



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 02<sup>nd</sup> March, 2024

Time of Issue: 1330 hours IST

**Subject: (i) Intense spell of rainfall/snowfall over Western Himalayan Region and moderate to intense thunderstorm/hailstorm activity over the plains of Northwest and adjoining Central India likely to continue today, the 02<sup>nd</sup> March and decrease thereafter.**  
**(ii) Thunderstorm/hailstorm activity likely over East India on 03<sup>rd</sup> March, 2024.**

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

- ❖ **Light to moderate rainfall/snowfall** at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand; at isolated places over Arunachal Pradesh.
- ❖ **Light to moderate rainfall** at many places over Punjab, West Uttar Pradesh; at a few places over Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh; at isolated places over East Uttar Pradesh, Vidarbha, Sub-Himalayan West Bengal & Sikkim, Madhya Maharashtra, Marathwada, Telangana and Saurashtra & Kutch.
- ❖ **Heavy rainfall/snowfall** occurred at isolated places over Jammu & Kashmir and Himachal Pradesh.
- ❖ Isolated **hailstorm** observed over Jammu-Kashmir, Himachal Pradesh, Haryana, Rajasthan and Madhya Pradesh.

**Weather Systems and Forecast & Warnings during next 5 days: (Annexure II)**

- ❖ A Western Disturbance as a cyclonic circulation lies over central Afghanistan & neighbourhood and a trough runs from this cyclonic circulation to North Arabian Sea in lower & middle tropospheric levels. An induced cyclonic circulation lies over north Pakistan & adjoining Punjab in lower tropospheric levels. High moisture feeding from Arabian Sea to northwest India and is likely to continue today, the 02<sup>nd</sup> March, 2024. Under their influence:
  - **Fairly widespread to widespread** light/moderate rainfall/snowfall accompanied with **thunderstorms & lightning** very likely over **Western Himalayan Region till 03<sup>rd</sup> March, 2024** and significant reduction in distribution and intensity thereafter.
  - **Fairly widespread to widespread** light/moderate rainfall accompanied with **thunderstorms, lightning & gusty winds (40-50 kmph)** very likely over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh and isolated to scattered light/moderate

rainfall over Rajasthan, Gujarat State and Madhya Pradesh on 02<sup>nd</sup> March and decrease in distribution and intensity thereafter.

➤ **Isolated heavy to very heavy rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh; isolated heavy rainfall/snowfall also very likely over Uttarakhand and Punjab on 02<sup>nd</sup> March, 2024.**

➤ **Hailstorm activity also very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, Punjab, Haryana, Chandigarh, Uttar Pradesh, Madhya Pradesh on 02<sup>nd</sup> March, 2024.**

- ❖ Due to confluence of winds at lower tropospheric levels, isolated light/moderate rainfall accompanied with **thunderstorms, lightning** very likely over Madhya Maharashtra, Marathwada on 02<sup>nd</sup>; Vidarbha, Chhattisgarh on 02<sup>nd</sup> & 03<sup>rd</sup>; over Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim during 02<sup>nd</sup>-04<sup>th</sup>; Gangetic West Bengal and Odisha on 03<sup>rd</sup> & 04<sup>th</sup> March, 2024. Isolated **hailstorm** also likely over Chhattisgarh on 02<sup>nd</sup> and over Bihar & Jharkhand on 03<sup>rd</sup> March.
- ❖ A cyclonic circulation lies over Meghalaya in lower tropospheric levels. Under its influence and eastward movement of current Western Disturbance:
  - ❖ Isolated to scattered light/moderate rainfall/snowfall very likely over Arunachal Pradesh during next 5 days. Isolated **heavy rainfall/snowfall** likely over Sikkim on 03<sup>rd</sup> and over Arunachal Pradesh on 04<sup>th</sup> March, 2024.
  - ❖ Isolated light/moderate rainfall accompanied with **thunderstorms & lightning** likely over Assam & Meghalaya and Nagaland on 04<sup>th</sup> & 05<sup>th</sup> March, 2024.

For more details, kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

## ANNEXURE I

### Significant amount of rainfall (in cm):

**Himachal Pradesh:** Manali (dist Kullu) 8, Banjar (dist Kullu) 8, Seo Bagh (dist Kullu) 8, , Bhuntar Aero (dist Kullu) 6, , Reckong Peo Aws (dist Kinnaur) 5, Sarahan (dist Shimla) 5, Bharmaur (dist Chamba) 5, Tissa (dist Chamba) 5, Chamba Aws (dist Chamba) 5, Rampur Bushar (dist Shimla) 5, Dalhousi Alha Aws (dist Chamba) 4, Chaupal (dist Shimla) 4, Saloni (dist Chamba) 4, Rohru (dist Shimla) 4, Narkanda Aws (dist Shimla) 3, Chuari (dist Chamba) 3, Wangtoo (dist Kinnaur) 3, Hmo Shillaro (dist Shimla) 3, Kotkhai (dist Shimla) 2, Arki (dist Solan) 2, Palampur (dist Kangra) 2, Gohar (dist Mandi) 2, Kataula (dist Mandi) 2, Kufri (dist Shimla) 2, Jogindarnagar (dist Mandi) 2, Bijahi (dist Mandi) 2.

**Jammu & Kashmir:** Banihal, Baderwah-7 each, Kupwara-6, Qazigund-5, Baramula-4, Kukernag-3, Pahalagam, Verinag, Ananatnag,Gund, Ganderbal, Rambagh, Shalimar, Srinagar, Awantipur, Nowgam-2 each.

**Uttarakhand:** Joshimath-4, Chakrata, Tiuni, Tehri, Ukimath, Uttarkashi-2 each.

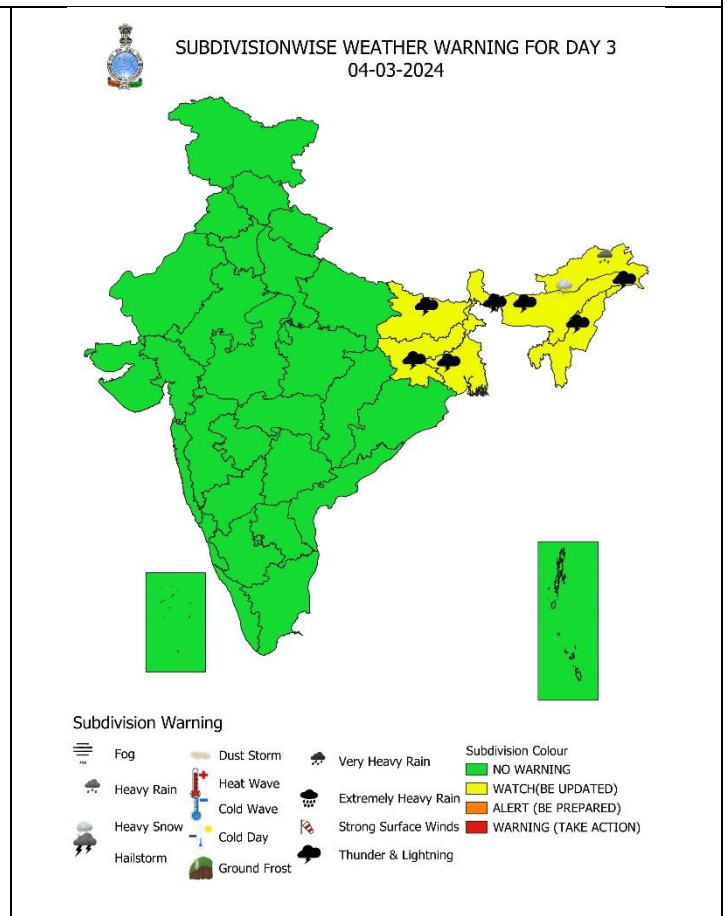
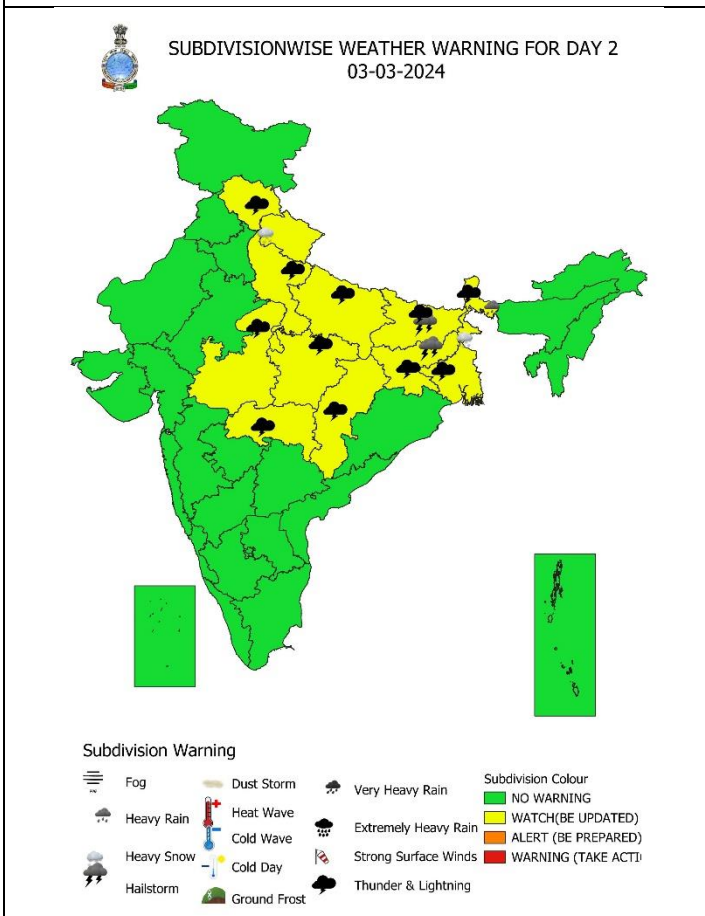
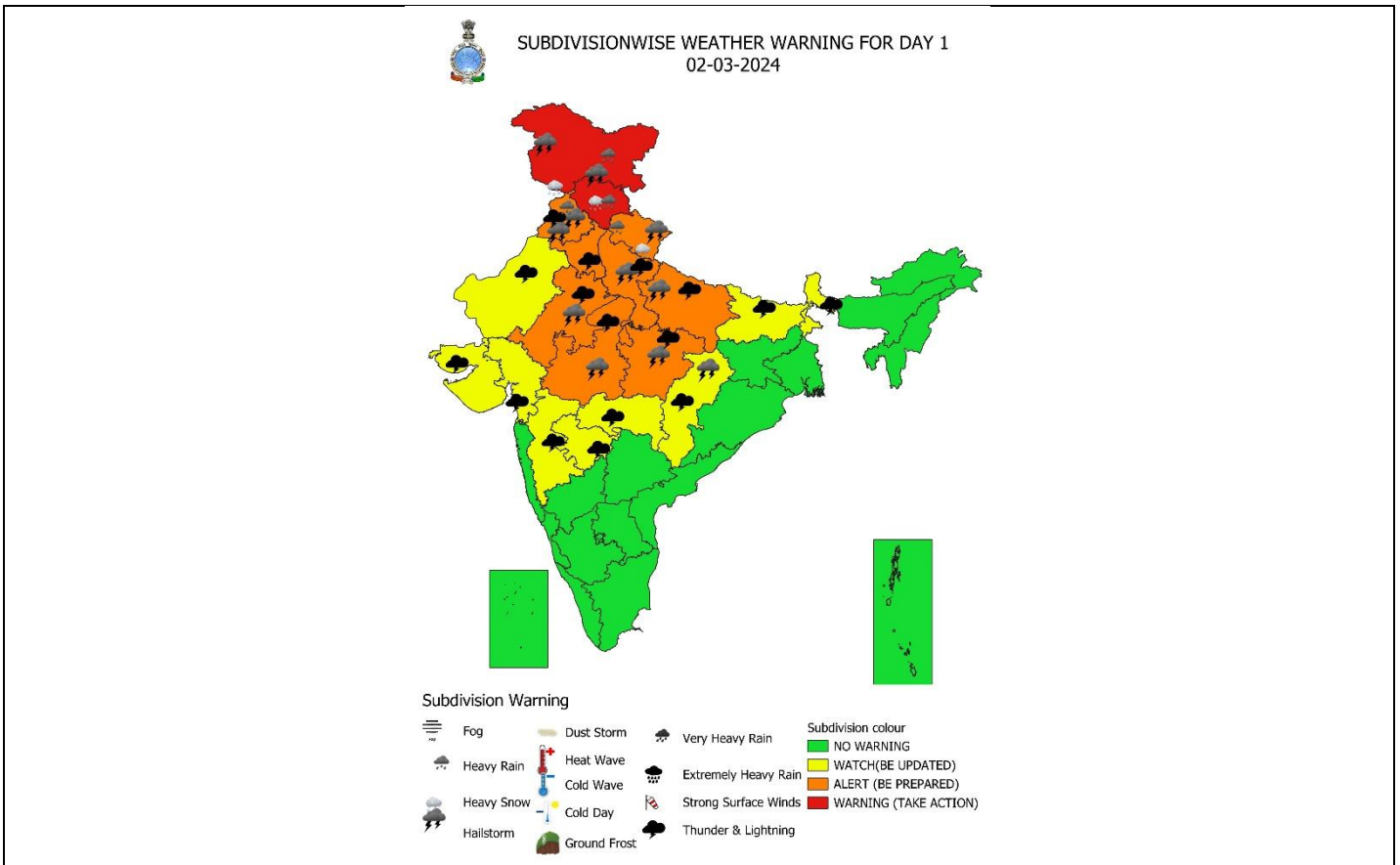
**East Madhya Pradesh:** Orchha (dist Niwari) 3, Lidhora (dist Tikamgarh) 2, Mohangarh (dist Tikamgarh) 2.

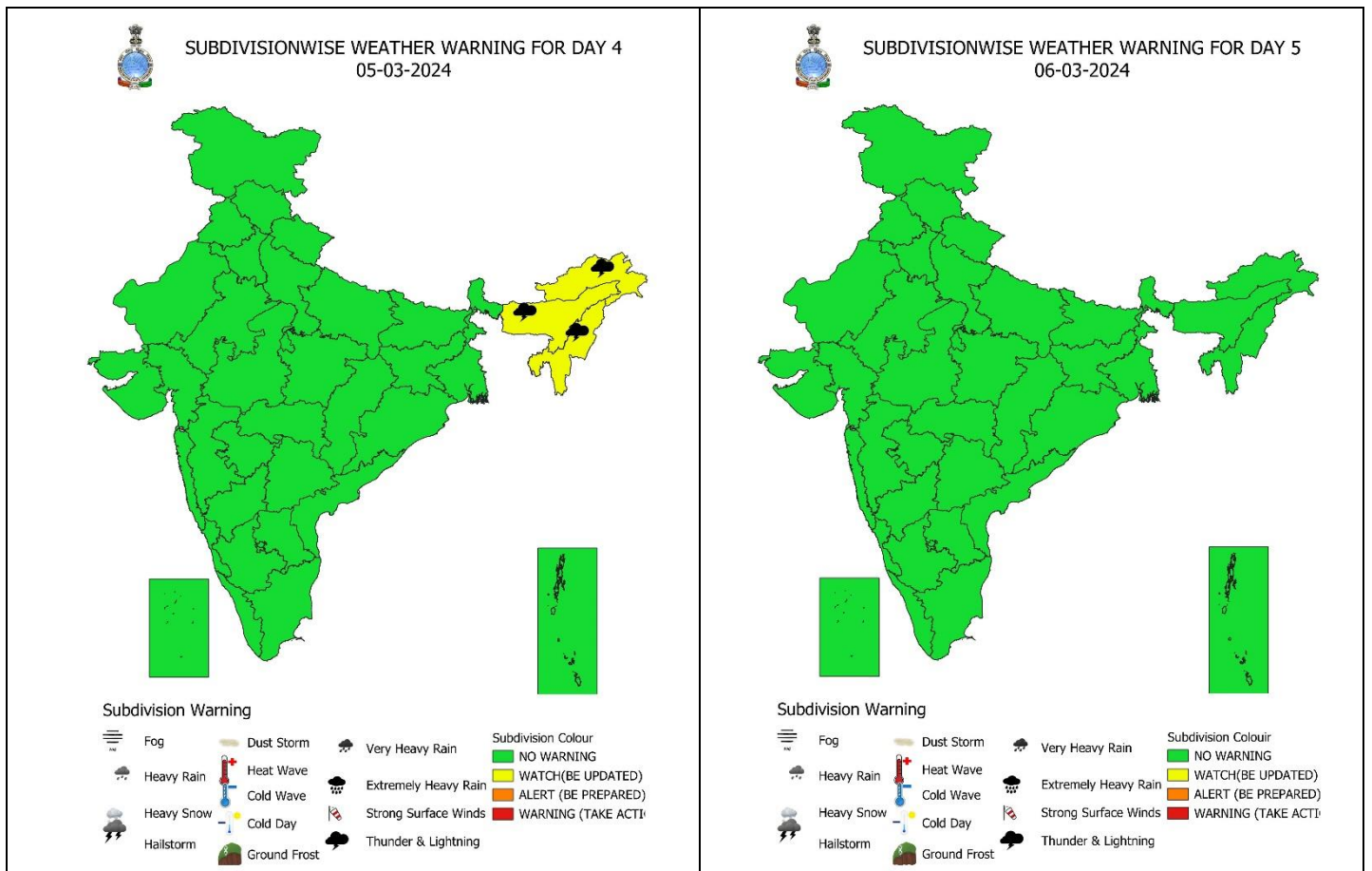
**West Madhya Pradesh:** Vijaypur (adp) (dist Sheopur) 3, Karera (dist Shivpuri) 2, Kolaras (dist Shivpuri) 2.

**Punjab:** Nabha (dist Patiala) 1, Balachaur (dist Sbs Nagar) 1, Samrala (dist Ludhiana) 1, Phangota (dist Pathankot) 1, Taran Taran (dist Tarn Taran) 1, Bhadson Irr (dist Patiala) 1, Dhariwal Irr (dist Gurdaspur) 1

**Haryana:** Chandigarh-1

**West Uttar Pradesh:** Kulpahar (dist Mahoba) 2, Mauranipur (dist Jhansi) 1, Thakurdwara (dist Moradabad) 1, Iglas (dist Aligarh) 1, Moradabad (dist Moradabad) 1, Sadabad (dist Hathras) 1, Lalitpur (dist Lalitpur) 1, Hathras (dist Hathras) 1, Vrindavan (dist Mathura) 1,





## Agromet advisories for Heavy rainfall, Gusty winds and hailstorms likely over various parts of the country

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

- ❖ Harvest the matured wheat, jowar and gram in Madhya Maharashtra and Marathwada; mustard in North Rajasthan and Madhya Pradesh as early as possible and keep the harvested produce at safer places.
- ❖ Use hail nets or hail caps in fruit orchards to protect them from mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Himachal Pradesh, Uttarakhand, Punjab, Haryana, Uttar Pradesh, North Rajasthan, Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Marathwada and Vidarbha.
- ❖ Make necessary arrangements for draining out excess water from crop fields to avoid water stagnation in Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab and Sikkim.
- ❖ Keep harvested produce in safe places.

- **Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, Punjab, Haryana, Chandigarh, Uttar Pradesh, Madhya Pradesh on 02<sup>nd</sup> March, 2024 and over Bihar and Jharkhand on 03<sup>rd</sup> March.

**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 kutchha 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.

**Impact & Action Suggested due to heavy to very heavy rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand on 02<sup>nd</sup> March, 2024.**

**Impacts Expected for Rain/Snow**

- Disruption of Electricity.
- Landslide, rock fall and mudslides, Blocking/washout of roads/highways/bridges Nallahs.
- Disruption of traffic flow.
- Damage to Kuccha and unsecured structures.














**Suggested Actions**

- Avoid roadway underpasses, drainage ditches, low lying areas and areas where water collects – they can unexpectedly flood or overflow.
- Stay away from power lines or electrical wires.
- Don't stay in kuccha houses during heavy rainfall as it may collapse anytime soon
- Drive carefully.

## Legends & abbreviations:

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **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 Marathwada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

<b>SPATIAL DISTRIBUTION</b> (% 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)

Subdivision Warning	 Dust Storm	Subdivision color
 Heavy Rain	 Strong Surface Winds	 NO WARNING
 Heavy Snow	 Heat Wave	 WATCH(BE UPDATED)
 Thunderstorms & Lightning	 Cold wave	 ALERT (BE PREPARED)
 Hailstorm	 Fog	 WARNING (TAKE ACTION)

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

<b>Flash Flood Risk</b>	
	High Risk (Take Action)
	Moderate Risk (Be Prepared)
	Low Risk (Be Updated)