



India Meteorological Department

(Ministry of Earth Sciences)

NATIONAL BULLETIN NO.: 18 (BOB/04/2024)

TIME OF ISSUE: 0245 HOURS IST

DATED: 12.09.2024

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

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**D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436
3260)**

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, HARYANA (FAX NO. 0172-2740317)

CHIEF SECRETARY, UTTARAKHAND (FAX NO. 0135-2712500)

CHIEF SECRETARY, DELHI (FAX NO. 011-23392102)

CHIEF SECRETARY, JHARKHAND (FAX NO. 0651-2400255)

CHIEF SECRETARY, MADHYA PRADESH (FAX NO. 0755-2441076)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022-22028594)

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Sub: Depression over Northwest Madhya Pradesh and adjoining southwest Uttar Pradesh

The depression over northeast Madhya Pradesh and adjoining south Uttar Pradesh moved nearly northwestwards with a speed of 33 kmph during past 6 hours and lay centred at 2330 hours IST of yesterday, the 11th September over Northwest Madhya Pradesh and adjoining southwest Uttar Pradesh near latitude 26.3°N and longitude 78.2°E, close to Gwalior (Madhya Pradesh), about 100 km south of Agra (Uttar Pradesh), 100 km north-northwest of Jhansi (Uttar Pradesh) and 180 km south of Aligarh (Uttar Pradesh).

It is likely to move slowly north-northwestwards during next 24 hrs. The system is under continuous surveillance of Doppler Weather Radars at Delhi and Lucknow.

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.

Warnings:

(i) Rainfall warning

Uttarakhand: 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 12th-14th September.

Haryana: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at a few places on 12th & 13th and **heavy rainfall** at isolated places on 14th & 15th September.

Delhi: Light to moderate rainfall at most places is very likely with **heavy rainfall** at a few places on 12th and **moderate rainfall** at a few places on 13th September.

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

(ii) Flash Flood Guidance: (Graphics Attached)

24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 12-09-2024:

Moderate to High flash flood risk likely over few watersheds & neighbourhoods of **West Uttar Pradesh** - Auraiya, Etah, Hamirpur, Jalaun, Jhansi, Lalitpur and Mahoba districts.

East Madhya Pradesh - Chhatarpur, Damoh and Sagar districts.

West Madhya Pradesh - Ashoknagar, Bhind, Bhopal, Datia, Guna, Morena, Rajgarh, Sheopur, Shivpur 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 35-45 kmph gusting to 55 kmph is likely to prevail over North Madhya Pradesh adjoining areas of west Uttar Pradesh, Haryana & Delhi during next 24 hours.

(iv) Impact Expected (Haryana, Delhi, Uttarakhand, Madhya Pradesh, Uttar Pradesh and 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.

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- ✓ Minor damage to kutcha 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 (Haryana, Delhi, Uttarakhand, Madhya Pradesh, Uttar Pradesh and 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.

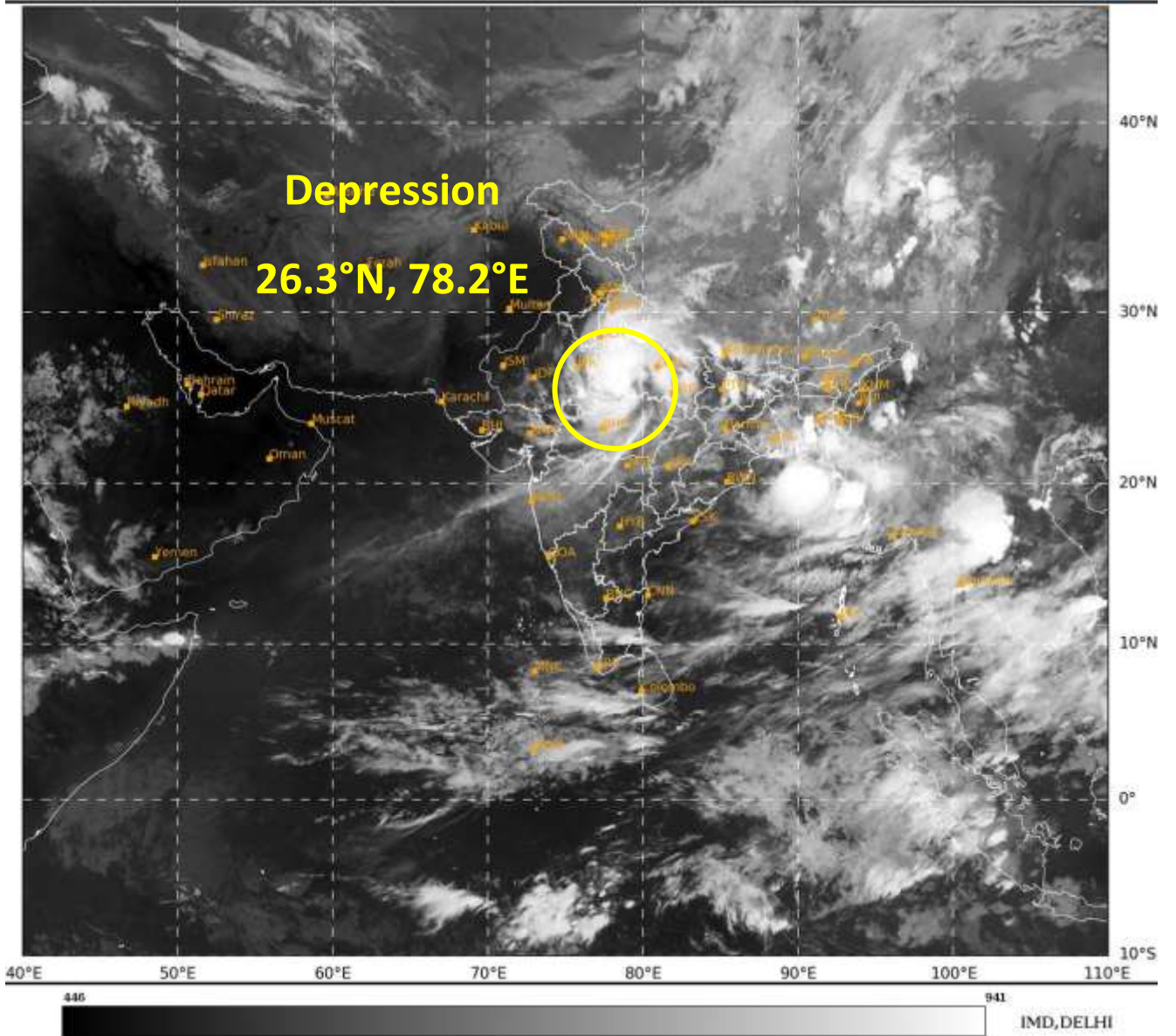
(vi) Agromet advisories for Heavy Rainfall likely over various parts of the country

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

The next bulletin will be issued at 0830 hrs IST of today, the 12th September, 2024.

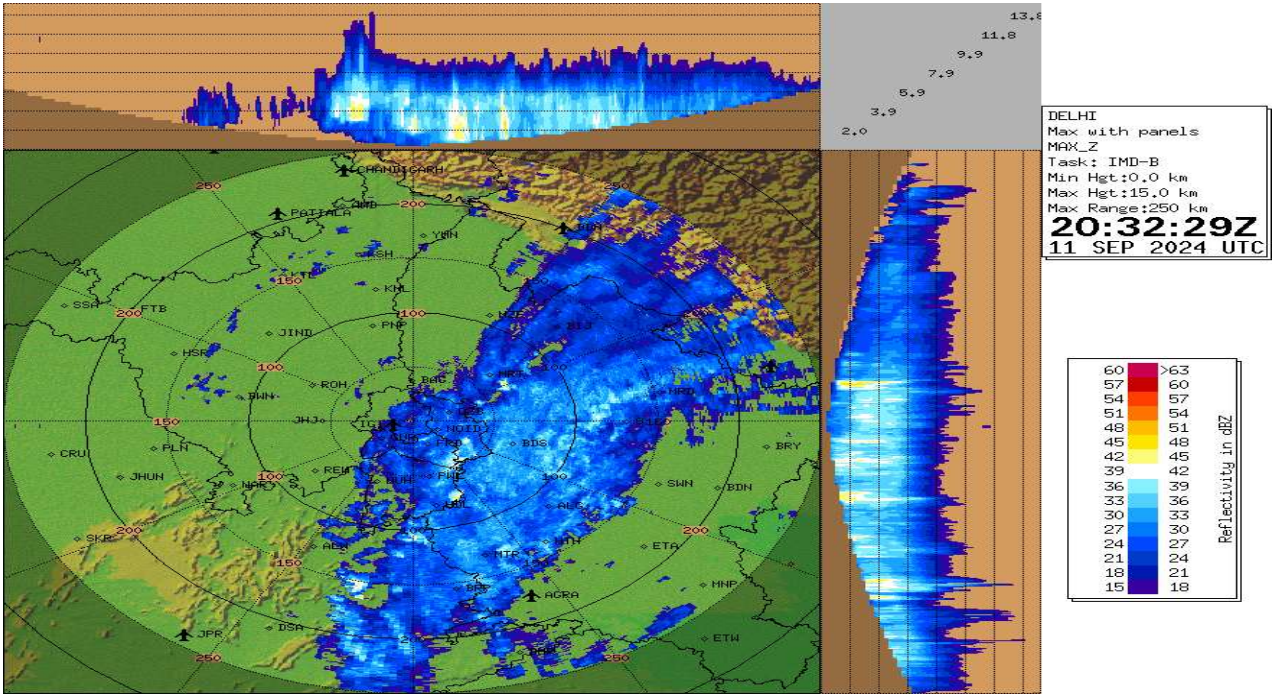
**(Dr Shashi Kant)
Scientist- D, RSMC, New Delhi**

Copy to: CRS, Pune/RMC Delhi /RMC Nagpur/MC Lucknow/MC Bhopal/MC Chandigarh/MC Dehradun/ MC Jaipur/MC Shimla

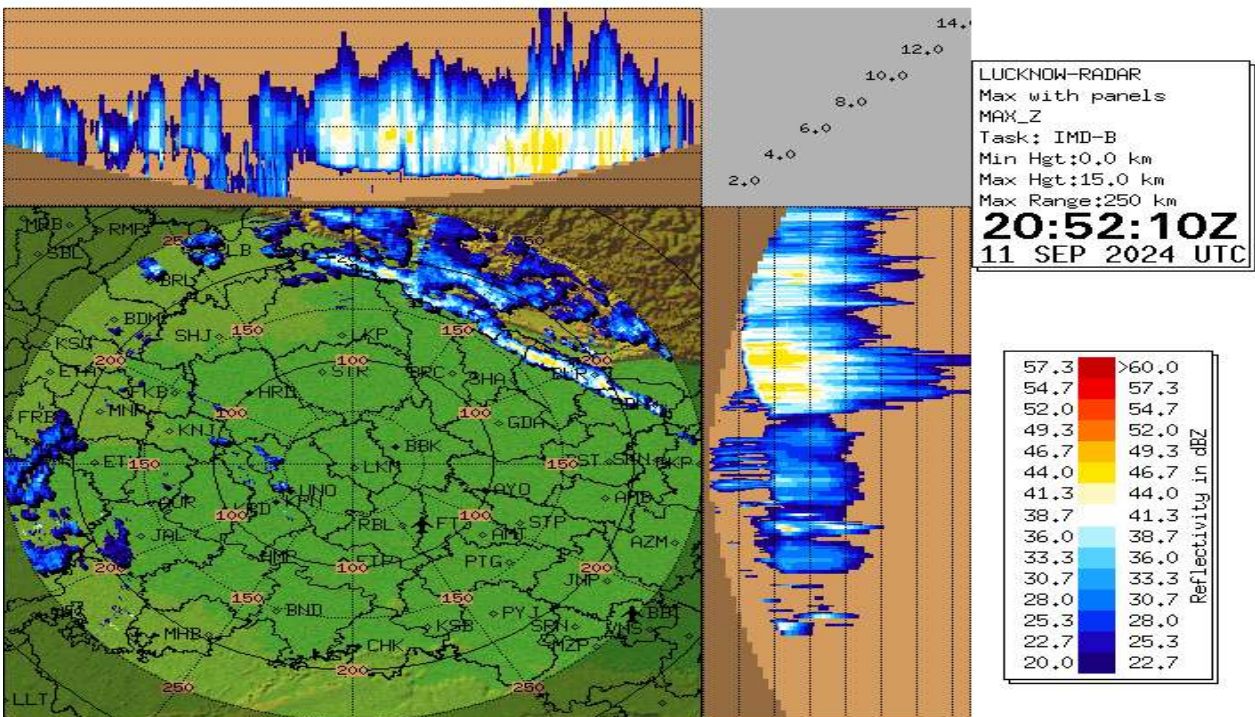


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Doppler Weather Radar at Delhi (Max_Z)



Doppler Weather Radar at Lucknow (Max_Z)

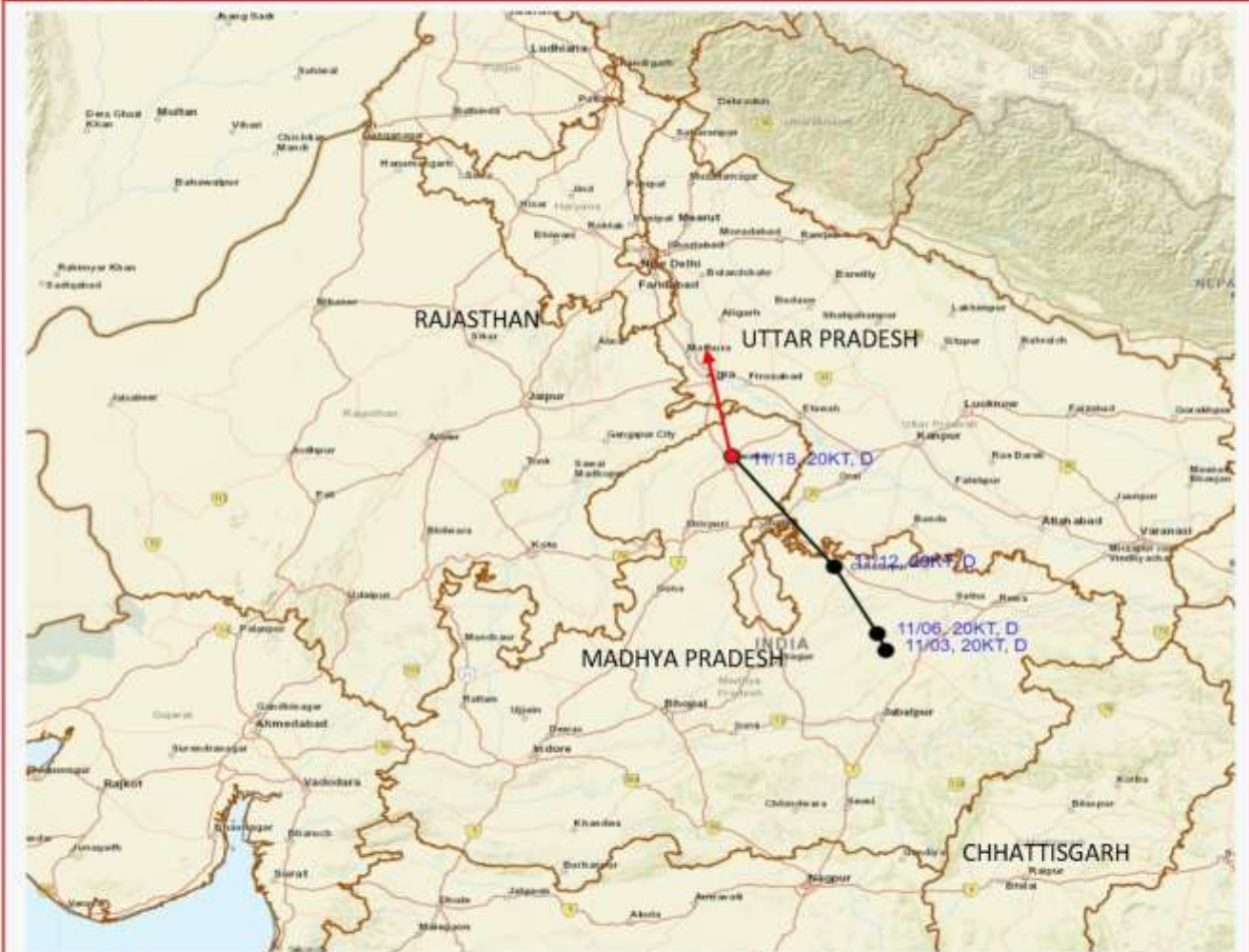


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OBSERVED AND FORECAST TRACK OF DEPRESSION OVER NORTHWEST MADHYA PRADESH AND ADJOINING SOUTHWEST UTTAR PRADESH BASED ON 1800 UTC (2330 IST) OF 11TH SEPTEMBER, 2024.

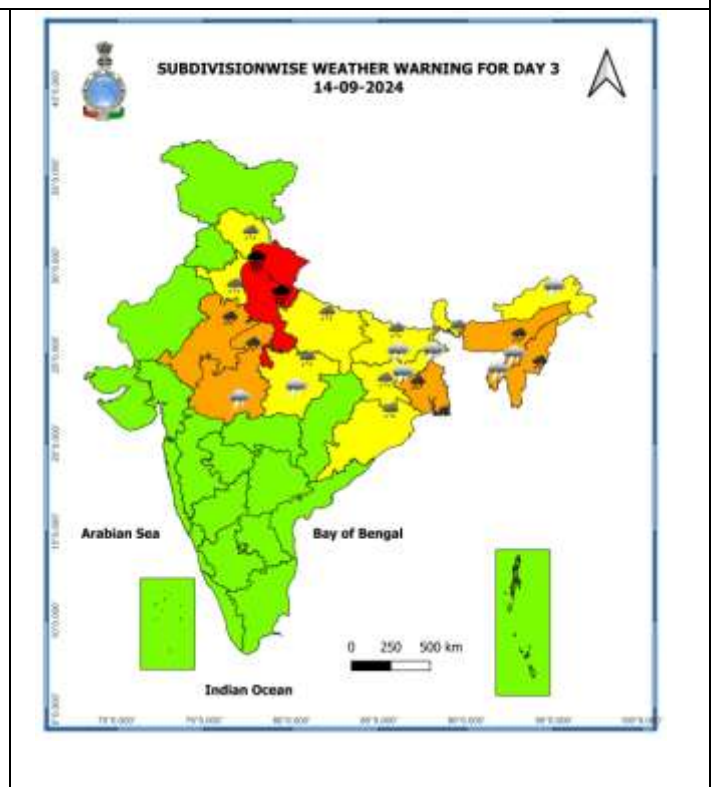
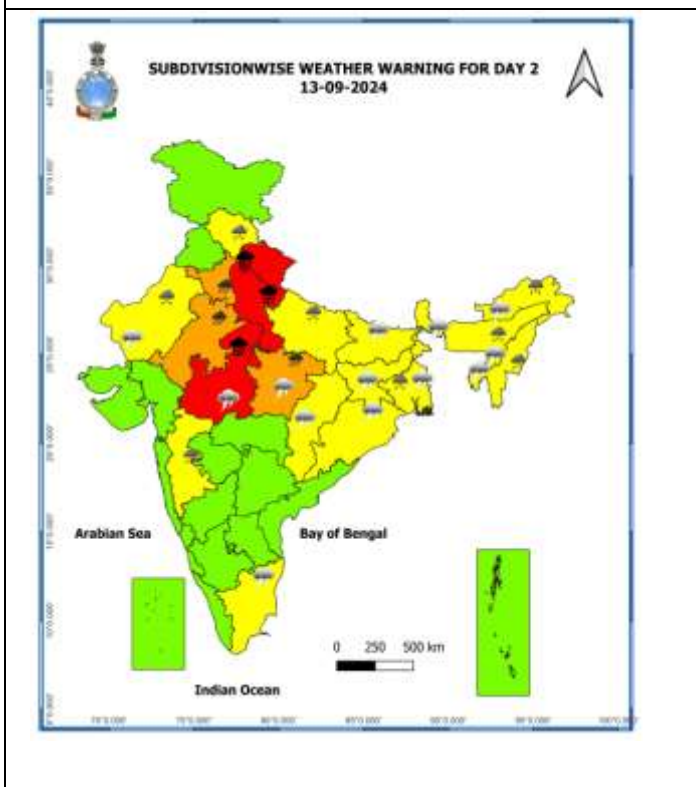
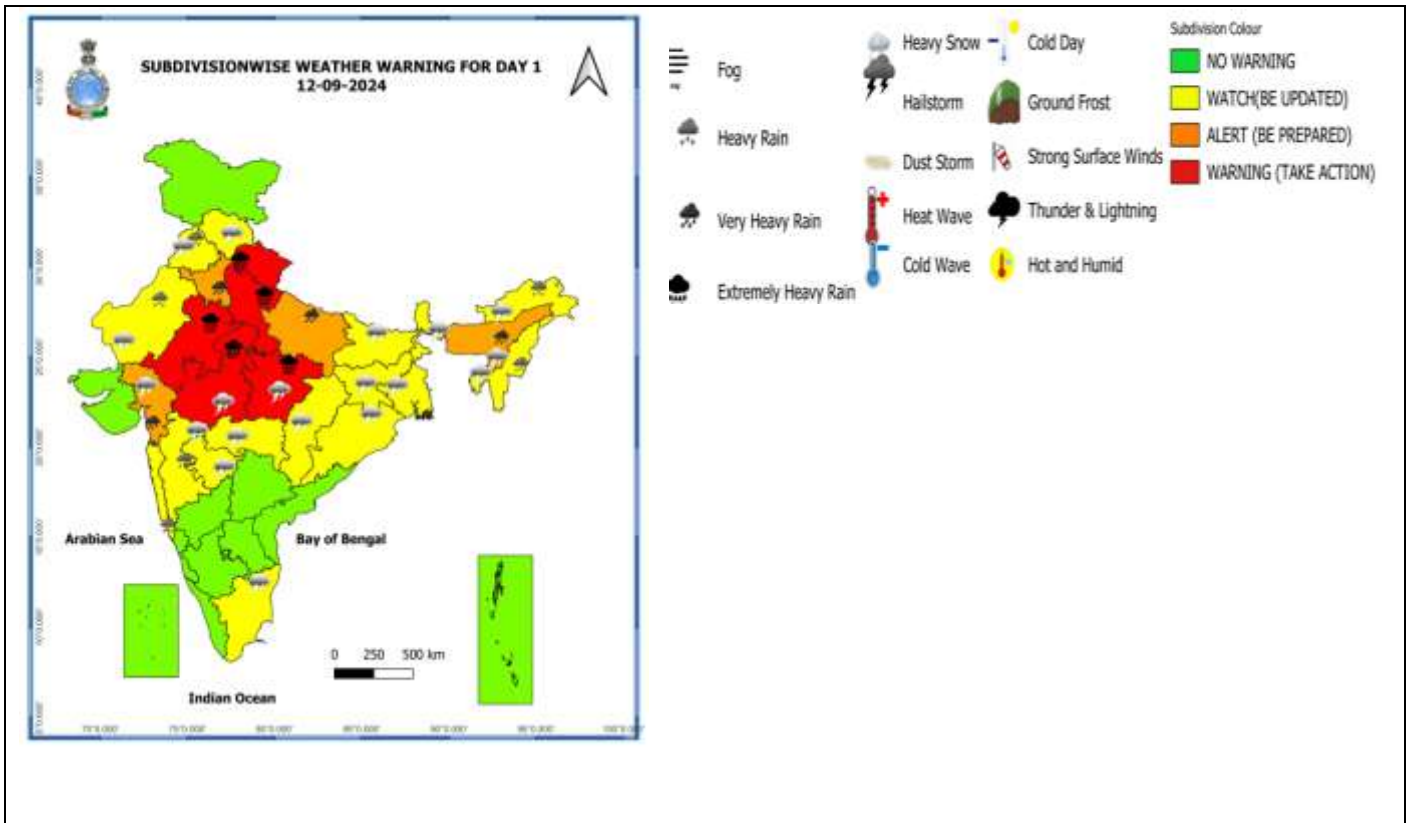


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM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

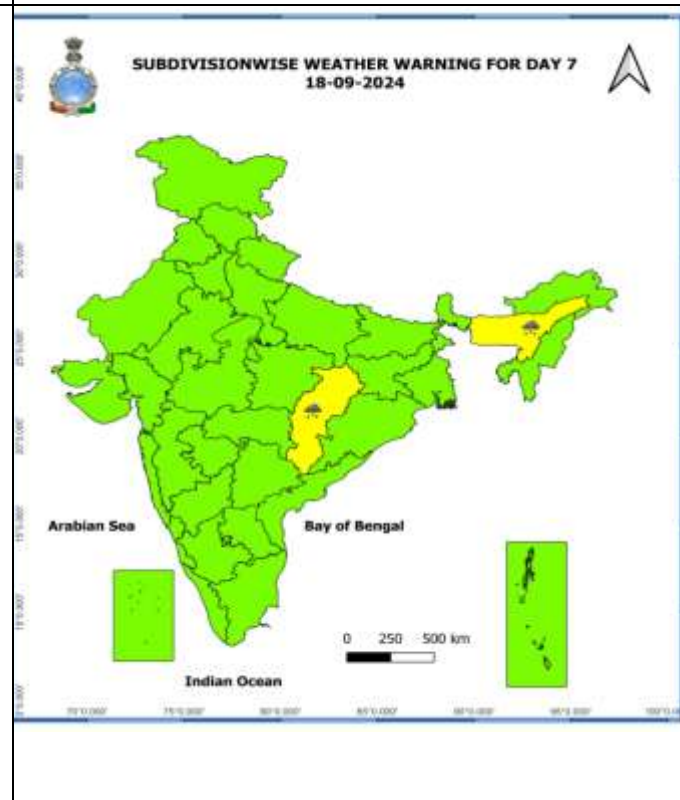
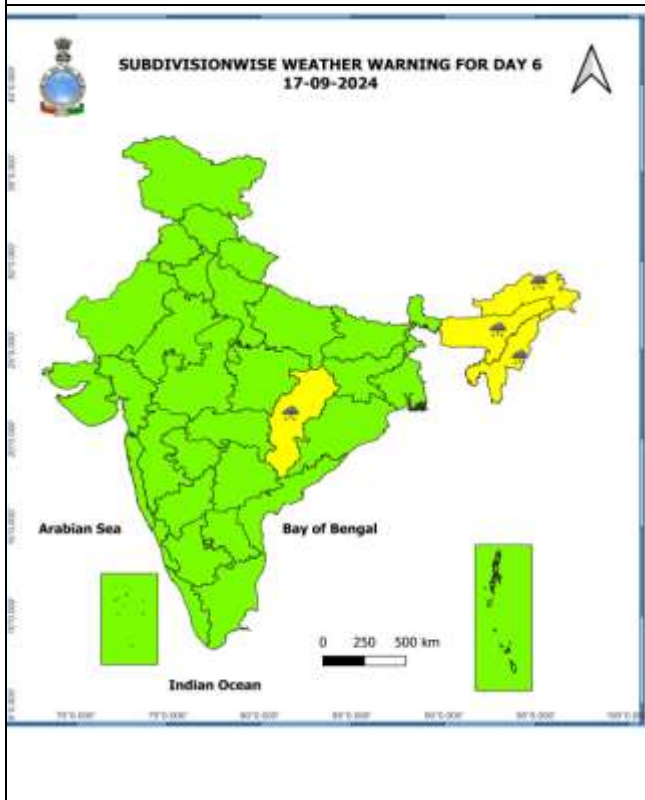
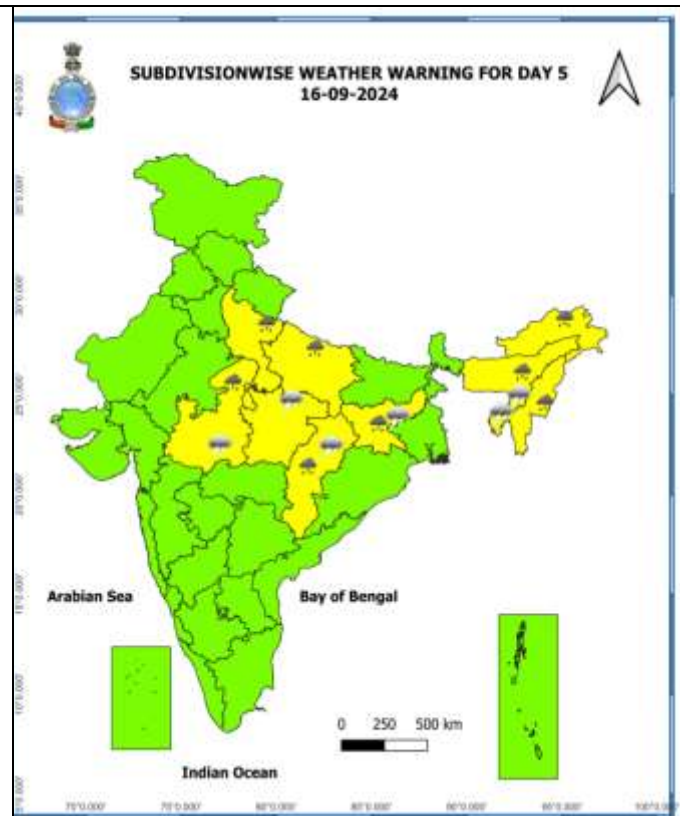
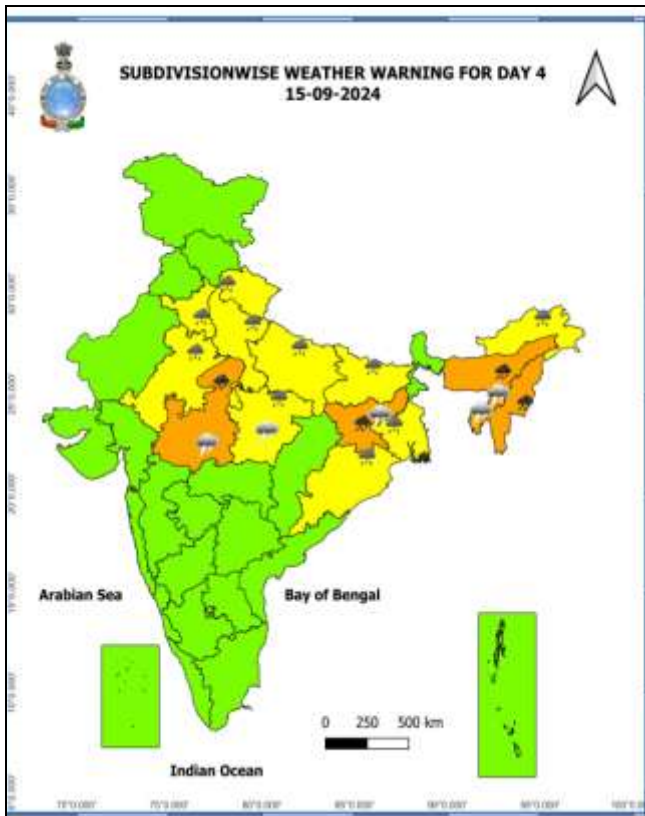
● LESS THAN 34 KT
 ◐ 34-47 KT
 ◑ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ◐ CONE OF UNCERTAINTY

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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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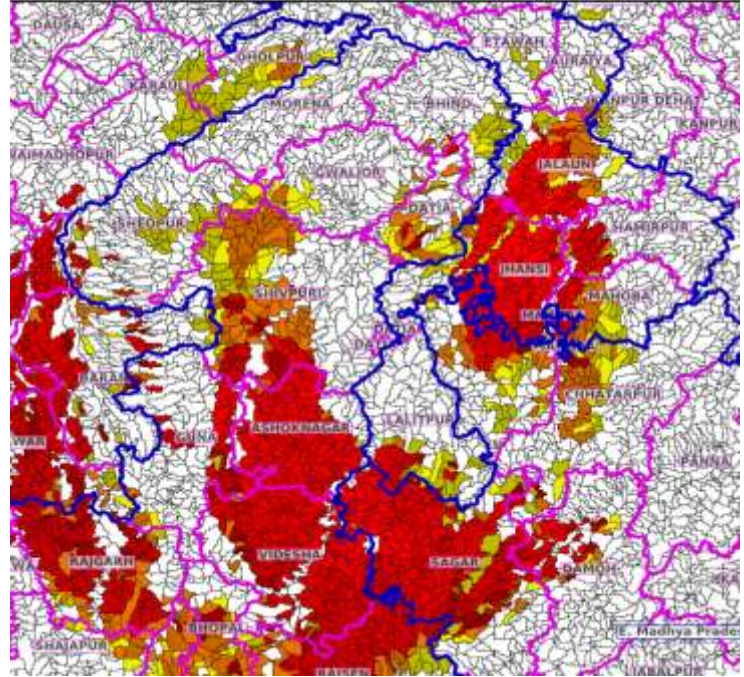
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Product: GFS FFR | Timescale: 24-hr | Region: "REGIONAL"
Product Date: 2024-09-11 12:00 UTC | Valid Date: 2024-09-12 12:00 UTC



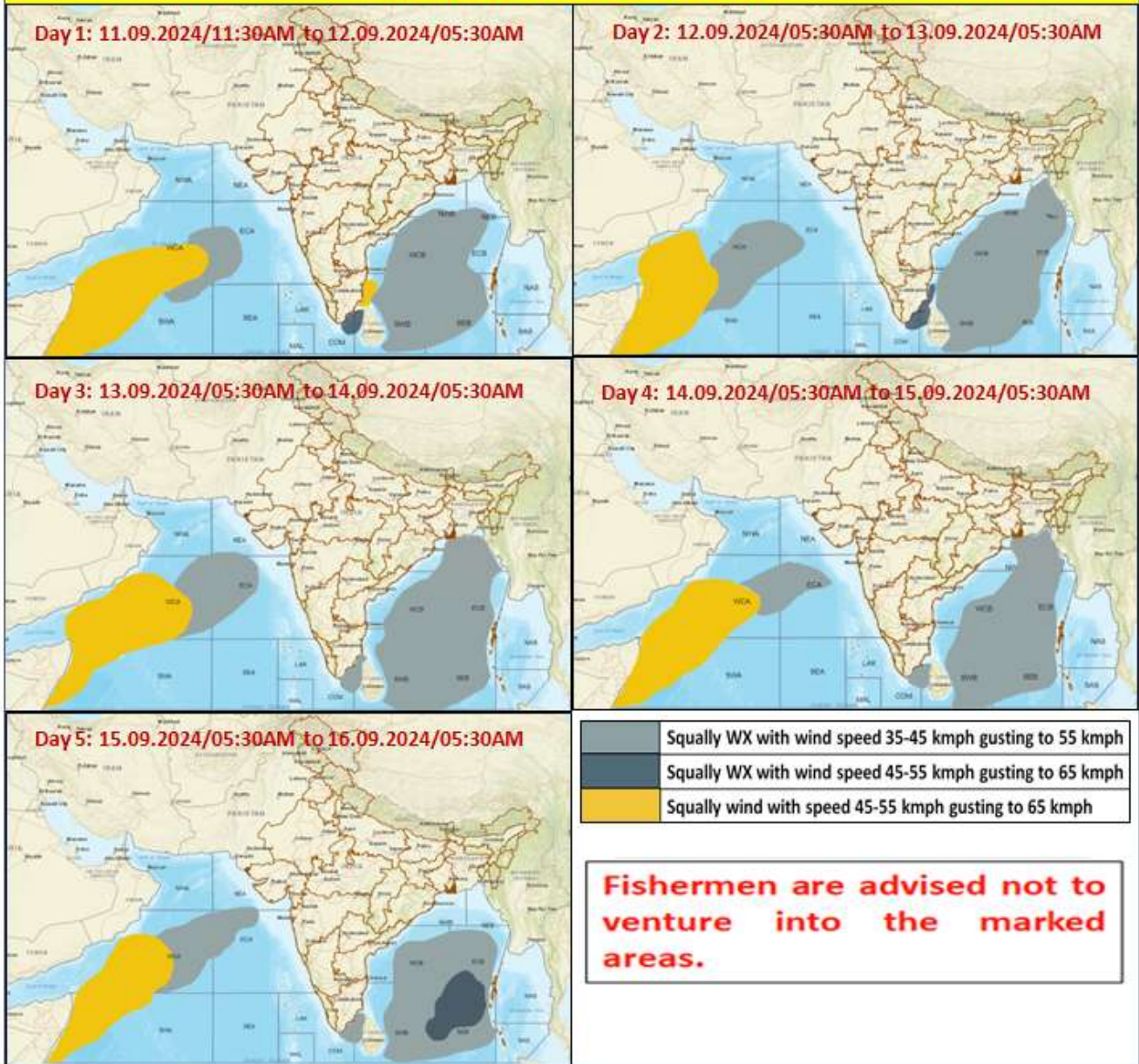
Flash Flood Risk

High Risk (Take Action)

Moderate Risk (Be Prepared)

Low Risk (Be Updated)

Fishermen Warning Graphics



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