



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

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Sub: Deep Depression over Gangetic West Bengal

The deep depression over Gangetic West Bengal moved west-northwestward with a speed of 5 Kmph during past 6 hours and lay centered at 1730 hours IST of today, the 15th September 2024, over the same region near latitude 22.8° N and longitude 87.2° E, about 120 km west-northwest of Kolkata (West Bengal), 70 km south of Bankura (West Bengal), 100 km east of Jamshedpur (Jharkhand) and 200 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 15th September. Thereafter, it is likely to weaken gradually into a depression and move nearly westwards across Jharkhand and North Chhattisgarh during subsequent 48 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
15.09.24/1730	22.8/87.2	50-60 gusting to 70	Deep Depression
16.09.24/0530	23.0/86.4	45-55 gusting to 65	Depression
16.09.24/1730	23.2/85.0	40-50 gusting to 60	Depression
17.09.24/0530	23.5/83.3	35-45 gusting to 55	Depression
17.09.24/1730	23.7/81.6	20-30 gusting to 40	Well Marked Low Pressure Area

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 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 to very heavy rainfall** at isolated places over Jharkhand 16th September.

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

Chhattisgarh: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places on 15th & 16th September and heavy rainfall at isolated places on 17th September.

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

Uttar Pradesh: Light to moderate rainfall at many places with **heavy rainfall** at isolated places over southeast Uttar Pradesh on 16th and over South Uttar Pradesh 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 1730 IST of 16-09-2024:

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

Gangetic West Bengal - Bardhaman, Birbhum, East & West Mednipur, Mursidabad, Nadia, North

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.

& South 24 Parganas, and Purulia districts.

Chhattisgarh - Balarampur, Jashpur, Korea, Surajpur and Surguja districts.

Bihar - Banka, Bhagalpur, Jamui, Lakhisarai and Nawada districts.

Odisha - Anugul, Baleswar, Bauda, Kendujhar, Mayurbhanj, Sambalpur and Sundargarh districts.

Jharkhand - Bokaro, Chatra, Deoghar, Dhanbad, Dumka, East & West Singhbhum, Garhwa, Giridih, Godda, Gumla, Hazaribagh, Jamtara, Khunti, Koderma, Latehar, Lohardaga, Pakur, Palamu, Ramgarh, Ranchi, Sahebganj, and Saraikela 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 prevail 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 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 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 due to heavy rainfall and strong winds)

- ✓ 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)

- ✓ 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.

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.

- ✓ Avoid staying in vulnerable structure.

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

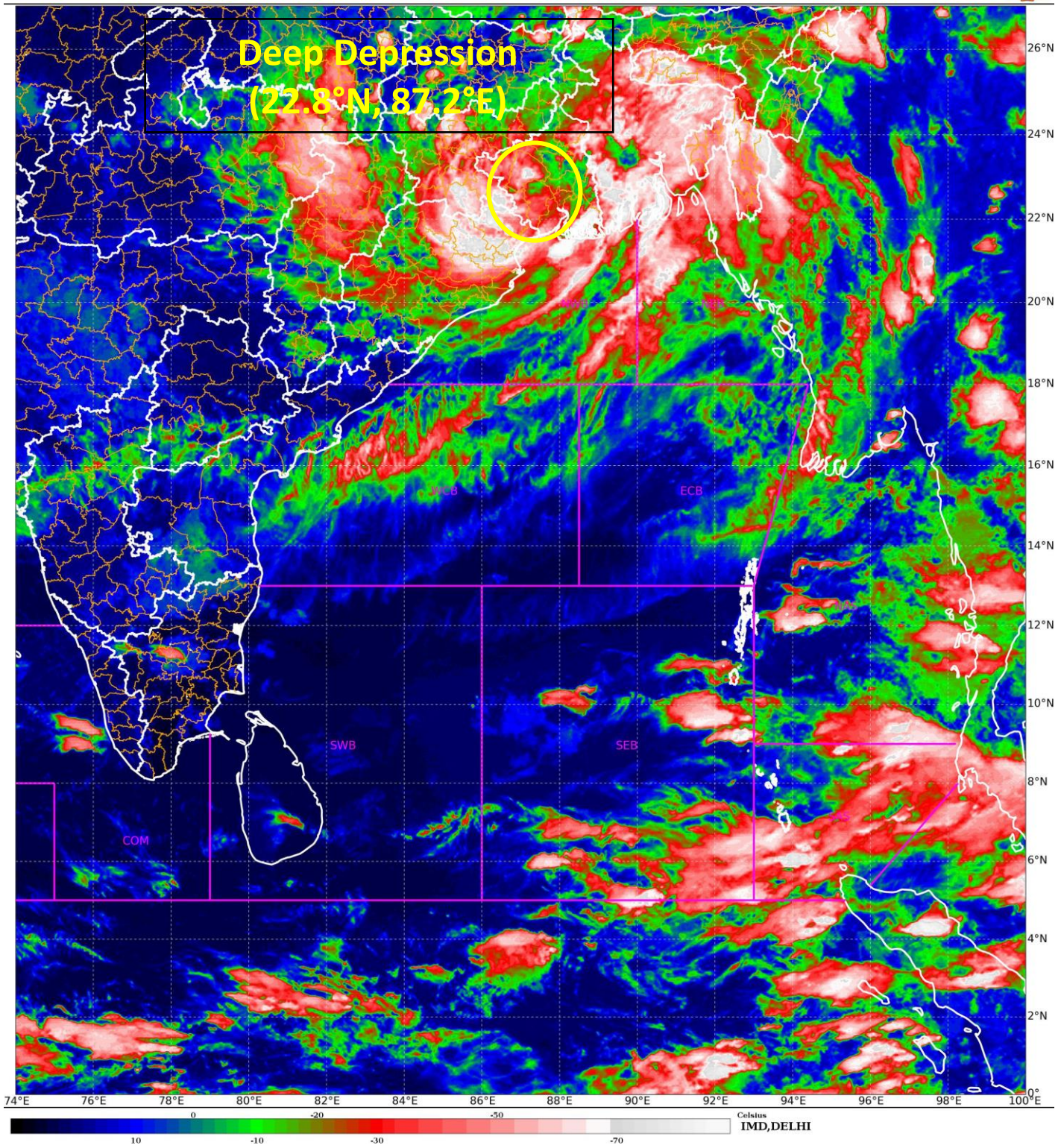
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ Keep the harvested produce at safer place

Significant amount of rainfall (from 0830 hours IST to 1730 hours IST of today, the 15th September, 2024) (in cm) in Annexure-I.

The next bulletin will be issued at 0230 hrs IST of tomorrow, the 16th September, 2024.

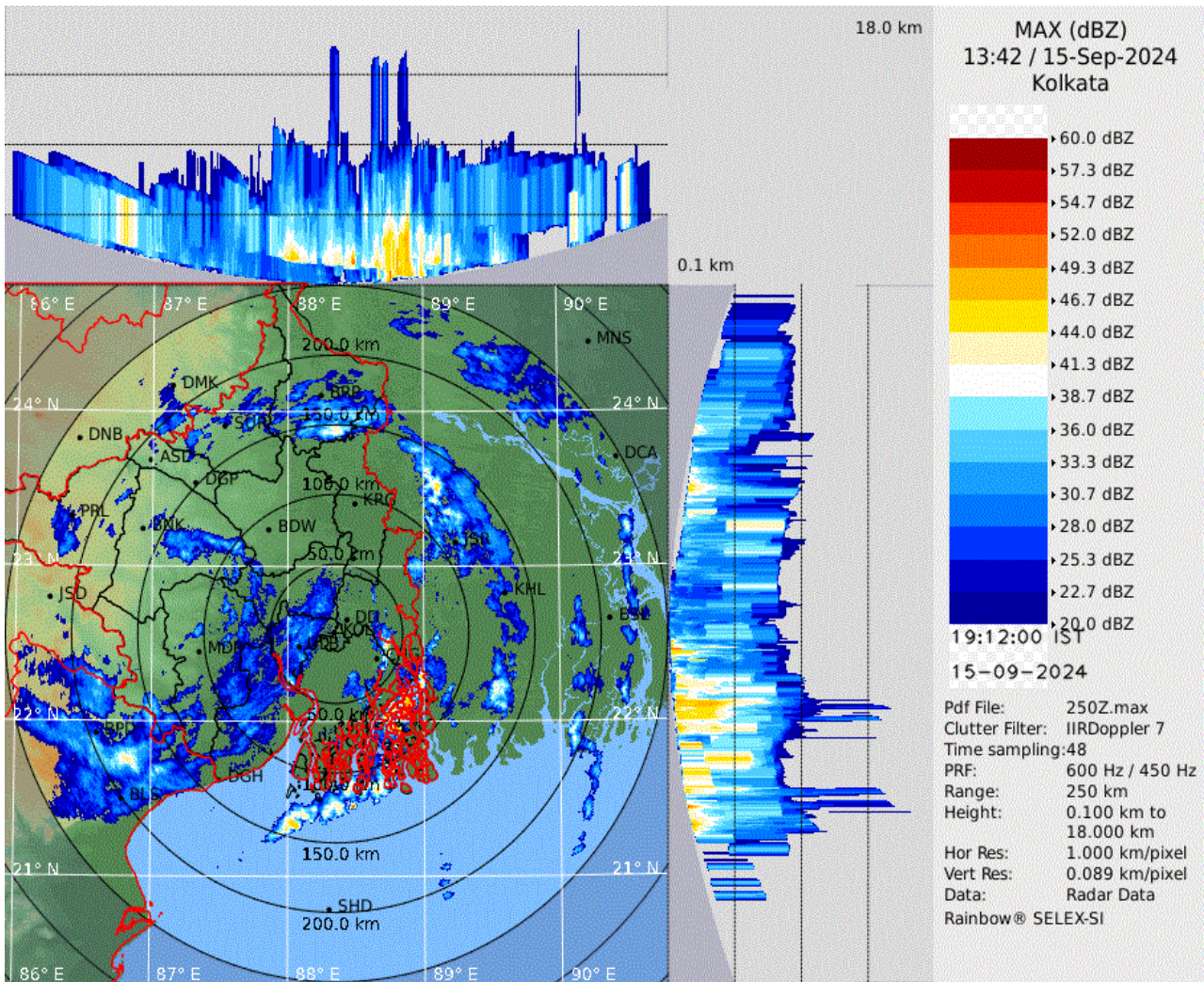
(Dr. Suprit Kumar)
Scientist-E, RSMC, New Delhi

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



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Kolkata Radar Image

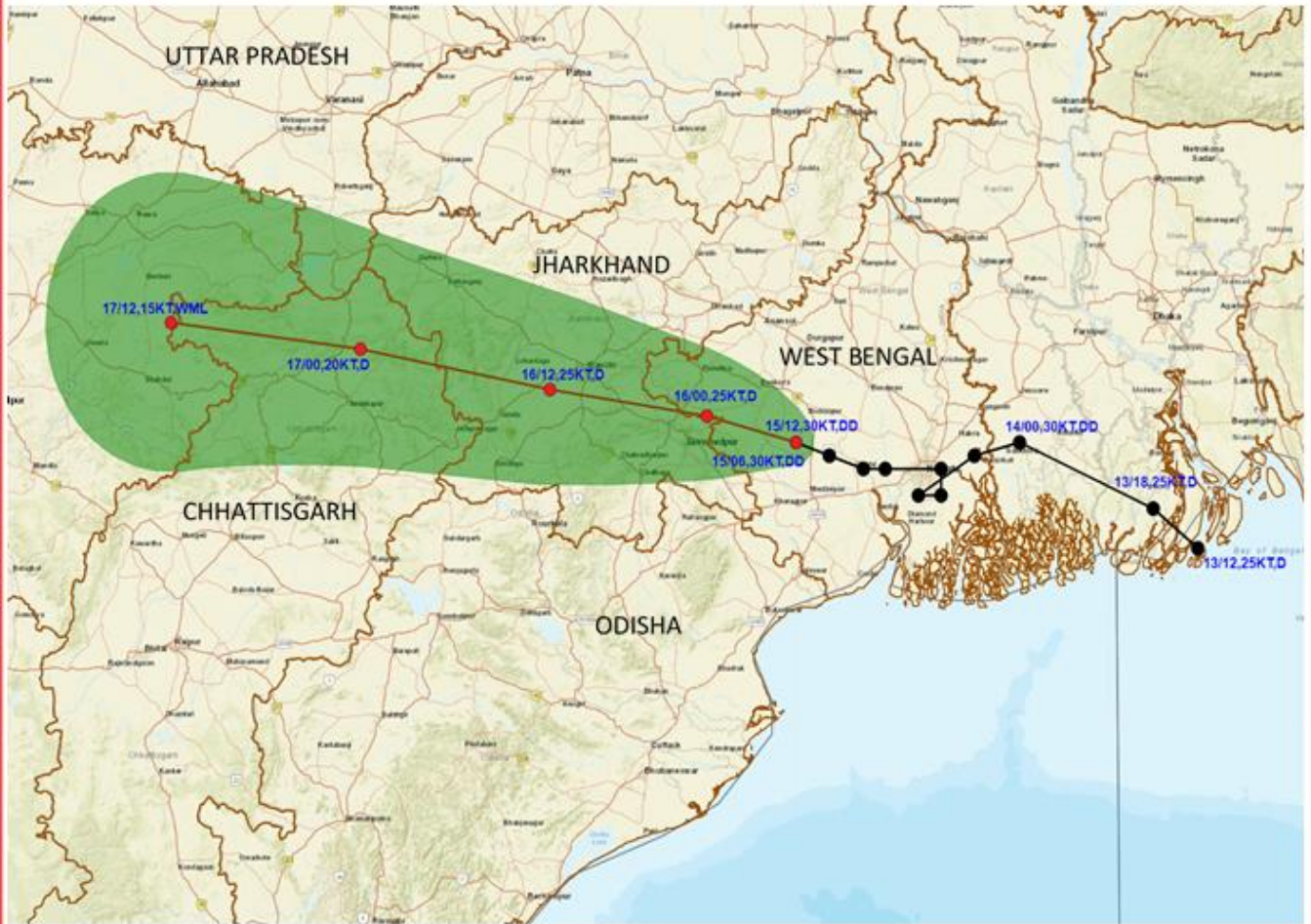


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OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 1200 UTC (1730 IST) OF 15TH SEPTEMBER, 2024.



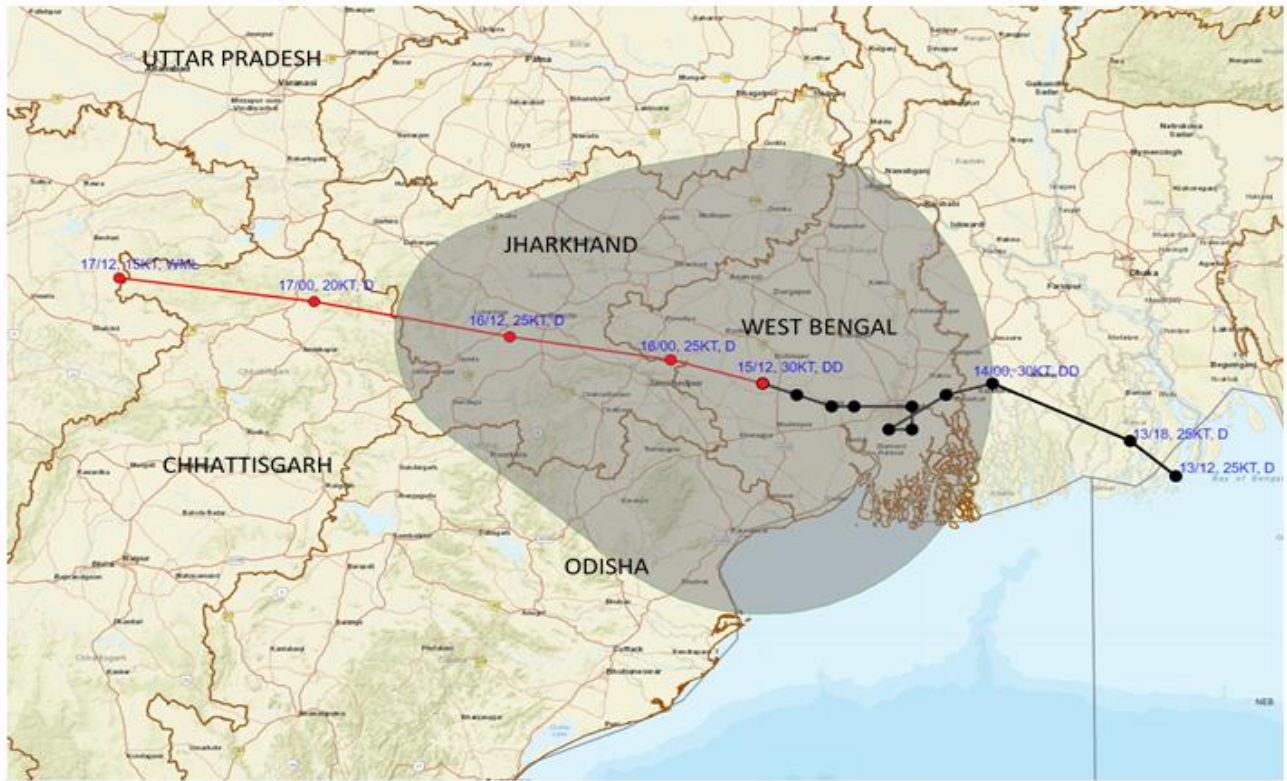
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM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

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 OVER GANGETIC WEST BENGAL BASED ON 1200 UTC (1730 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)

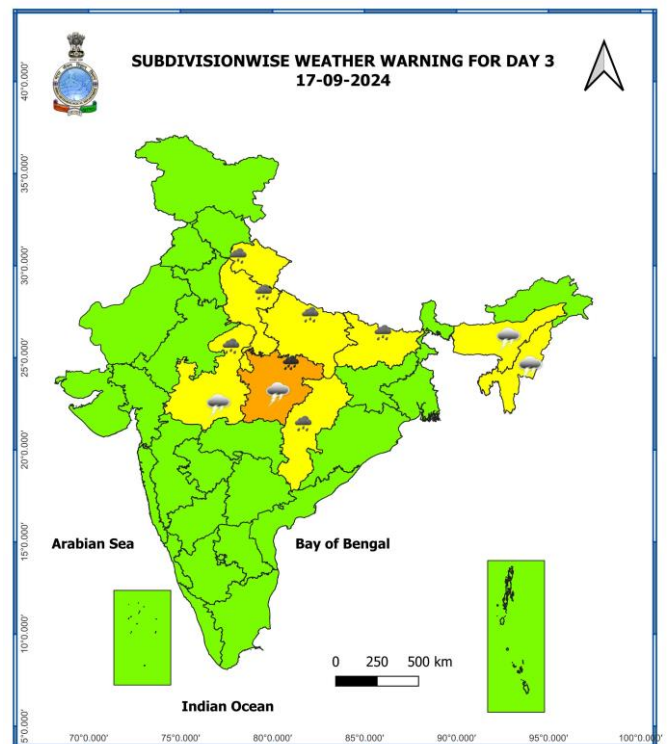
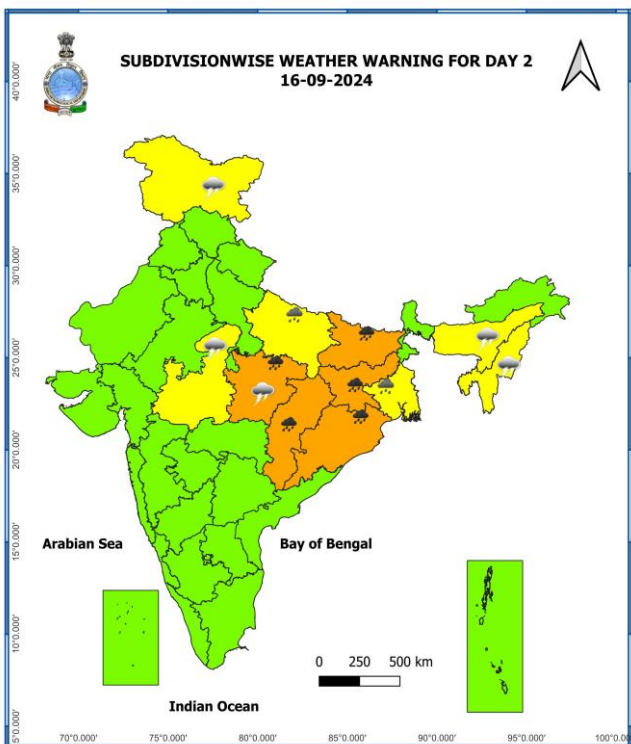
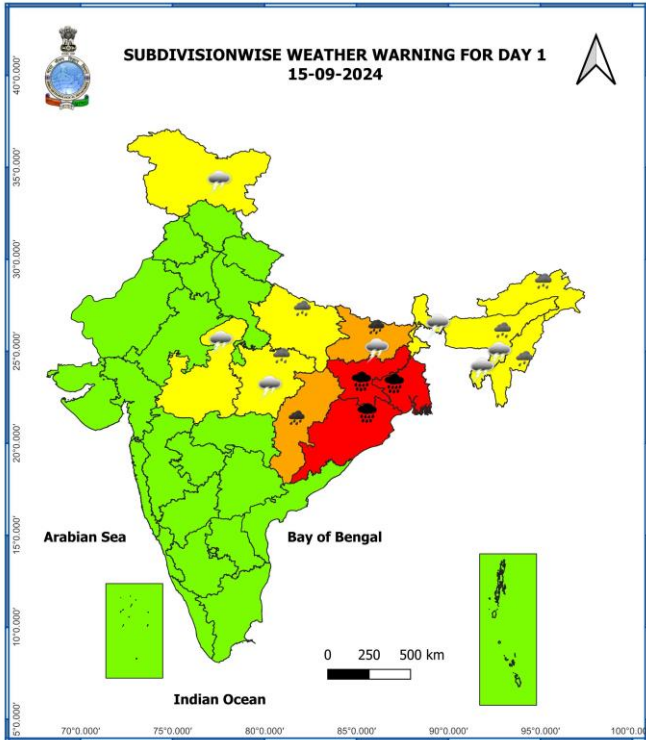
— ≥ 64 KT (≥ 118 KMPH)

IMPACT OVER THE SEA

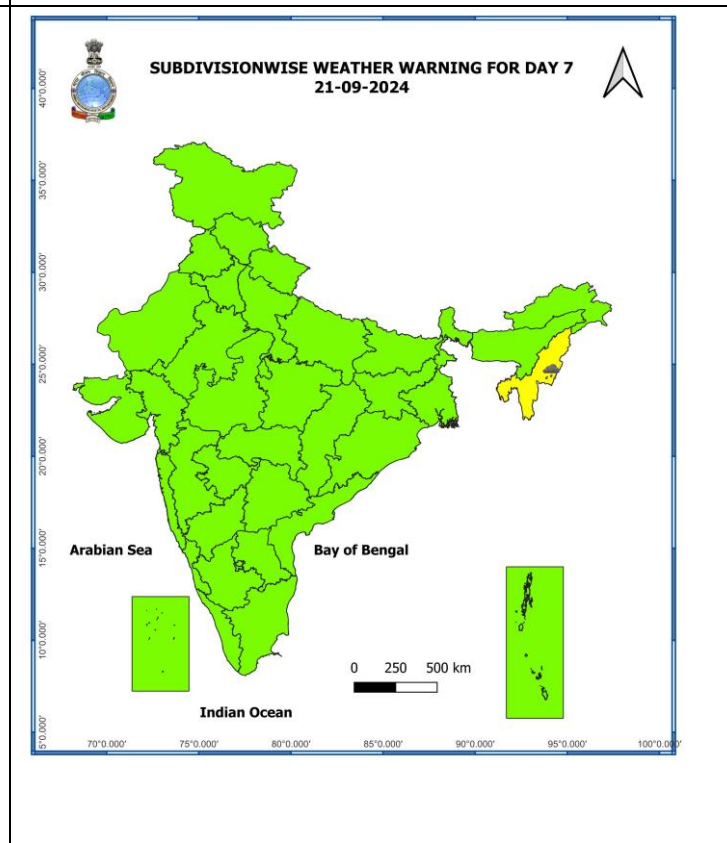
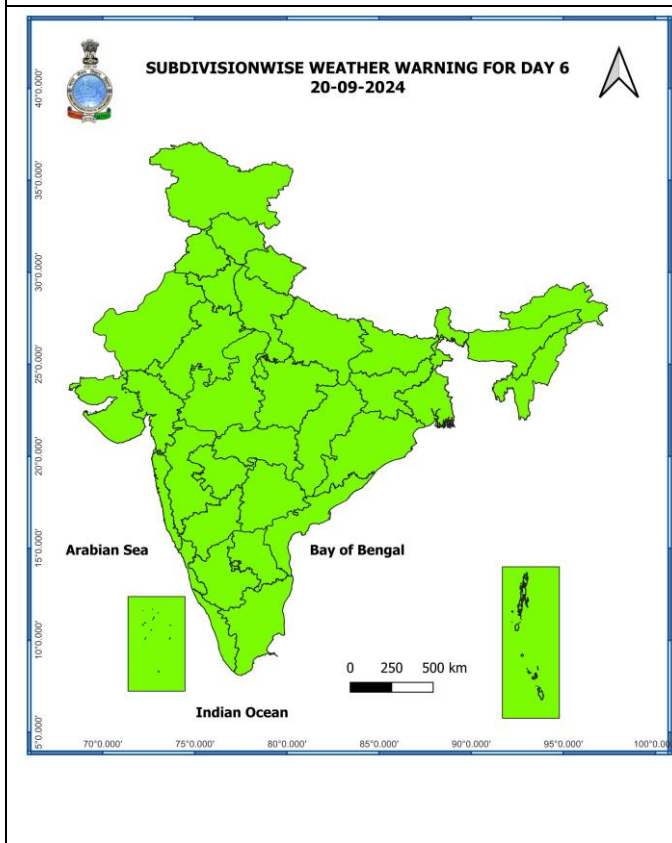
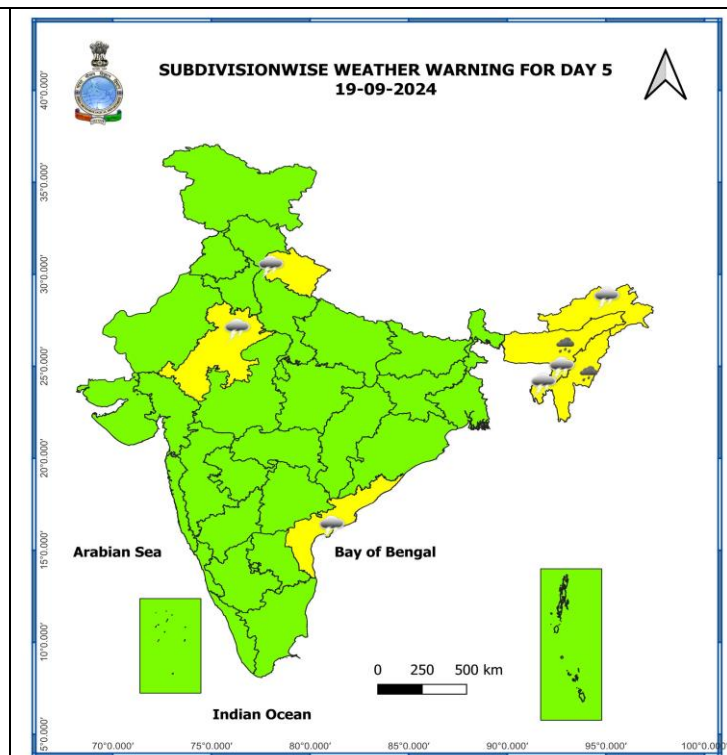
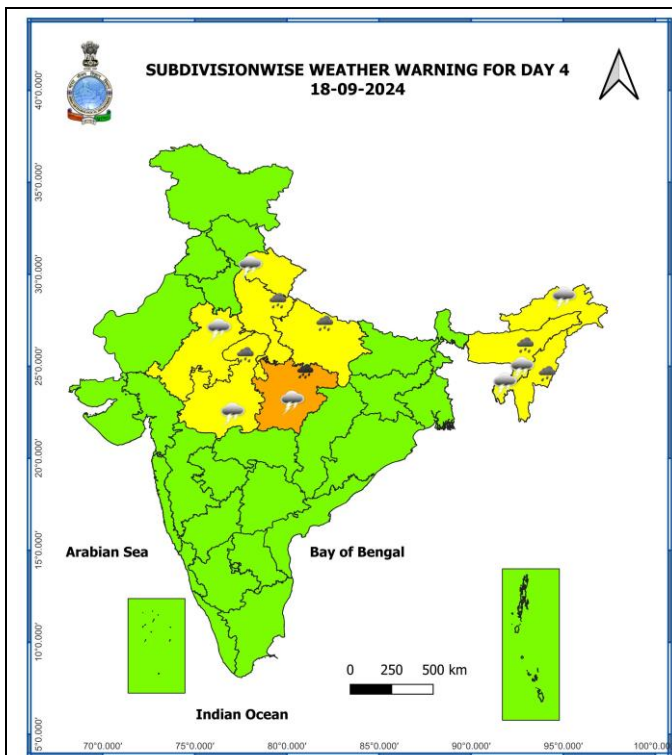
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥ 118)	Phenomenal	Total suspension of fishing operations

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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

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

24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 16-09-2024:

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

Chhattisgarh - Balarampur, Jashpur, Korea, Surajpur and Surguja districts.

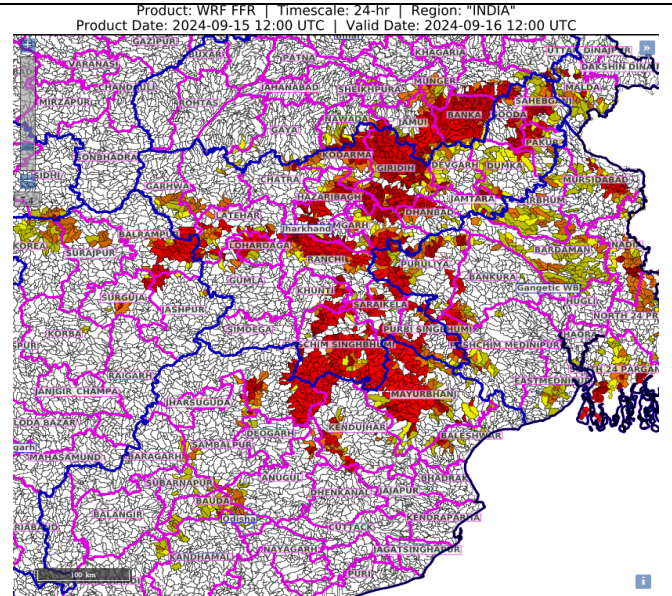
Gangetic West Bengal - Bardhaman, Birbhum, East & West Mednipur, Mursidabad, Nadia, North & South 24 Parganas, and Purulia districts.

Bihar - Banka, Bhagalpur, Jamui, Lakhisarai and Nawada districts.




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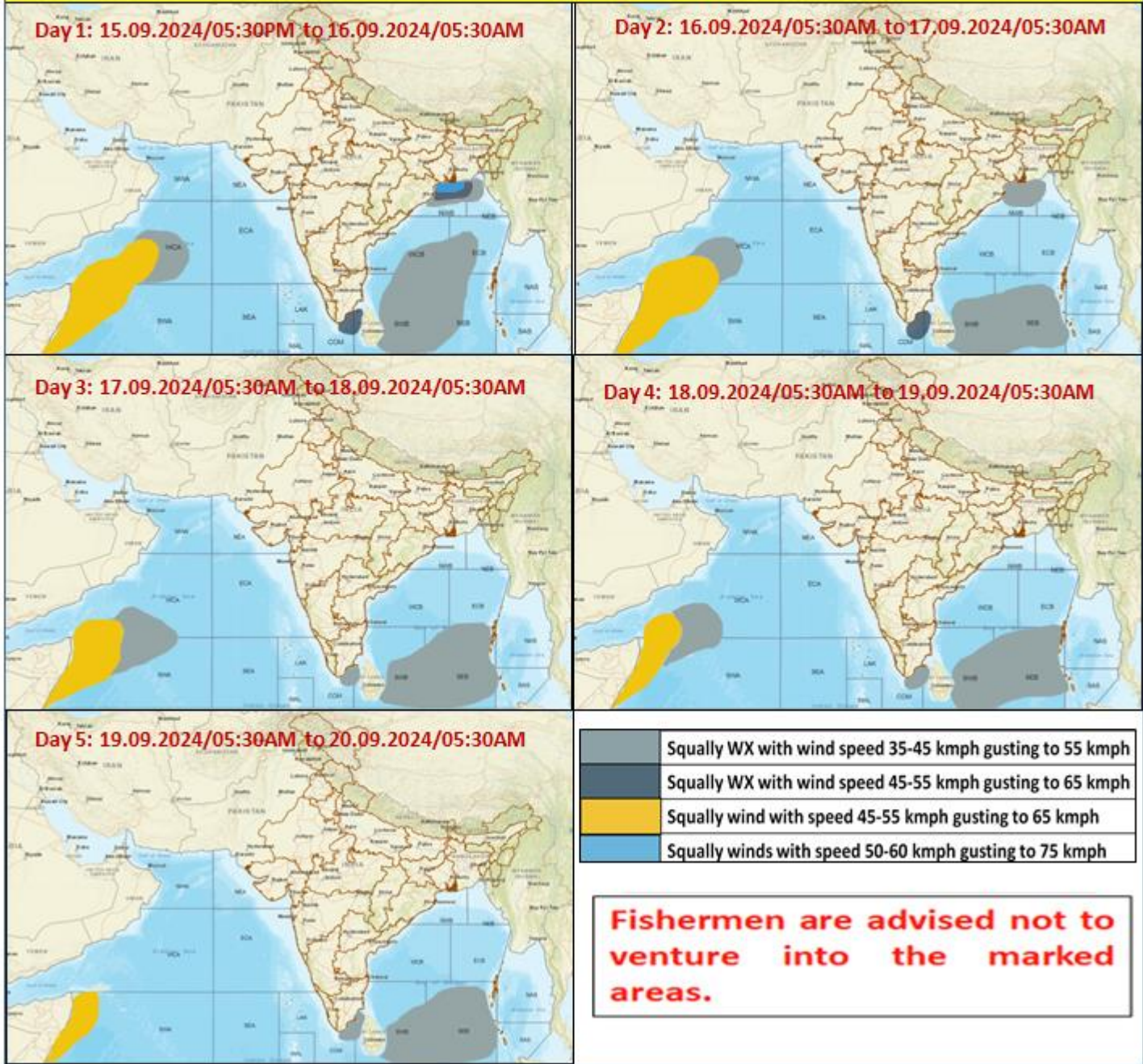
Flash Flood Risk

	High Risk (Take Action)
	Moderate Risk (Be Prepared)
	Low Risk (Be Updated)

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Fishermen Warning Graphics



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Annexure-I

Significant amount of rainfall (from 0830 hours IST to 1730 hours IST of today, the 15th September, 2024) (in cm):

Gangetic West Bengal: Asansol-8; Shanti Niketan, Purulia & Kalamunda -4 each, Bankura-3; Panagarh & Canning -2;

Jharkhand: Jamshedpur-5; Chaibasa & Dalton Ganj-2 each;

East Uttar Pradesh: Churk-8;

Chhattisgarh: Ambikapur -5;

Sub-Himalayan West Bengal & Sikkim: Gangtok-2; bagdogara-1;