



India Meteorological Department

(Ministry of Earth Sciences)

NATIONAL BULLETIN NO.: 16 (BOB/04/2024)

TIME OF ISSUE: 1430 HOURS IST

DATED: 11.09.2024

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Sub: Depression over Northeast Madhya Pradesh

The depression over Northeast Madhya Pradesh moved slowly nearly north-northwestwards with a speed of 8 kmph during past 3 hours and lay centred at 1130 hours IST of today, the 11th September over the same region near latitude 24.2°N and longitude 79.9°E, about 60 km northeast of Damoh (Madhya Pradesh), 90 km south of Khajuraho (Madhya Pradesh), 100 km west-southwest of Satna (Madhya Pradesh) and 190 km southeast of Jhansi (Uttar Pradesh).

It is likely to move slowly north-northwestwards during next 24 hrs. The system is under continuous surveillance of Doppler Weather Radar at Bhopal (Madhya Pradesh).

Warnings:

(i) Rainfall warning

East Madhya Pradesh: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall** at isolated places on 11th ; **heavy to very heavy rainfall** at few places on 12th and **heavy rainfall** at isolated places on 13th and 14th September.

West Madhya Pradesh: Light to moderate rainfall at many places is very likely with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall** at isolated places on 11th & 12th; **heavy to very heavy rainfall** at a few places on 13th & 14th September and **heavy rainfall** at a few places on 15th September.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

West Uttar Pradesh: Light to moderate rainfall at many places is very likely with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall** at isolated places on 11th, 12th and 13th and **heavy rainfall** at a few places on 14th & 15th September.

East Uttar Pradesh: Light to moderate rainfall at many places is very likely with heavy rainfall at isolated places on 11th; **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall** at isolated places on 12th and **heavy rainfall** at a few places on 13th, 14th & 15th September.

East Rajasthan: Light to moderate rainfall at many places is very likely with **heavy to very heavy rainfall** at a few places on 11th, 12th & 13th and **heavy rainfall** at isolated places on 14th & 15th September.

West Rajasthan: Light to moderate rainfall at many places is very likely with **heavy rainfall** at a few places on 11th & 12th September.

(ii) Flash Flood Guidance: (Graphics Attached)

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 12-09-2024:

Moderate to High flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

West Uttar Pradesh - Hamirpur, Jalaun, Jhansi and Lalitpur districts.

East Madhya Pradesh - Damoh and Sagar districts.

West Madhya Pradesh - Agar-Malwa, Ashoknagar, Bhind, Bhopal, Guna, Gwalior, Jhabua, Mandasaur, Morena, Nimach, Raisen, Rajgarh, Ratlam, Sehore, Shajapur, Sheopur, Shivpuri and Videsha districts.

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.

(iii) Wind warning:

Strong wind speed reaching 30-40 kmph gusting to 50 kmph is likely to prevail over North Madhya Pradesh and adjoining South Uttar Pradesh during next 24 hours.

(iv) Impact Expected (East Madhya Pradesh, West Madhya Pradesh, West Uttar Pradesh, East Uttar Pradesh, East Rajasthan and West Rajasthan due to heavy rainfall)

- ✓ 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 and roadways 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 and wind.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

(v) Action Suggested (East Madhya Pradesh, West Madhya Pradesh, West Uttar Pradesh, East Uttar Pradesh, East Rajasthan and West Rajasthan)

- ✓ Judicious regulation of surface transports including railways and roadways.
- ✓ 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.

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

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- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ Keep the harvested produce at safer place.

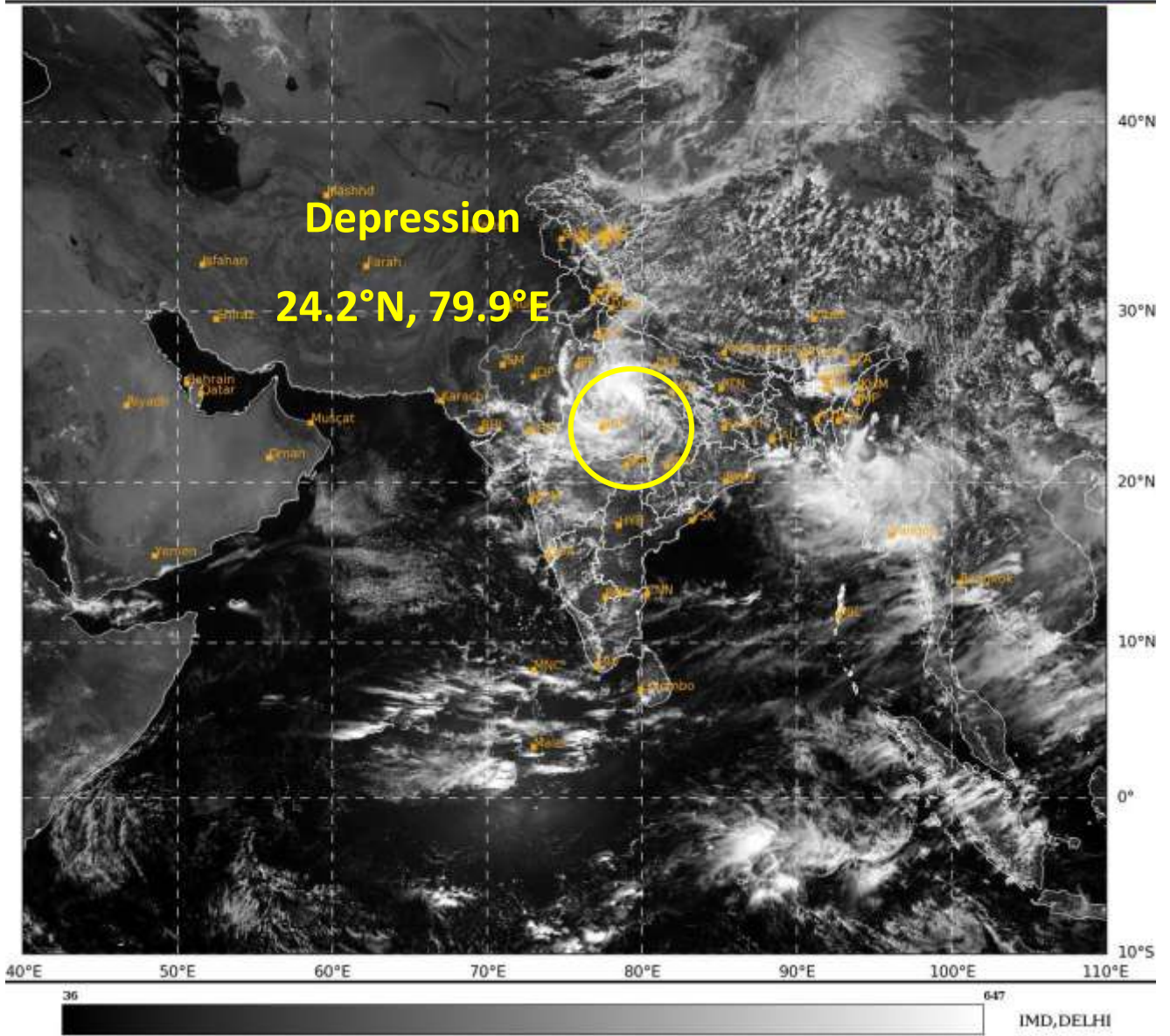
Rainfall recorded during 0830 hrs IST to 0830 hours IST of 11th September (in cm) is placed in Annexure-1

The next bulletin will be issued at 2030 hrs IST of 11th September, 2024.

**(Dr RK Jenemani)
Scientist- G, RSMC, New Delhi**

*Copy to: CRS, Pune/ACWC Kolkata/ACWC Chennai/CWC Bhubaneswar/CWC Visakhapatnam/
/MC Raipur/MC Ranchi/MC Hyderabad/MC Amaravati/MC Lucknow/MC Bhopal*

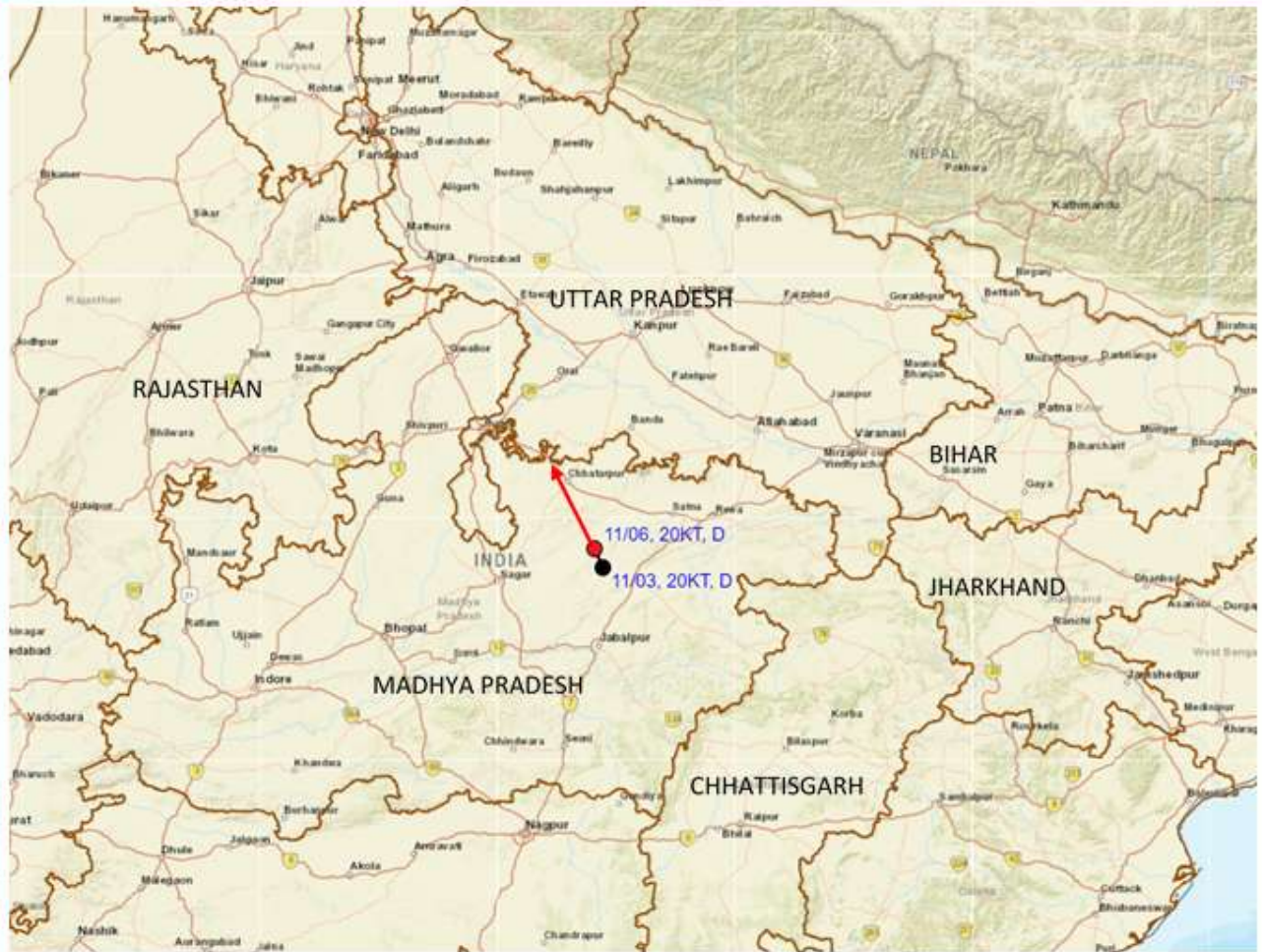
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OBSERVED AND FORECAST TRACK OF DEPRESSION OVER NORTHEAST MADHYA PRADESH BASED ON 0600 UTC (1130 IST) OF 11TH SEPTEMBER, 2024.

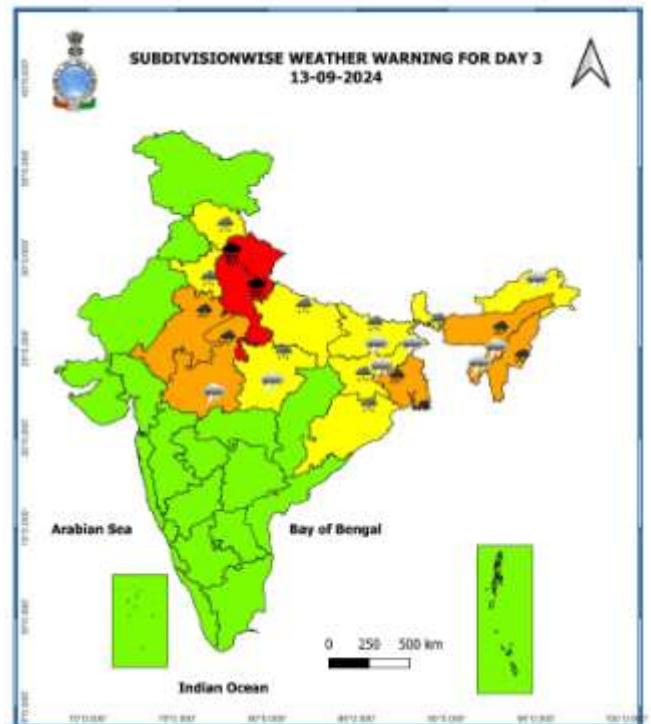
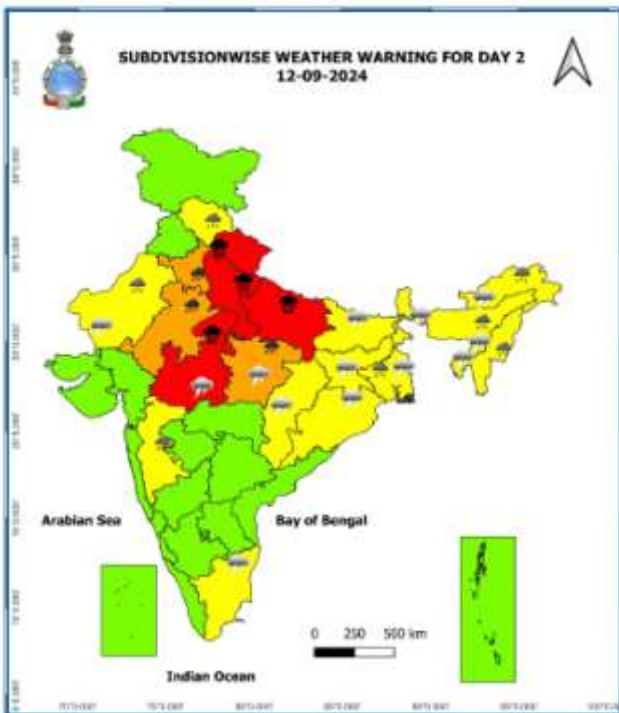
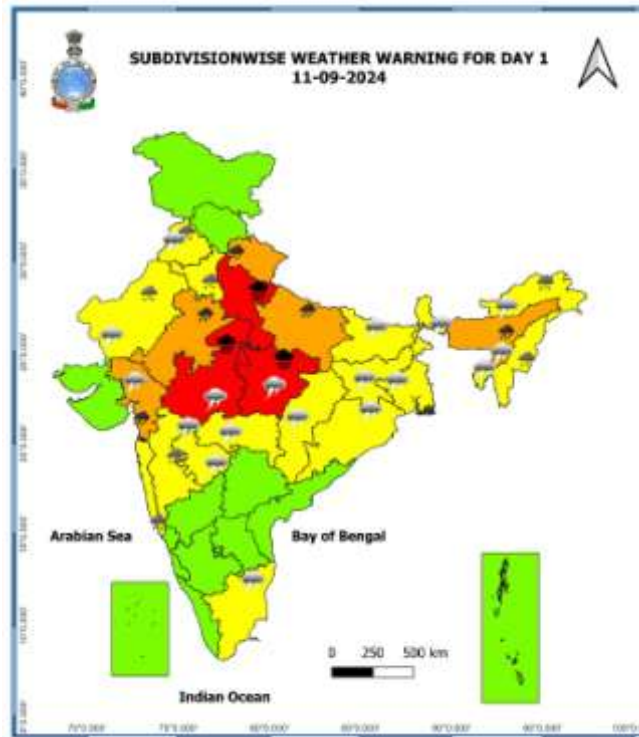


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS: SUPER CYCLONIC STORM @ 120 KT)

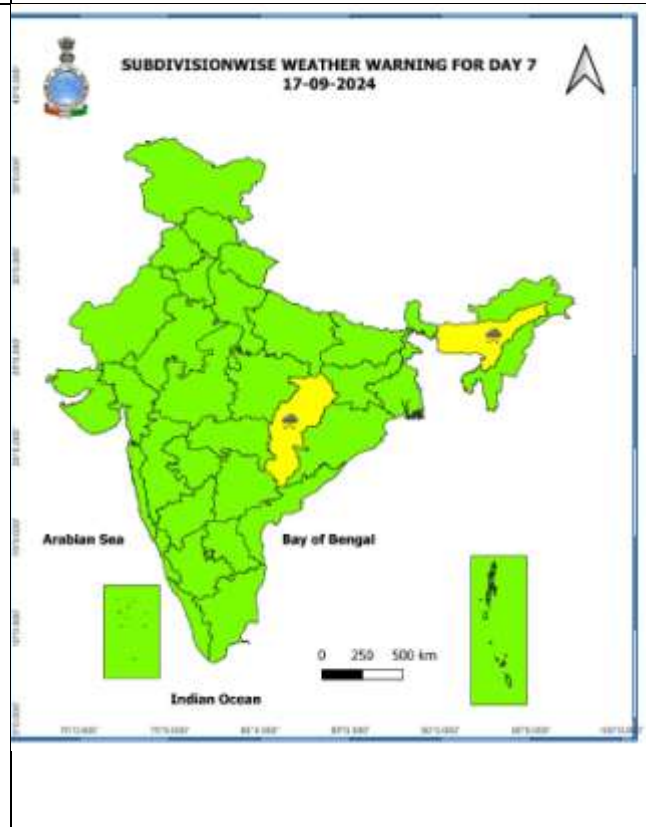
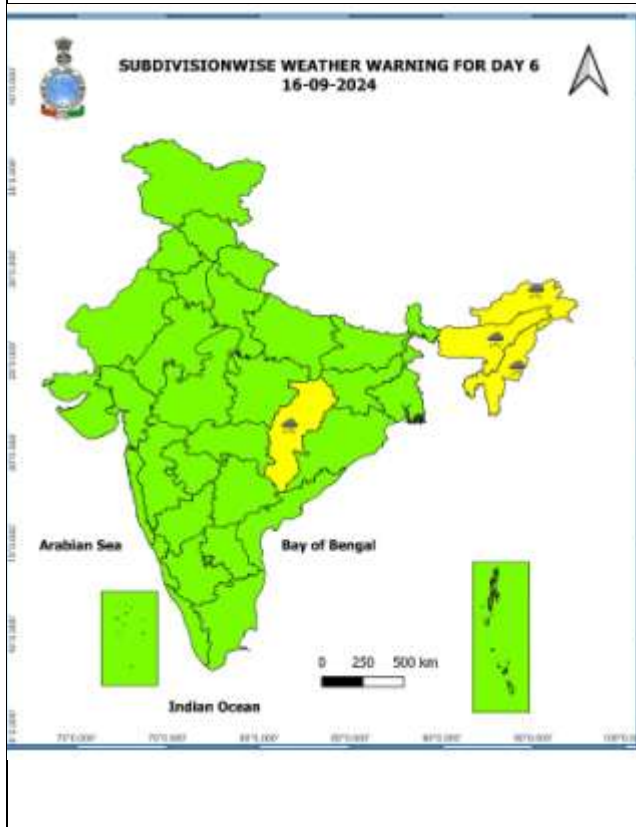
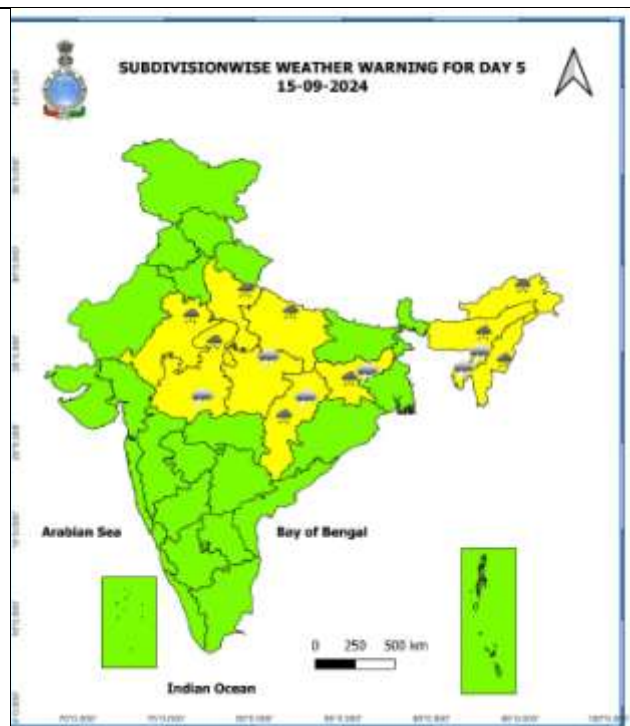
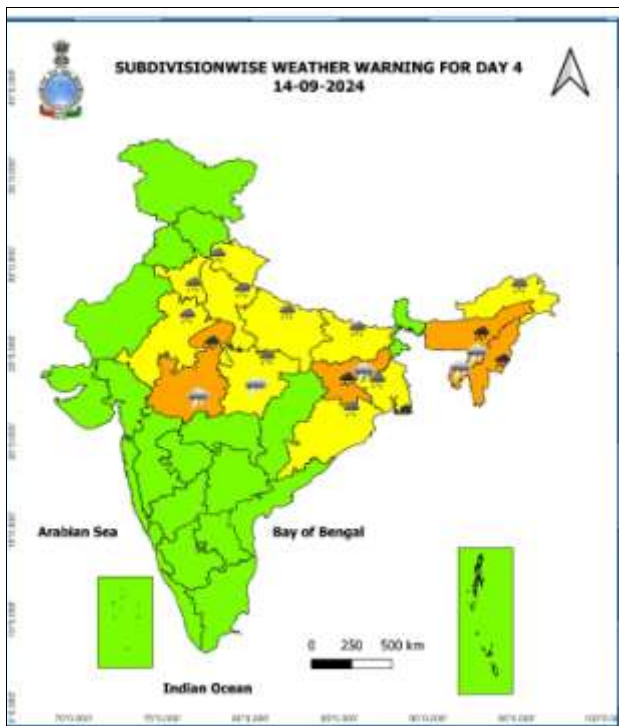
- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

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Warning Graphics



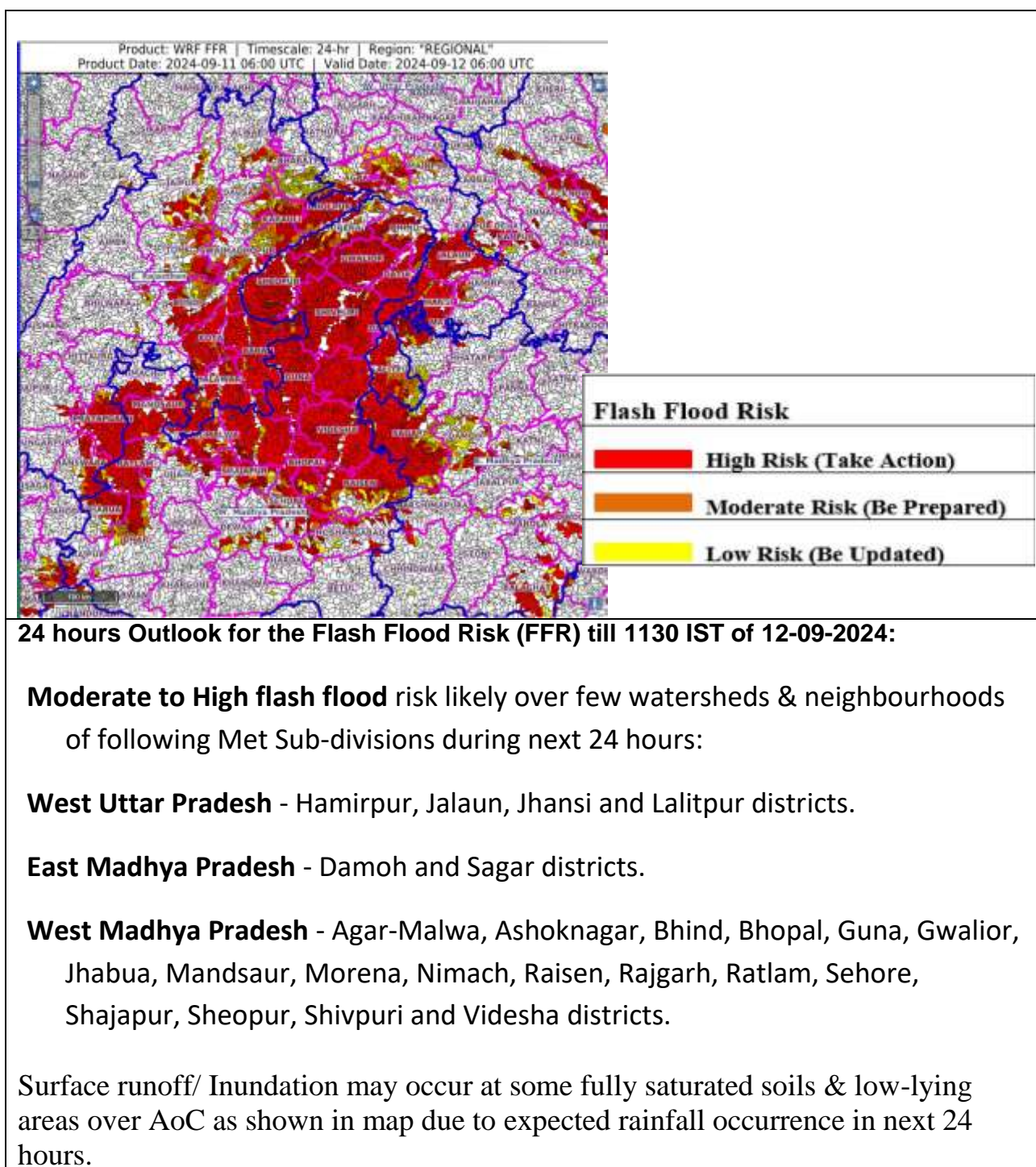
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- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

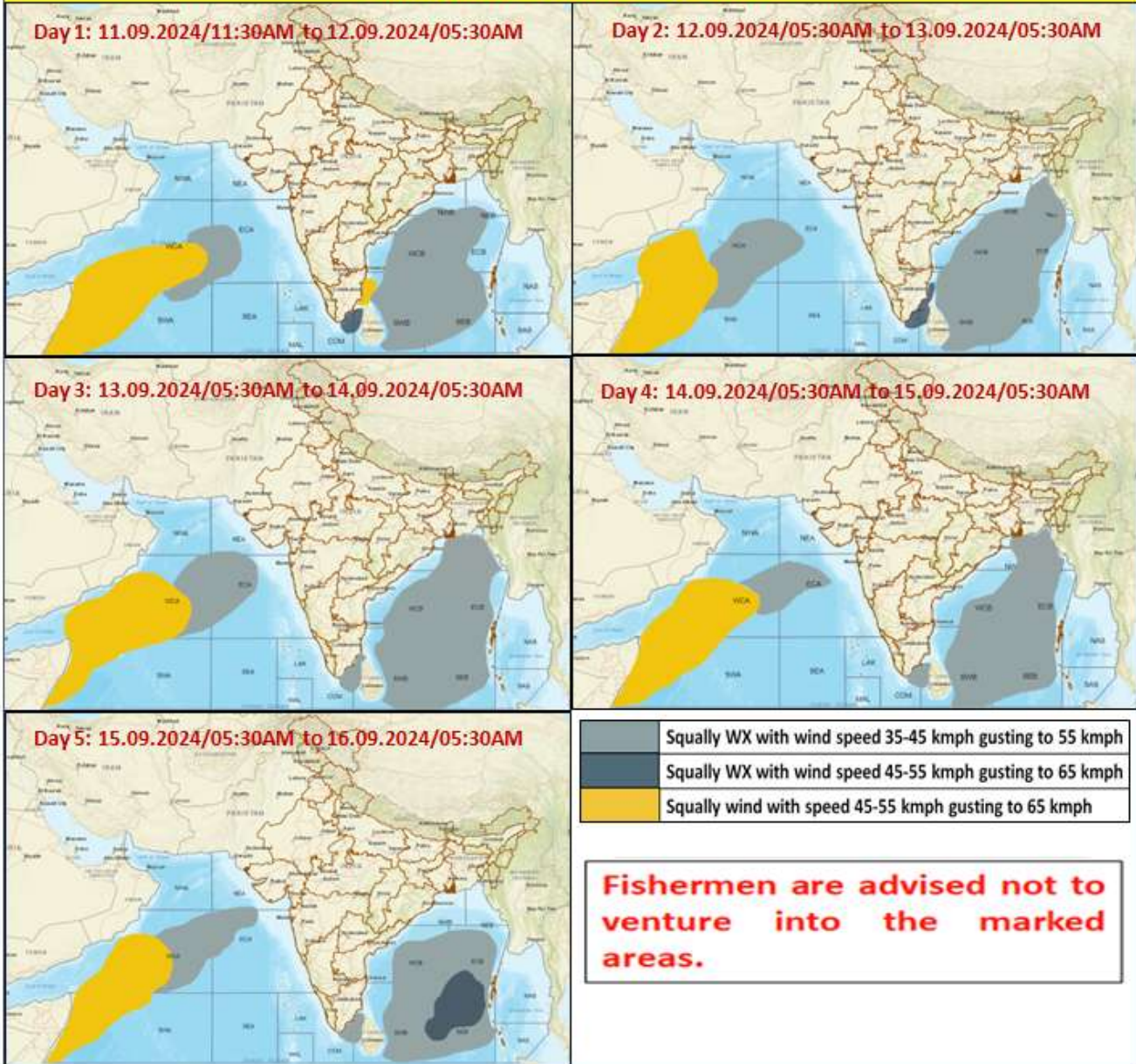
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Flash Flood Guidance



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Fishermen Warning Graphics



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Significant rainfall recorded from 0830 hrs IST of yesterday, the 10th September to 0830 hrs IST of today, the 11th September, 2024 (cm):

East Madhya Pradesh: Shahgarh (Sagar) 30, Patharia (Damoh) 28, Buxwaha (Chhatarpur) 24, Damoh-aws (Damoh) 21, Hatta (Damoh) 21, Banda (Sagar) 21, Baihar (Balaghat, 19, Jabalpur-aws (Jabalpur) 19, Jaberha (Damoh) 19, Rehli (Sagar) 19, Seoni (distSeoni) 19, Tendukheda (Damoh) 18, Panagar (Jabalpur) 18, Narsinghpur-aws (distNarsinghpur) 18, Garhakota (Sagar) 17, Tendukheda (Narsinghpur) 17, Kareli (distNarsinghpur) 17, Matiyari (Mandla) 17, Deori (Sagar) 16, Bichhia (Mandla) 16, Badamalhera (Chhatarpur) 15, Mohgaon (Mandla) 15, Patera (Damoh) 14, Sagar-aws(Sagar) 14, Kesli (Sagar) 13, Niwas (Mandla) 13, Kumdam (Jabalpur) 12, Batiyagarh (Damoh) 12, Patan (Jabalpur) 12, Barghat (Seoni) 12,

West Madhya Pradesh: Udaipura (Raisen) 25, Bareli (Raisen) 16, Pipariya (Narmadapuram) 16, Narwar (Shivpuri) 15, Bhandar (Datia) 12, Seoni Malwa (Narmadapuram) 11, Sultanpur (Raisen) 11, Pachmarhi (Narmadapuram) 11, Navibagh Aet (Bhopal) 11, Karera (distShivpuri) 10, Deori (Raisen) 10, Bankhedi (Narmadapuram) 10, Gairatgang (Raisen) 9, Raghogarh (Guna) 9, Bhitwar (Gwalior) 9, Thandla (Jhabua) 9, Sohagpur (distNarmadapuram) 9, Begumganj (Raisen) 9, Narsingarh (Rajgarh) 9, Bhopal Arera Hills (distBhopal) 8, Badi (Raisen) 8, Ganjbasoda (Vidisha) 8, Babai (makhan Nagar) (distNarmadapuram) 8, Kolaras (Shivpuri) 8, Chinor (Gwalior) 8, Alot (Ratlam) 8,

Chhattisgarh: Gandai (Khairagarh Chh Gandai) 11, Rengakhar Kala (Kabirdham) 9, Tilda (Raipur) 8, Sahaspurlohara (Kabirdham) 7;

East Rajasthan: Khushalgarh (Banswara) 11, Banera (Bhilwara) 9, Ganeshpur (Dungarpur) 8, Shahpura (Jaipur) 7, Mounntabu Tehsil (Sirohi) 7, Chaksu (Jaipur) 7, Baseri (Dholpur) 7, Phagi (Jaipur) 7, Bansur (distAlwar) 7, Jaipur Aero (Jaipur) 7,

West Uttar Pradesh: Mahroni (Lalitpur) 9, Muzaffarnagar (Muzaffarnagar) 9, Jhansi (Jhansi) 9, Mauranipur (Jhansi) 9; Madawara (Lalitpur) 9, Pali (Lalitpur) 7,

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