



**India Meteorological Department
(Ministry of Earth Sciences)**

NATIONALBULLETIN NO.: 08 (BOB/05/2024)

TIME OF ISSUE: 0915 HOURS IST

DATED: 15.09.2024

**FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)
TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)
CONTROL ROOM NDMA (FAX.NO. 26701729)
CABINET SECRETARIAT (FAX.NO.23012284, 23018638)
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)
SECRETARY, MOES (FAX NO. 24629777)
H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)
DIRECTOR GENERAL, DOORDARSHAN (23385843)
DIRECTOR GENERAL, AIR (23421105, 23421219)
PIB MOES (FAX NO. 23389042)
UNI (FAX NO. 23355841)
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)
CHIEF SECRETARY, JHARKHAND (FAX NO. 0651-2400255)
CHIEF SECRETARY, BIHAR (FAX NO. 0612-2217085)
CHIEF SECRETARY, WEST BENGAL (FAX NO. 033-22144328)
CHIEF SECRETARY, ODISHA (FAX NO. 0674-2536660)
CHIEF SECRETARY, CHHATTISGARH (FAX NO. 0771-2221206)
CHIEF SECRETARY, TRIPURA (FAX NO. 0381-2414013, 2413200)
CHIEF SECRETARY, MIZORAM (FAX NO. 0389-2322745, 2320588)
CHIEF SECRETARY, ASSAM (FAX NO. 0361-2260900)
CHIEF SECRETARY, MEGHALAYA (FAX NO. 0364-2225978)**

Sub: Deep Depression over Gangetic West Bengal

The deep depression over Gangetic West Bengal moved slowly westward with a speed of 8 kmph during past 6 hours and lay centered at 0530 hours IST of today, the 15th September 2024, over the same region near latitude 22.6° N and longitude 88.0° E, about 40 km west-northwest of Kolkata (West Bengal), 130 km east-southeast of Bankura (West Bengal), 190 km east of Jamshedpur (Jharkhand) and 290 km east-southeast of Ranchi (Jharkhand).

It is likely to move slowly, nearly westwards across Gangetic West Bengal and maintain its intensity of deep depression till evening of today, the 15th September. Thereafter, it will continue to move nearly westwards across Jharkhand and North Chhattisgarh and weaken gradually into a depression during subsequent 24 hours.

The deep depression is under continuous surveillance by the Doppler Weather Radar at Kolkata.

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.

Forecast track and intensity are given in the following table:

Date/Time (IST)	Position (Lat. °N/ Long. °E)	Maximum Sustained Surface Wind Speed (Kmph)	Category Of Cyclonic Disturbance
15.09.24/0000	22.6/88.0	50-60 gusting to 70	Deep Depression
15.09.24/1730	22.6/87.4	50-60 gusting to 70	Deep Depression
16.09.24/0000	22.7/86.5	45-55 gusting to 65	Depression
16.09.24/1730	22.8/85.0	40-50 gusting to 60	Depression
17.09.24/0000	23.1/83.3	35-45 gusting to 55	Depression

Warnings:

(i) Rainfall warning

Gangetic West Bengal (including Kolkata): Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at few places over Gangetic West Bengal and **extremely heavy rainfall** at isolated places over south Gangetic West Bengal on 15th; **heavy rainfall** at isolated places on 16th September.

Sub-Himalayan West Bengal: Light to moderate rainfall at most places is very likely with **heavy rainfall** at isolated places on 15th September.

Odisha: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at a few places over Odisha and **extremely heavy rainfall** at isolated places over north Odisha on 15th and **heavy to very heavy rainfall** at isolated places on 16th and **heavy rainfall** at isolated places over Odisha 17th September.

Jharkhand: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places and **extremely heavy rainfall** over south Jharkhand on 15th and **heavy rainfall** at isolated places over Jharkhand 16th & 17th September.

Bihar: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places very likely on 15th and **heavy rainfall** at isolated places over Bihar 16th & 17th September.

Chhattisgarh: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places on 15th-17th September.

East Madhya Pradesh: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places on 15th, 16th and 17th September.

East Uttar Pradesh: Light to moderate rainfall at most places with **heavy rainfall** at isolated places on 16th & 17th September.

West Madhya Pradesh: Light to moderate rainfall at most places with **heavy rainfall** at isolated places on 17th & 18th September.

Mizoram & Tripura: Light to moderate rainfall at most places is very likely with isolated **heavy rainfall** during 15th -16th September.

Assam & Meghalaya: Light to moderate rainfall at many places is very likely with isolated **heavy rainfall** on 15th September.

(ii) Flash Flood Guidance: (Graphics Attached)

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 16-09-2024:

Low flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-division during next 24 hours.

Odisha - Baleswar, Deogarh, Kendujhar, Mayurbhanj and Sundargarh districts.

Gangetic West Bengal - Bankura, Bardhaman, Birbhum, East & West Mednipur, Hoogly, Murshidabad, Nadia, North & South 24 Praganas and Puruliya districts.

Jharkhand - Chatra, East Singhbhum, Gumla, Hazaribagh, Khunti, Koderma, Latehar, Lohardaga, Ramgarh, Ranchi, Saraikela, Simdega and West Singhbhum 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:

Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to over north Bay of Bengal and along & off Bangladesh, West Bengal, and north Odisha coasts till night of 15th September. It is likely to become 40-50

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.

kmph gusting to 60 kmph till evening of 16th September and decrease thereafter.

Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over Gangetic West Bengal and adjoining Jharkhand & north Odisha till night of 15th September, decrease gradually becoming 45-55 kmph gusting to 65 kmph likely over Jharkhand and adjoining Gangetic West Bengal & north Odisha from morning of 16th September and decrease thereafter.

(iv) Sea Condition:

Rough to very rough sea condition is very likely to prevail over north Bay of Bengal and along & off West Bengal-Odisha coasts till night of 15th September.

Subsequently, Rough Sea condition is likely to prevail over north Bay of Bengal and along & off West Bengal-Odisha coasts from morning of 16th September and improve thereafter.

(iv) Fishermen Warning:

Fishermen are advised not to venture into north Bay of Bengal and along & off Bangladesh, West Bengal, and Odisha coasts till 16th September.

Impact Expected (West Bengal (including Kolkata), Odisha, Bihar, Jharkhand, Chhattisgarh, Bihar, and Chhattisgarh 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 and poor visibility due to heavy rain leading to increased travel time and incidents
- ✓ Likely disruption of marine and inland water transportation like small boats and trawlers.
- ✓ Minor damage to kutch 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)

Action Suggested (West Bengal (including Kolkata), Odisha, Bihar, Jharkhand, Chhattisgarh, Bihar, Chhattisgarh)

- ✓ Fishermen are advised not to venture into north Bay of Bengal till 16th September.
- ✓ Judicious regulation of surface transports including railways and roadways and onshore/offshore activities.
- ✓ 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.

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.

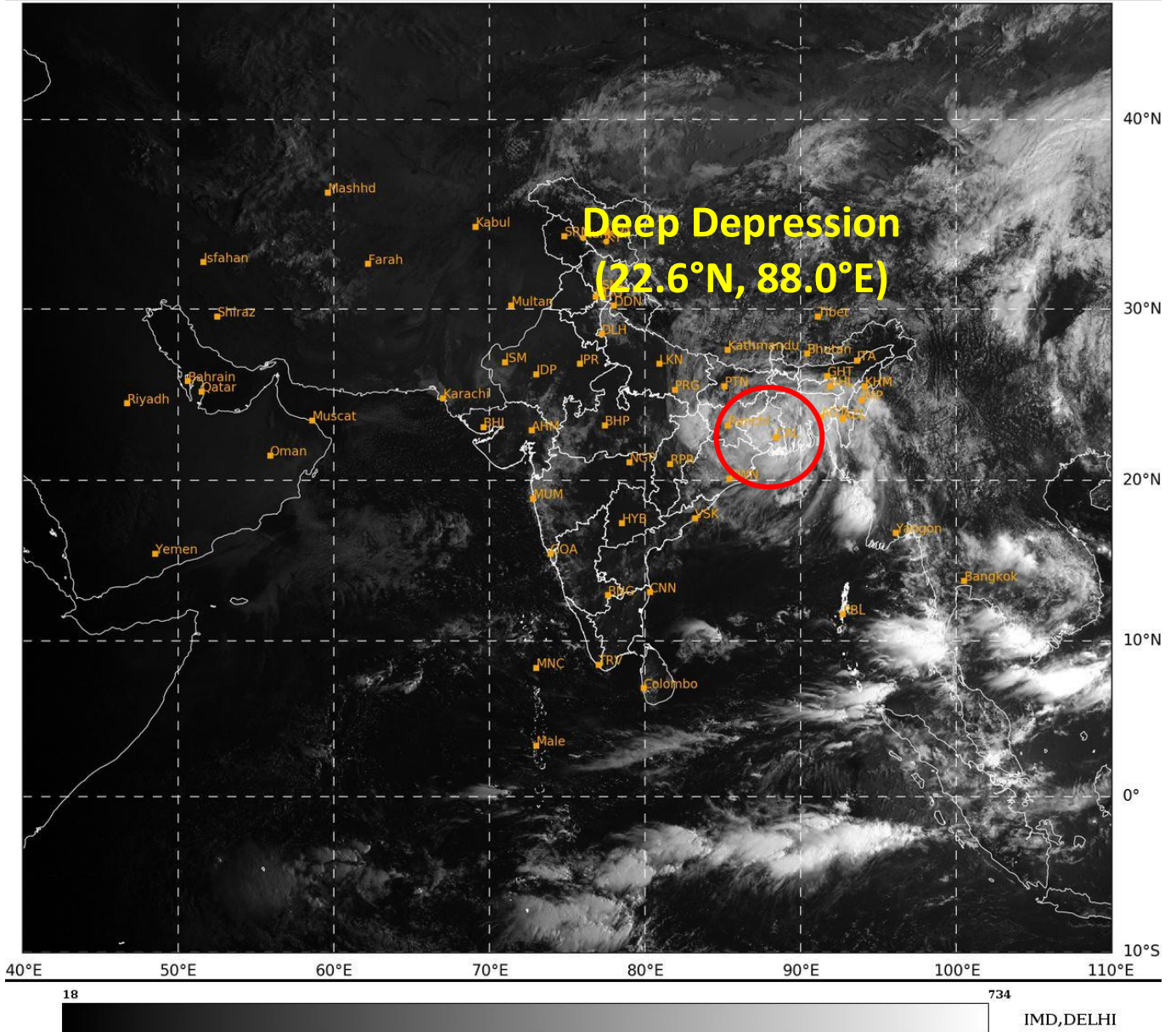
Significant amount of rainfall (in cm) recorded from 0830 hours IST of 14th September to 0530 hours IST of today, the 15th September is given in Annexure-I.

The next bulletin will be issued at 1230 hrs IST of today, the 15th September, 2024.

**(Dr Ananda Kumar Das)
Scientist-F, RSMC, New Delhi**

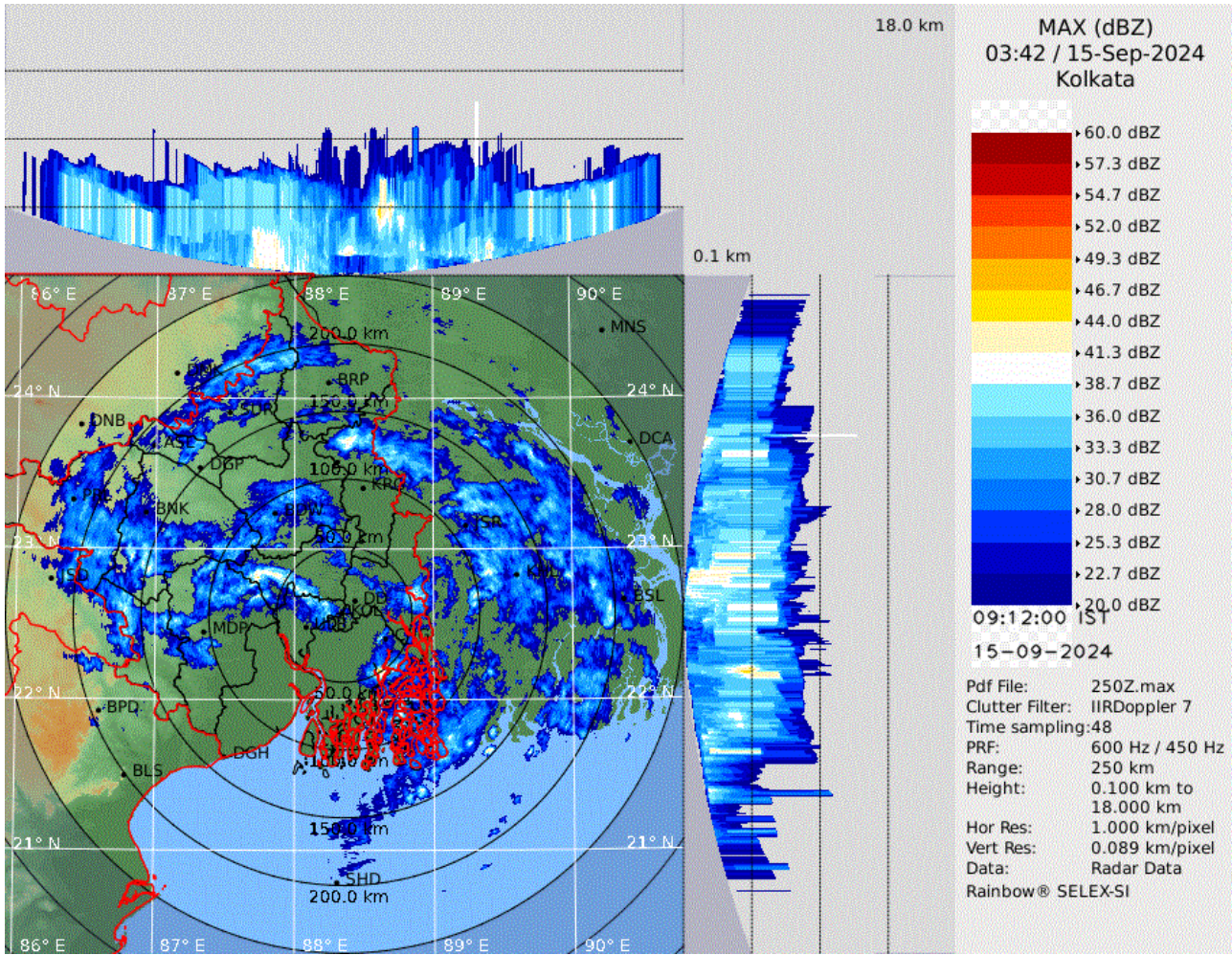
Copy to: CRS, Pune/RMC Chennai /RMC Kolkata/RMC Guwahati/MC Bhubaneswar/MC Ranchi/MC Patna/MC Raipur/ MC Agartala/ MC Shillong/MC Aizawl/Mc, Bhopal/MC Lucknow

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.



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.

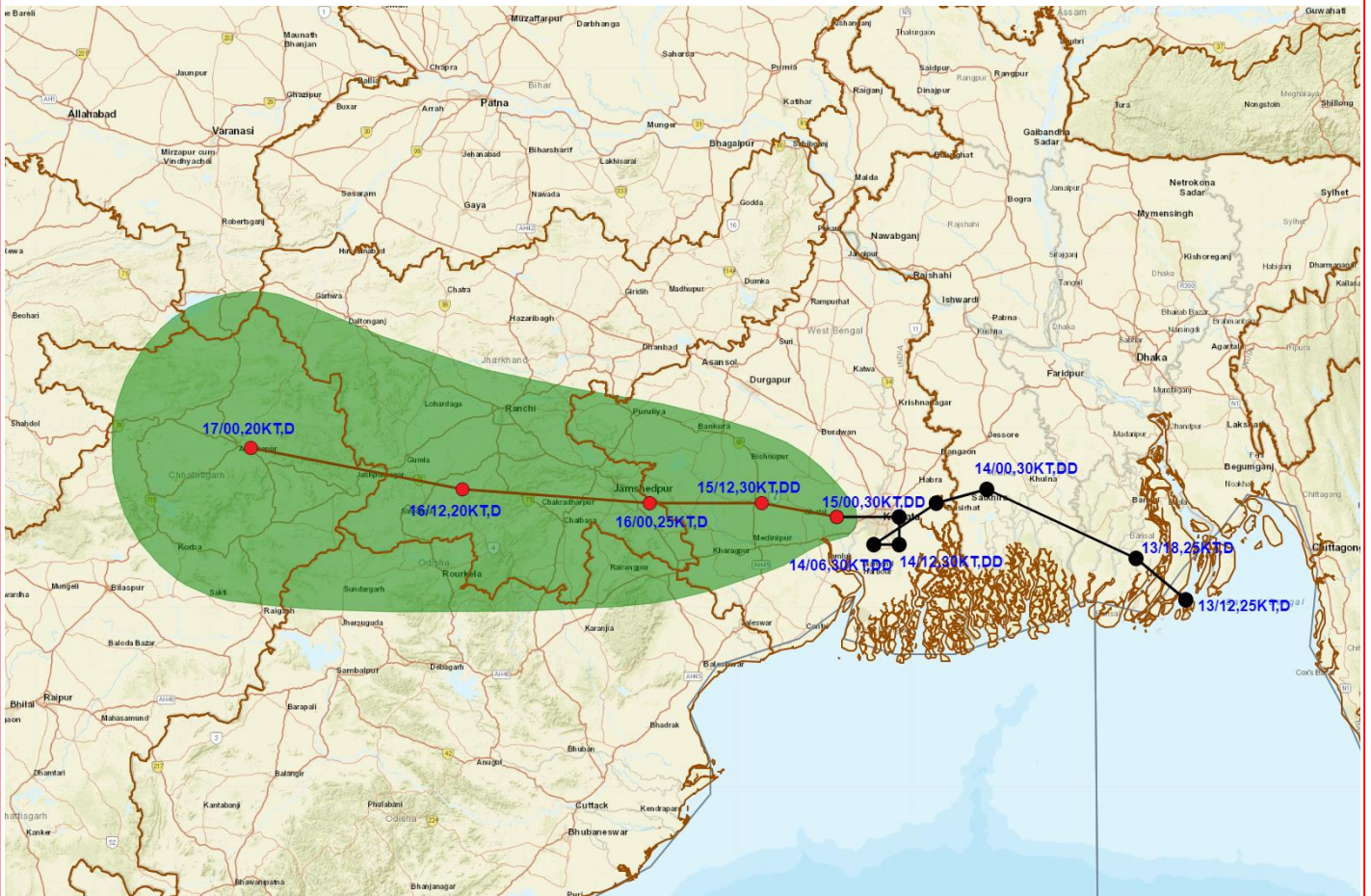
Kolkata Radar Image



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.



OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 0000 UTC (0530 IST) OF 15TH SEPTEMBER, 2024.



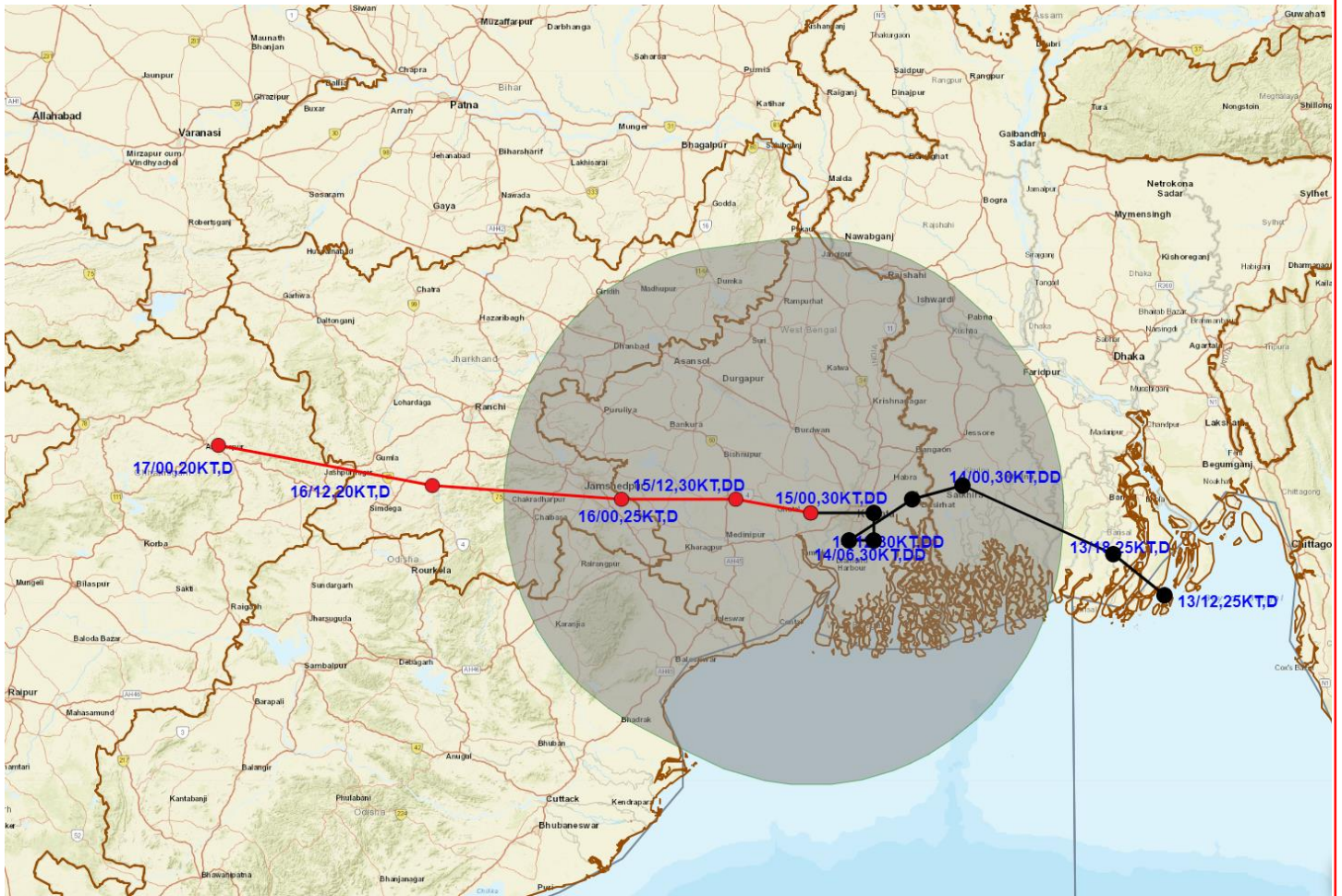
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119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

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

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.



OBSERVED AND FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION GANGETIC WEST BENGAL BASED ON 0000 UTC (0530 IST) OF 15TH 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
AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

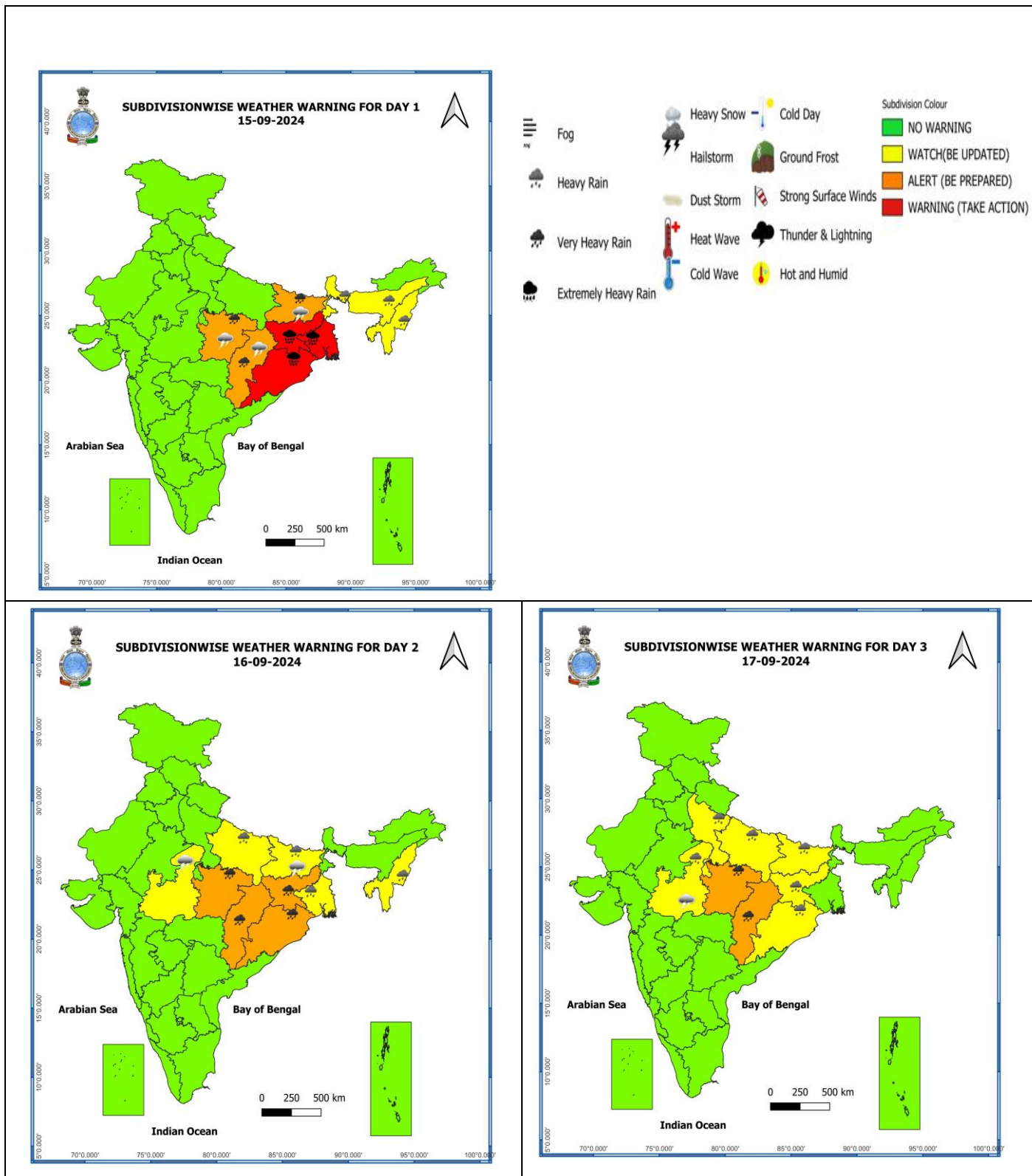
IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

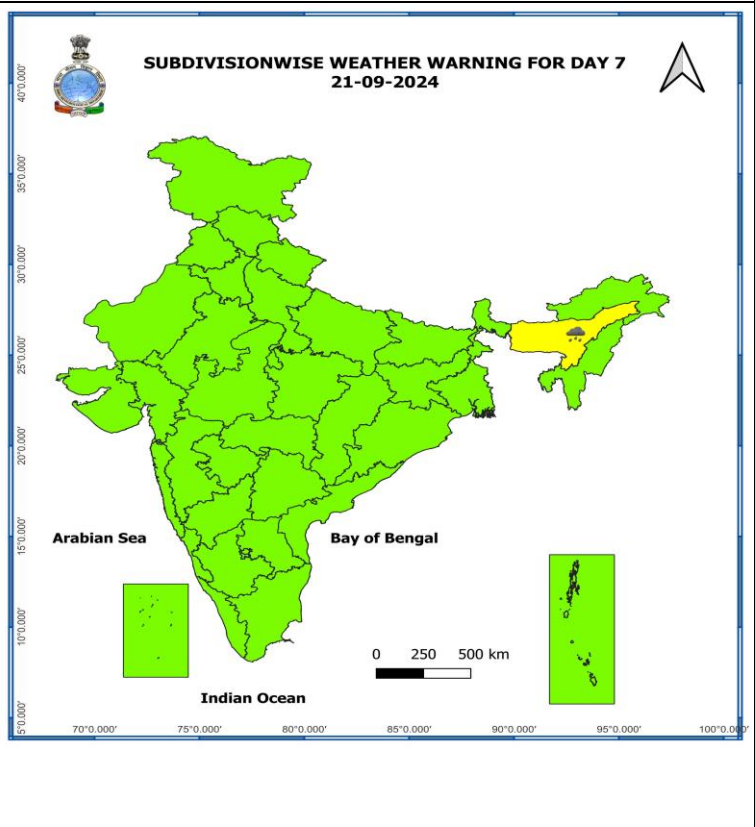
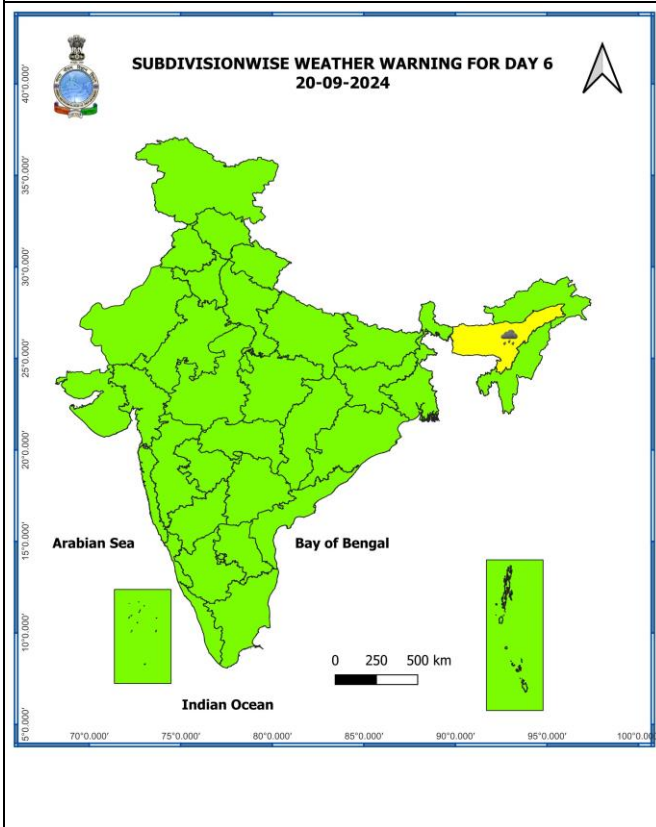
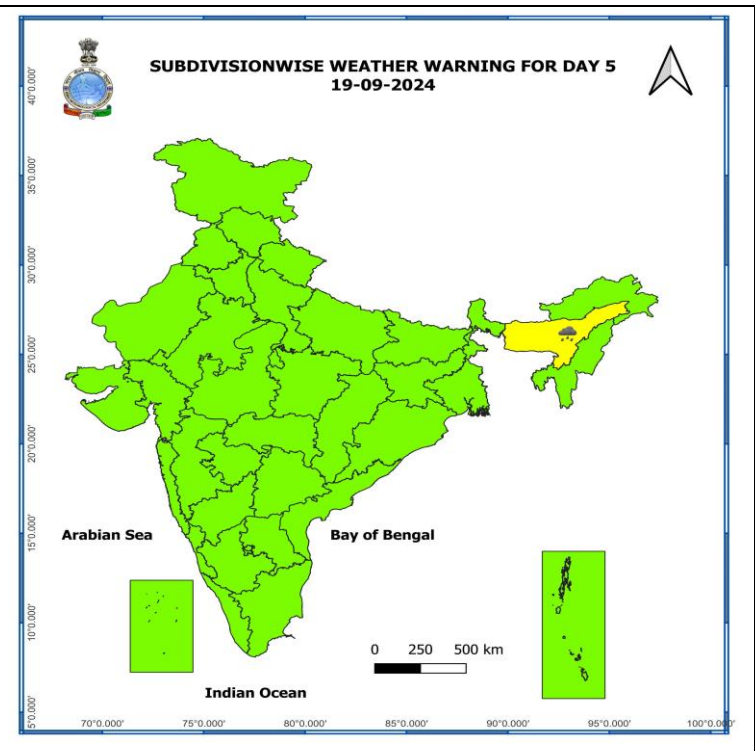
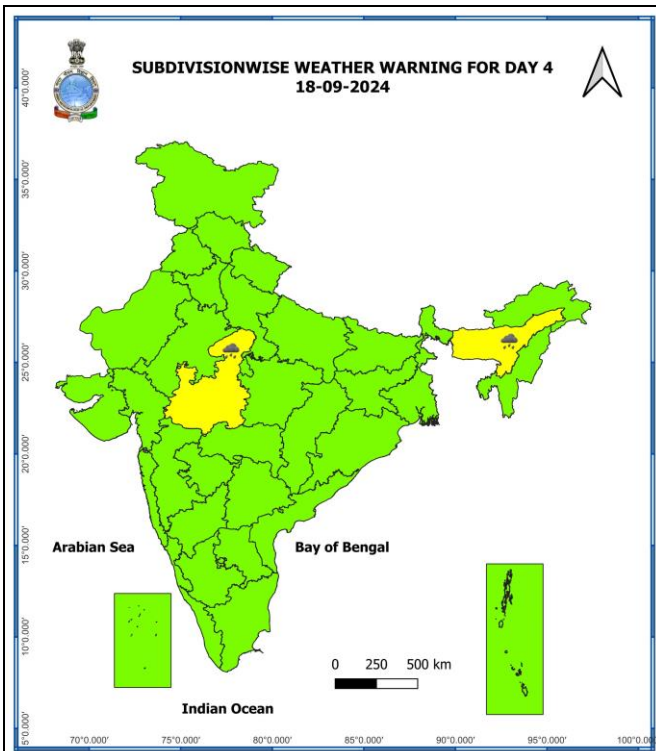
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

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

Warning Graphics



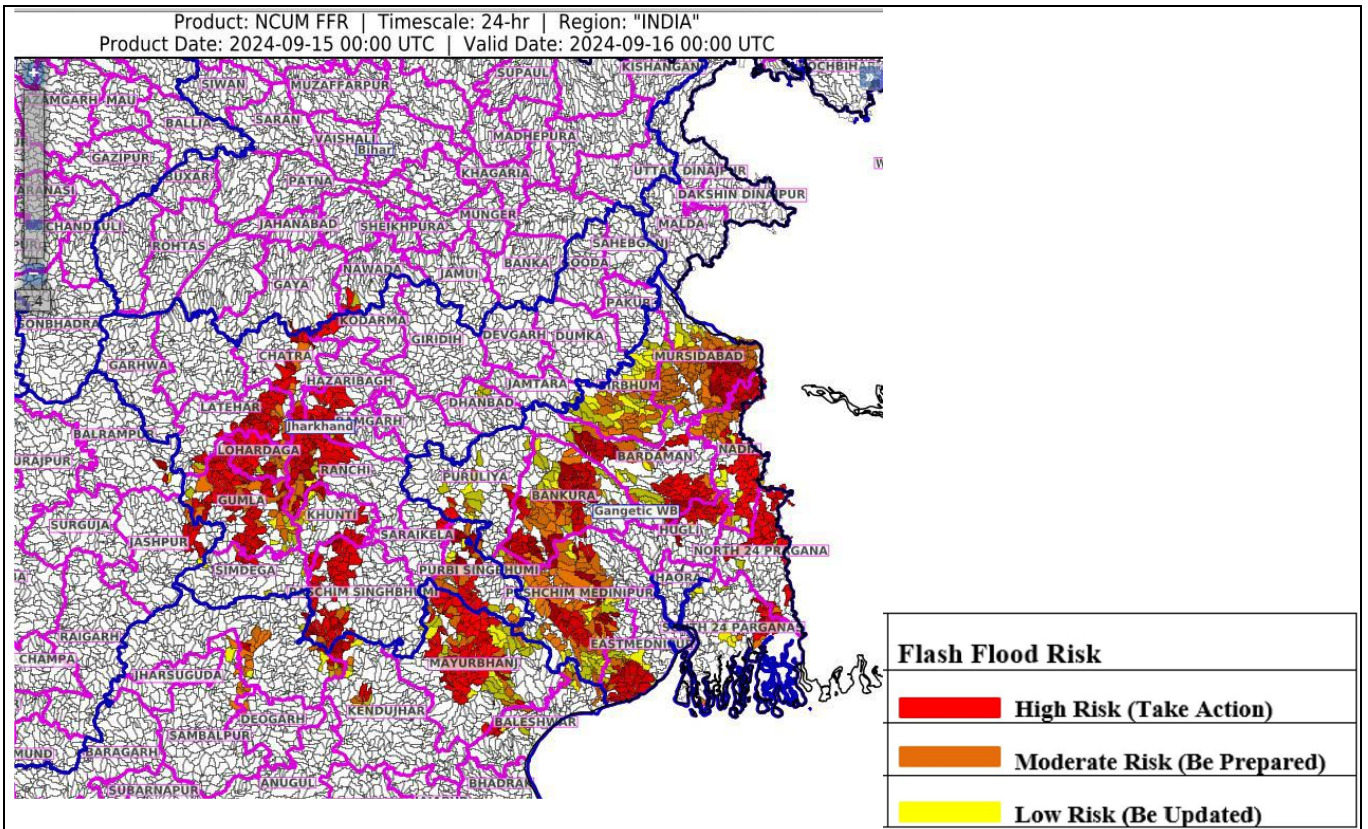
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



- 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

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.

Flash Flood Guidance



24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 16-09-2024:

Low flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-division during next 24 hours.

Odisha - Baleshwar, Deogarh, Kendujhar, Mayurbhanj and Sundargarh districts.

Gangetic West Bengal - Bankura, Bardhaman, Birbhum, East & West Mednipur, Hoogly, Murshidabad, Nadia, North & South 24 Praganas and Puruliya districts.

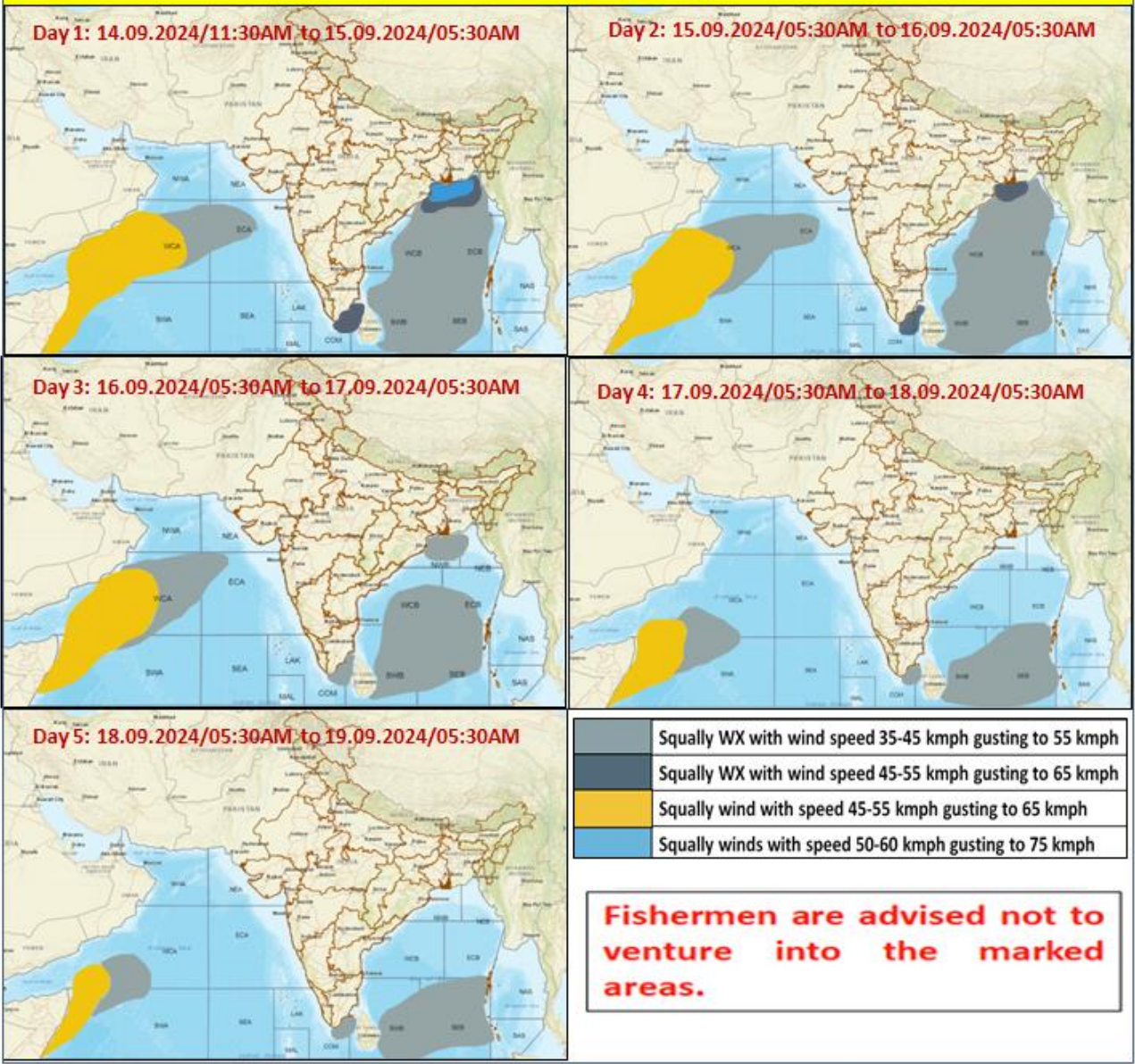
Jharkhand - Chatra, East Singhbhum, Gumla, Hazaribagh, Khunti, Koderma, Latehar, Lohardaga, Ramgarh, Ranchi, Saraikela, Simdega and West Singhbhum districts.

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.

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.

Fishermen Warning Graphics



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.

Annexure-I

Significant amount of rainfall (from 0830 hours IST of 14.09.2024 to 0530 hours IST of 15.09.2024) (in cm):

Gangetic West Bengal: Digha 12, Bankura 9, Haldia 8, Diamond Harbour 6, Kolkata Alipore 3;

Jharkhand: Daltonganj 8, Jamshedpur 3;

Odisha: Balasore 6, Paradip & Bhubaneswar 2 each;

Bihar: Bhagalpur 6;