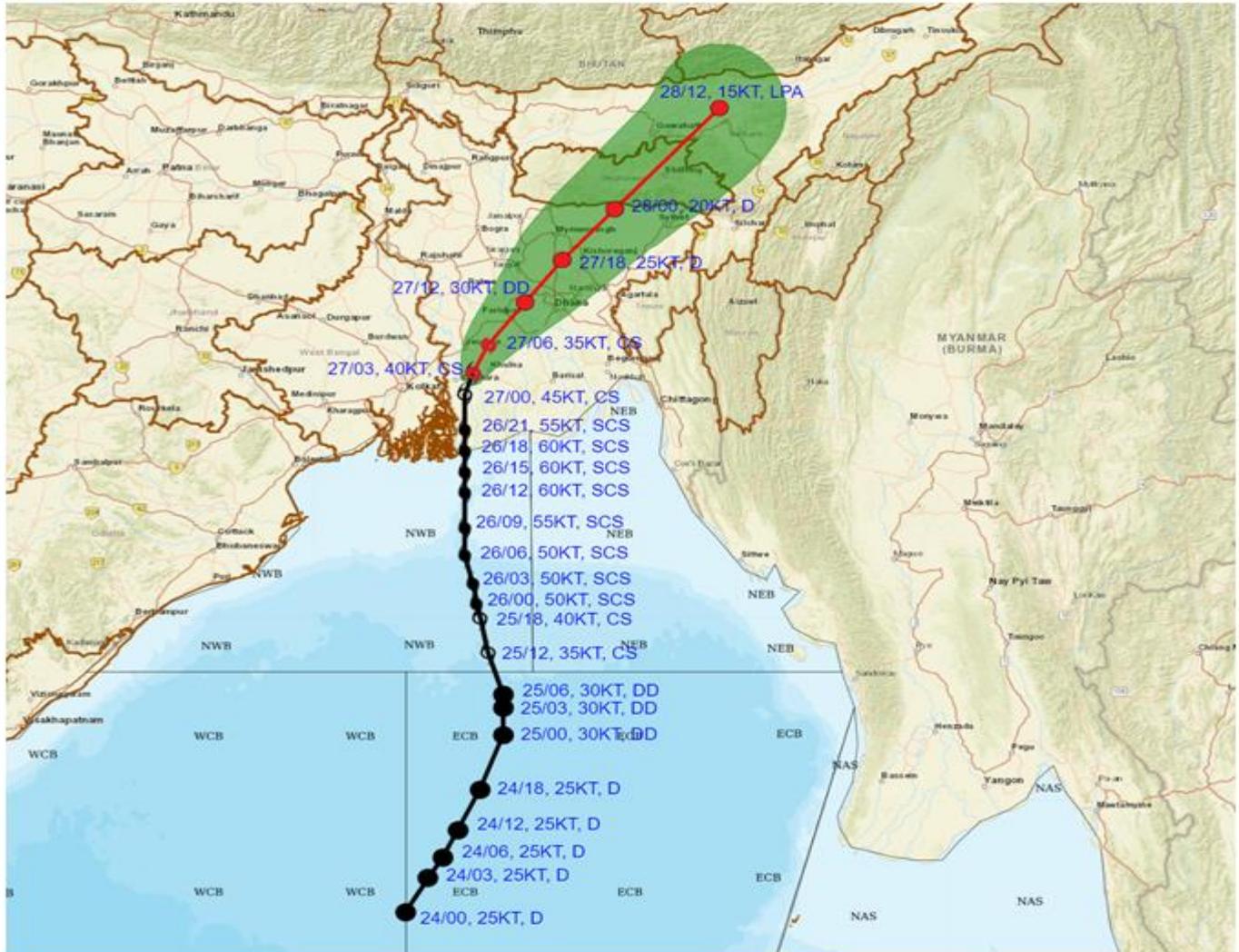


Fishermen Warning Graphics





FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH CYCLONIC STORM 'REMAL' OVER COASTAL BANGLADESH AND ADJOINING COASTAL WEST BENGAL BASED ON 0300 UTC (0830 IST) OF 27TH 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

| Forecast Date and Time (UTC) | DISTANCE (KM) AND DIRECTION FROM STATIONS | | | |
|---------------------------------|---|-----------|--------------|--------|
| | Canning | Khepupara | Sagar Island | Mongla |
| 27.05.24/0300 | 90, NE | 140, NW | 190, NE | 40, NW |
| 27.05.24/0600 | 140, NE | 160, NNW | 230, NE | 70, N |

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 *



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

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



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)