



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 14th July, 2024

Time of Issue: 1315 hours IST

Subject: 1) Isolated extremely heavy rainfall very likely over Konkan & Goa, Ghat areas of Madhya Maharashtra during 14th-16th; Coastal Karnataka and South Interior Karnataka on 14th & 15th and Kerala & Mahe on 15th July.
2) Monsoon is likely to be active in Peninsular & adjoining central India during next 4-5 days.

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

- ✓ **Heavy to very heavy rainfall** at many places with **isolated extremely heavy falls** over Konkan & Goa; **Heavy to very heavy rainfall** with **extremely heavy falls at isolated** places over Madhya Maharashtra and Coastal Karnataka; **Heavy to very heavy rainfall** at isolated places over Gujarat Region, Chhattisgarh, East Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha, South Interior Karnataka and Kerala & Mahe; **Heavy rainfall** at isolated places over Uttarakhand, East Rajasthan, East Uttar Pradesh, West Madhya Pradesh, Andaman & Nicobar Islands, Arunachal Pradesh, Jharkhand, Tamil Nadu and Coastal Andhra Pradesh & Yanam.

Weather Systems

- ✓ The Monsoon trough is south of its normal position and extends upto lower tropospheric levels. It is likely to be south of its normal position during next 4-5 days.
- ✓ The off-shore trough runs along south Gujarat-north Kerala coasts at mean sea level.
- ✓ A cyclonic circulation lies over Gangetic West Bengal & adjoining Jharkhand and Odisha in lower & middle tropospheric levels.

Forecast & Warnings (Annexure II)

❖ West, Central and South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Konkan & Goa, Madhya Maharashtra, Marathwada, Kerala & Mahe, Lakshadweep, Karnataka, Gujarat state, Madhya Pradesh, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam; scattered to fairly widespread light to moderate rainfall over Telangana, Rayalaseema; isolated to scattered light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal during next 5 days.
- ✓ **Heavy to very heavy rainfall very likely at isolated/some places over Konkan & Goa, Kerala & Mahe, Coastal & South Interior Karnataka; at isolated places over Madhya Maharashtra, Gujarat state during next 5 days. Isolated extremely heavy rainfall very likely over Konkan & Goa, ghat areas of Madhya Maharashtra during 14th-16th; Coastal Karnataka and South Interior Karnataka on 14th & 15th; Kerala & Mahe on 15th July.**
- ✓ Isolated **Heavy rainfall** over Telangana, Madhya Pradesh, Vidarbha, Chhattisgarh during 14th-18th; Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, North Interior Karnataka on 14th-16th July. **Isolated very heavy rainfall likely over Vidarbha, Telangana, Coastal**

Andhra Pradesh & Yanam, North Interior Karnataka on 14th & 15th; Chhattisgarh on 14th, Marathwada on 15th July.

❖ **East & Northeast India**

- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm, lightning** very likely over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim and Odisha; scattered to fairly widespread light to moderate rainfall over Northeast India and Gangetic West Bengal and isolated to scattered light to moderate rainfall over Bihar, Jharkhand during next 5 days.
- ✓ **Heavy rainfall** very likely at isolated places over Odisha on 15th, 17th & 18th; Arunachal Pradesh during 14th-17th; Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Bihar on 14th & 15th; Nagaland, Manipur, Mizoram & Tripura during 14th-16th; Andaman & Nicobar Islands on 14th July.
- ✓ **Isolated very heavy rainfall also likely over Odisha on 14th July.**

❖ **Northwest India**

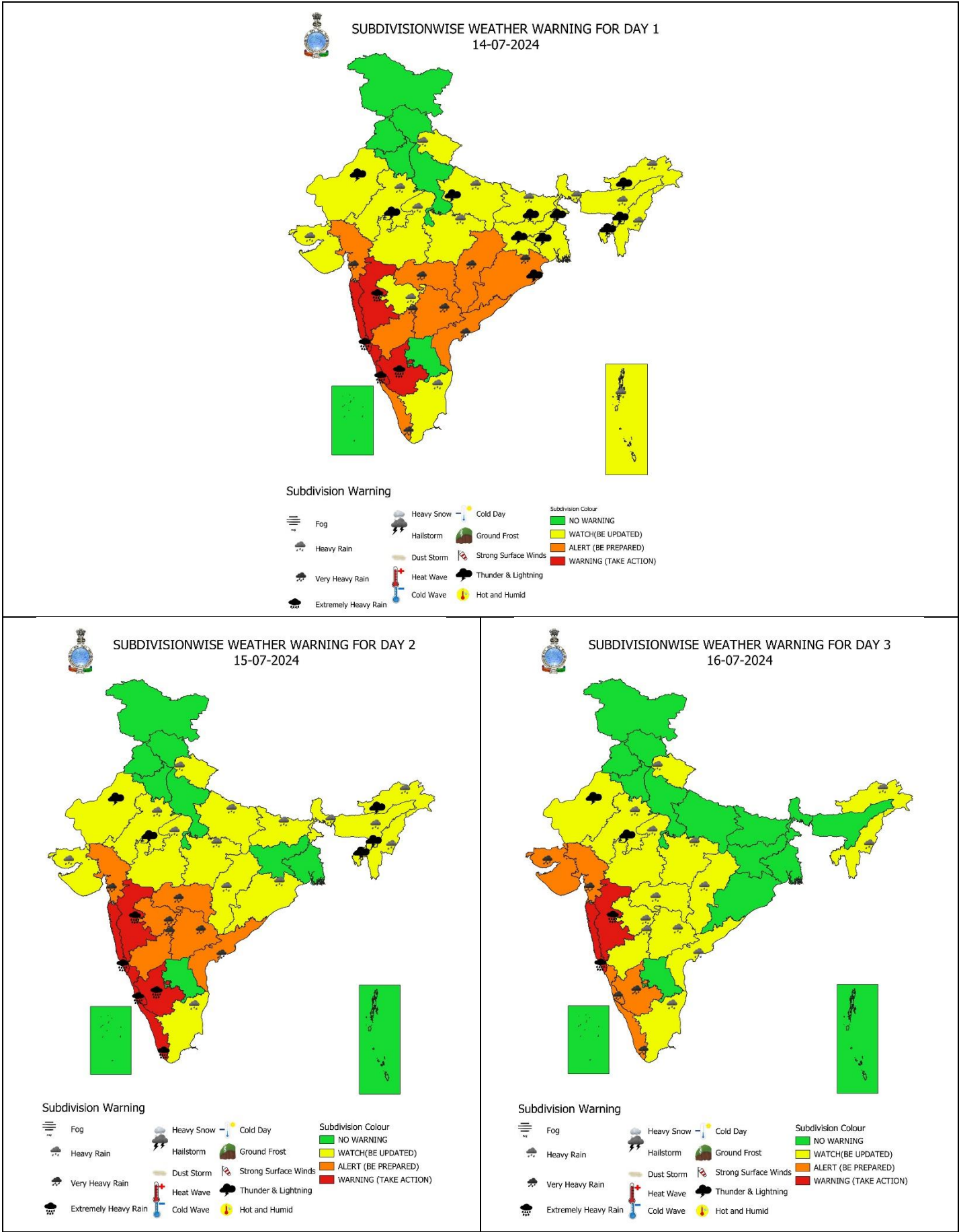
- ✓ Scattered to fairly widespread light to moderate rainfall **accompanied with thunderstorm & lightning** very likely over Uttarakhand, Uttar Pradesh and West Rajasthan; isolated to scattered rainfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and East Rajasthan during next 5 days.
- ✓ Isolated **heavy rainfall** very likely over Uttarakhand, East Rajasthan during 14th-18th; East Uttar Pradesh on 14th, 15th & 18th July.

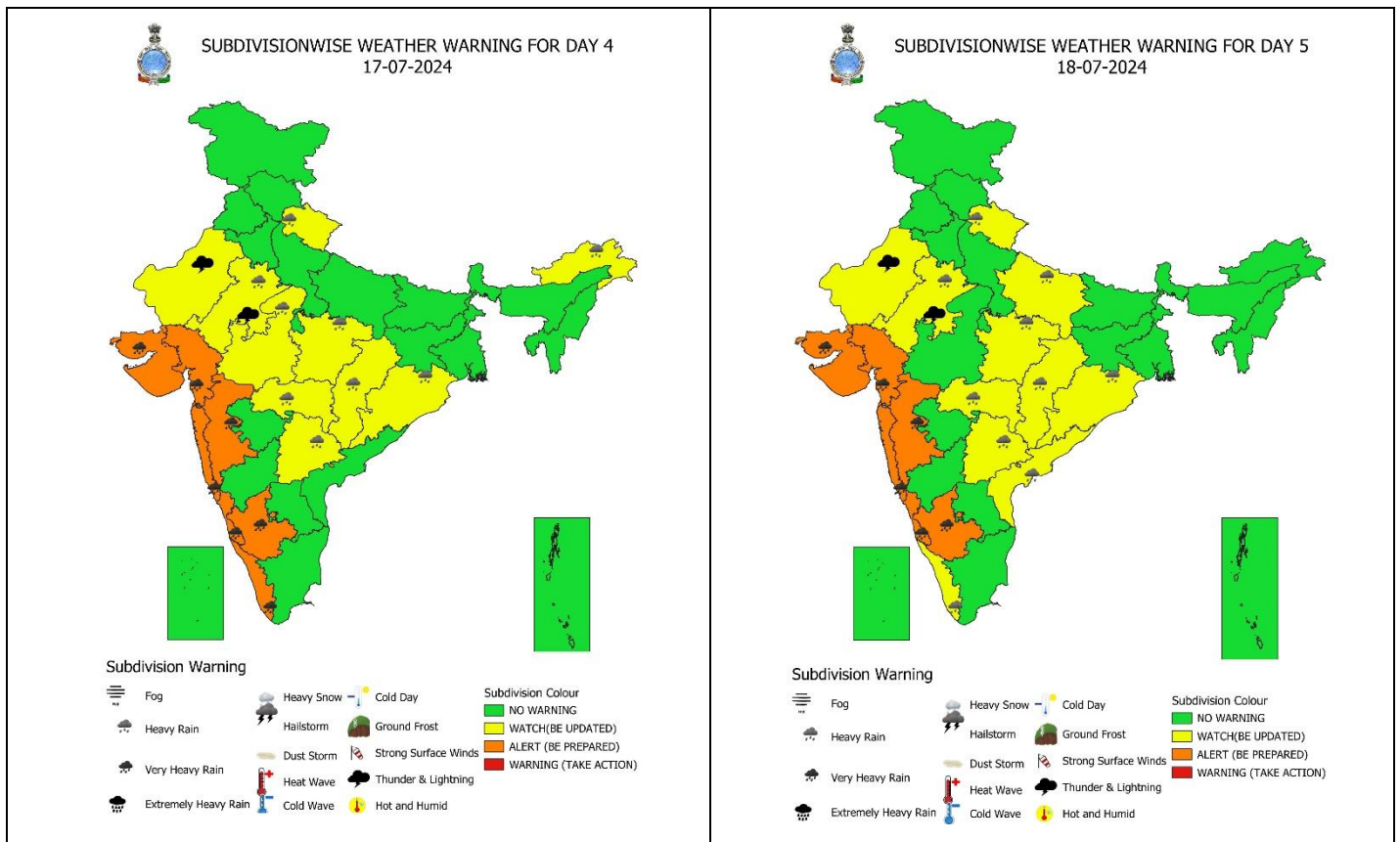
For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today (in cm):

- ❖ **Madhya Maharashtra:** Lonavala_agri (dist Pune) 24, Mahabaleshwar- Imd Obsy (dist Satara) 15, Gaganbawada (dist Kolhapur) 12, Igatpuri (dist Nashik) 9, Yaval (dist Jalgaon) 9, Shahuwadi (dist Kolhapur) 9, Navapur (dist Nandurbar) 7, Jalgaon - Imd Pt (dist Jalgaon) 7, Surgana (dist Nashik) 7;
- ❖ **Konkan & Goa:** Pen (dist Raigad) 22, Sudhagad Pali (dist Raigad) 22, Matheran (dist Raigad) 22, Pernem (dist North Goa) 21, Tala (dist Raigad) 21, Wada (dist Palghar) 21, Mandangad (dist Ratnagiri) 21, Ulhasnagar (dist Thane) 20, Bhiwandi (dist Thane) 19, Karjat_agri (dist Raigad) 17, Quepem (dist South Goa) 17, Ambernath (dist Thane) 16, Awalegaon - Arg (dist Sindhudurg) 16, Panvel_agri (dist Raigad) 15, Roha (dist Raigad) 15, Murud (dist Raigad) 15, Santacruz - Imd Obsy (dist Mumbai Suburban) 14, Vengurla Arg (dist Sindhudurg) 14, Mhasla (dist Raigad) 14, Tbia Imd Part Time (dist Thane) 14, Sanguem (dist South Goa) 14, Thane (dist Thane) 14, Dapoli_agri (dist Ratnagiri) 13, Vasai (dist Palghar) 13, Kankavli (dist Sindhudurg) 13, Wakwali_agri (dist Ratnagiri) 13, Dahanu - Imd Obsy (dist Palghar) 13, Mangaon (dist Raigad) 13, Poladpur (dist Raigad) 13, Vikramgad (dist Palghar) 12, Mahad (dist Raigad) 12, Palghar_agri (dist Palghar) 12, Lanja (dist Ratnagiri) 12, Shriwardhan (dist Raigad) 12, Vaibhavwadi (dist Sindhudurg) 12, Mapusa (dist North Goa) 11, Canacona (dist South Goa) 11, Uran (dist Raigad) 11, Pawarwadi - Arg (dist Ratnagiri) 11, Kalyan (dist Thane) 11, Dodamarg (dist Sindhudurg) 11, Mulde_ Agri (dist Sindhudurg) 11, Guhagarh (dist Ratnagiri) 10, Sangameshwar Devrukh (dist Ratnagiri) 10, Khed (dist Ratnagiri) 10, Panjim - Imd Obsy (dist North Goa) 10, Talasari (dist Palghar) 10, Colaba - Imd Obsy (dist Mumbai City) 9, Mormugao - Pmo Imd (dist South Goa) 9, Harnai Imd Obsy (dist Ratnagiri) 9, Kudal (dist Sindhudurg) 9, Margao (dist South Goa) 9, Chiplun (dist Ratnagiri) 8, Sawantwadi (dist Sindhudurg) 8, Jawhar (dist Palghar) 8, Devgad (dist Sindhudurg) 8, Savarde-arg (dist Ratnagiri) 8, Rameshwar_agri (dist Sindhudurg) 7;
- ❖ **Coastal Karnataka:** Castle Rock (dist Uttara Kannada) 22, Kumta (dist Uttara Kannada) 15, Gersoppa (dist Uttara Kannada) 13, Kadra (dist Uttara Kannada) 13, Honavar Obsy (dist Uttara Kannada) 12, Karwar Obsy (dist Uttara Kannada) 11, Shirali Pto (dist Uttara Kannada) 10, Gokarna (dist Uttara Kannada) 9, Manki (dist Uttara Kannada) 9, Siddapur (dist Uttara Kannada) 8, Joida (dist Uttara Kannada) 7, Kundapur (dist Udupi) 7;
- ❖ **South Interior Karnataka:** Agumbe EMO (dist Shivamogga) 17, Kammardi (dist Chikkamagaluru) 8, Napoklu (dist Kodagu) 8, Somwarpet (dist Kodagu) 7, Koppa (dist Chikkamagaluru) 7;
- ❖ **Gujarat Region:** Vansda (dist Navsari) 16, Gandevi (dist Navsari) 16, Khergam (dist Navsari) 14, Kaprada (dist Valsad) 12, Umergam (dist Valsad) 11, Daman_aws (dist Daman) 11, Chikhli (dist Navsari) 11, Pardi (dist Valsad) 10, Dharampur (dist Valsad) 9, Valsad_Kvk Aws (dist Valsad) 9, Umerpada (dist Surat) 8, Valia (dist Bharuch) 7, Valsad (dist Valsad) 7, Uchchhal (dist Tapi) 7;
- ❖ **Chhattisgarh:** Dornapal (dist Sukma) 15, Rajpur (dist Balrampur) 8, Mainpur (dist Gariaband) 7;
- ❖ **East Madhya Pradesh:** Niwari (dist Niwari) 14;
- ❖ **Odisha:** Padia (Malkangiri) 14, Chitrakunda K Guma (Malkangiri) 10, Deogaon (Jharsuguda) 9, Polsara (Ganjam) 8, Umarmkote (Nawarangpur) 7, Burla (Sambalpur) 7, Sinapali (Nawapara) 7, Kukudahandi (Ganjam) 7, Hirakud (Sambalpur) 7;
- ❖ **Bihar:** Halsi (dist Lakhisarai) 13, Beldaur (dist Khagaria) 11, Akbarpur (dist Nawada) 9, Kashichak (dist Nawada) 8, Bhawanipur (dist Purnea) 7, Katrisarai (dist Nalanda) 7, Chautham (dist Khagaria) 7, Sarmera (dist Nalanda) 7, Kaler (dist Arwal) 7,
- ❖ **Kerala & Mahe:** Ayyankunnu Aws (dist Cannur) 12;
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Jhallong (dist Kalimpong) 12, Neora (dist Jalpaiguri) 12, Murti (dist Jalpaiguri) 7,
- ❖ **East Uttar Pradesh:** Lalganj (dist Mirzapur) 11, Kerakat (dist Jaunpur) 7,
- ❖ **Uttarakhand:** Chalthi (dist Champawat) 10, Chorgalia (dist Nainital) 9;
- ❖ **East Rajasthan:** Gangdhar Sr (dist Jhalawar) 9, Mozamabad Sr (dist Jaipur) 9, Deeg Sr (dist Bharatpur) 7;
- ❖ **West Madhya Pradesh:** Bareli (dist Raisen) 9, Goharganj (dist Raisen) 8, Biaora (dist Rajgarh) 7, Indore (dist Indore) 7, Mhow (dist Indore) 7;

- ❖ **Jharkhand:** Hazaribagh DVC (dist Hazaribagh) 9, Borio (dist Sahibganj) 9, Latehar Baluhat KVK AWS (dist Latehar) 7, Ramgarh (dist Ramgarh) 7;
- ❖ **Arunachal Pradesh:** Nachu Arg (dist Upper Subansiri) 7,
- ❖ **Coastal Andhra Pradesh:** Koyyalagudem (dist Eluru) 7, Polavaram (dist Eluru) 7, Veeraghattam (dist Parvathipuram Manyam) 7;
- ❖ **Tamil Nadu:** Chinnakalar (dist Coimbatore) 7;
- ❖ **Andaman & Nicobar Islands:** Port Blair (dist South Andaman) 7,





IMPACT & ACTION SUGGESTED due to

- ✓ **Isolated extremely heavy rainfall over Konkan & Goa, ghat areas of Madhya Maharashtra during 14th-16th; Coastal Karnataka and South Interior Karnataka on 14th & 15th; Kerala & Mahe on 15th July.**
 - ✓ **Heavy to very heavy rainfall at isolated/some places over Konkan & Goa, Kerala & Mahe, Coastal & South Interior Karnataka; at isolated places over Madhya Maharashtra, Gujarat state during next 5 days; Vidarbha, Telangana, Coastal Andhra Pradesh & Yanam, North Interior Karnataka on 14th & 15th; Chhattisgarh, Odisha on 14th, Marathwada on 15th July.**
- 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 kutchha roads.
 - Possibilities of damage to vulnerable structure.
 - Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
 - 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)

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 expected and action suggested due to thunderstorm accompanied with lightning over Bihar, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh on 14th July.

Impact expected:

- ❖ Strong wind/hail may damage plantation, horticulture and standing crops.
- ❖ Hail may injure people and cattle at open places.
- ❖ Partial damage to vulnerable structures due to strong winds.
- ❖ Minor damage to kutcha houses/walls and huts.
- ❖ Loose objects may fly.

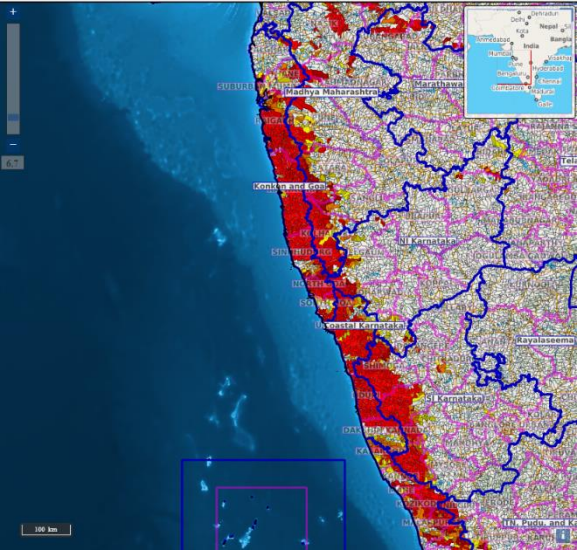
Action suggested:

- ❖ Stay indoors, close windows & doors and avoid travel if possible.
- ❖ Take safe shelters; do not take shelter under trees.
- ❖ Do not lie on concrete floors and do not lean against concrete walls.
- ❖ Unplug electrical/ electronic appliances.
- ❖ Immediately get out of water bodies.
- ❖ Keep away from all the objects that conduct electricity.

Agromet advisories for Heavy Rainfall likely over various parts of the country

- Make provision for draining out excess water from crop fields to avoid water stagnation in Sub Himalayan West Bengal & Sikkim, Odisha, Bihar, Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh, Vidarbha, Konkan & Goa, Ghat areas of Madhya Maharashtra, Gujarat State, Tamil Nadu, Kerala, Karnataka, Coastal Andhra Pradesh and Telangana.
- Postpone transplanting of rice, finger millet and vegetables in Konkan.
- Provide mechanical support to horticultural crops & staking to vegetables.

FLASH FLOOD GUIDANCE:

<p>24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 15-07-2024 :</p> <p>Moderate flash flood risk likely over few watersheds & neighbourhoods Konkan & Goa & adjoining Madhya Maharashtra and Coastal Karnataka & adjoining South Interior Karnataka Met Sub-divisions during next 24 hours.</p> <p>Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.</p>	<div> <div> Product: NCUM FFR Timescale: 24-hr Region: "REGIONAL" Product Date: 2024-07-14 06:00 UTC Valid Date: 2024-07-15 06:00 UTC </div>  </div>
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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; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **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>