



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

NATIONAL BULLETIN NO. 09 (BOB/05/2023)

TIME OF ISSUE: 0210 HOURS IST

DATED: 17.11.2023

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Sub: Deep Depression over Northwest Bay of Bengal

The Deep Depression over Northwest and adjoining Westcentral Bay of Bengal moved north-northeastwards with a speed of 10 kmph during past 6 hours and lay centred at 2330 hours IST of yesterday, the 16th November over Northwest Bay of Bengal near latitude 19.1°N and longitude 88.0°E, about 190 km southeast of Paradip (Odisha), 280 km south-southeast of Digha (West Bengal) and 390 km south-southwest of Khepupara (Bangladesh).

It is likely to continue to move north-northeastwards, intensify further into a cyclonic storm during next 12 hours and cross Bangladesh coast between Mongla and Khepupara with wind speed of 60-70 kmph gusting to 80 kmph by the early hours of 18th November, 2023.

Forecast track and intensity are given below:

Date/Time (IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
16.11.23/2330	19.1/88.0	55-65 kmph gusting to 75 kmph	Deep Depression
17.11.23/0530	19.8/88.3	60-70 kmph gusting to 80 kmph	Cyclonic Storm
17.11.23/1130	20.4/88.6	65-75 kmph gusting to 85 kmph	Cyclonic Storm
17.11.23/1730	21.0/89.0	65-75 kmph gusting to 85 kmph	Cyclonic Storm
17.11.23/2330	21.6/89.5	60-70 kmph gusting to 80 kmph	Cyclonic Storm
18.11.23/1130	22.7/90.2	50-60 kmph gusting to 70 kmph	Deep Depression
18.11.23/2330	23.8/90.8	40-50 kmph gusting to 60 kmph	Depression

Warnings:

(i) Rainfall Warning (graphics enclosed):

- Light to moderate rainfall at many places with isolated heavy rainfall is likely over coastal districts of West Bengal on 17th November.
- Light to moderate rainfall at most places with isolated heavy rainfall is likely over Nagaland, Manipur, Mizoram & Tripura on 17th & 18th November with very heavy rainfall at isolated places over Mizoram & Tripura on 17th November.
- Light to moderate rainfall at many places with isolated heavy rainfall is likely over south Assam and east Meghalaya on 17th & 18th November.

(ii) Wind warning (graphics enclosed):

- **Squally wind** speed reaching **55-65 kmph gusting to 75 kmph** is prevailing over Northwest & adjoining Westcentral Bay of Bengal and is likely to increase gradually becoming Gale wind speed reaching **60-70 kmph gusting to 80 kmph** over North Bay of Bengal from morning of 17th November. It would increase further becoming **65-75 kmph gusting to 85 kmph** over North Bay of Bengal on 17th noon. Thereafter, it would become **60-70 kmph gusting to 80 kmph** over the North Bay of Bengal on 18th morning and decrease thereafter.
- **Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely over adjoining central Bay of Bengal from 17th evening to 18th morning and decrease thereafter.
- **Along & off Odisha Coast: Squally wind** speed reaching **45-55 kmph gusting to 65 kmph** is likely to prevail till 17th evening and decrease thereafter.
- **Along & off West Bengal Coast: Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is prevailing. It is likely to increase gradually becoming **50-60 kmph gusting to 70 kmph** from 17th morning till 18th morning and decrease thereafter.
- **Along & off Bangladesh Coast: Squally wind** speed reaching **45-55 kmph gusting to 65 kmph** is prevailing and likely to increase becoming **60-70 kmph gusting to 80 kmph** from 17th evening till 18th morning and decrease thereafter.

(iii) Sea Condition:

- **Rough to very rough sea condition** is likely over
 - Westcentral Bay of Bengal on 17th November
 - North Bay of Bengal till morning of 17th November. **It would become very rough to high over North Bay of Bengal from 17th morning to 18th morning.**
 - **Along & off Odisha coast on 17th and West Bengal & Bangladesh coasts on 17th & 18th November**

(iv) Fishermen Warning:

Fishermen are advised not to venture into

- Westcentral Bay of Bengal on 17th November
- North Bay of Bengal on 17th & 18th November
- Along & off Odisha coast on 17th November
- Along & off West Bengal and Bangladesh coasts on 17th & 18th November

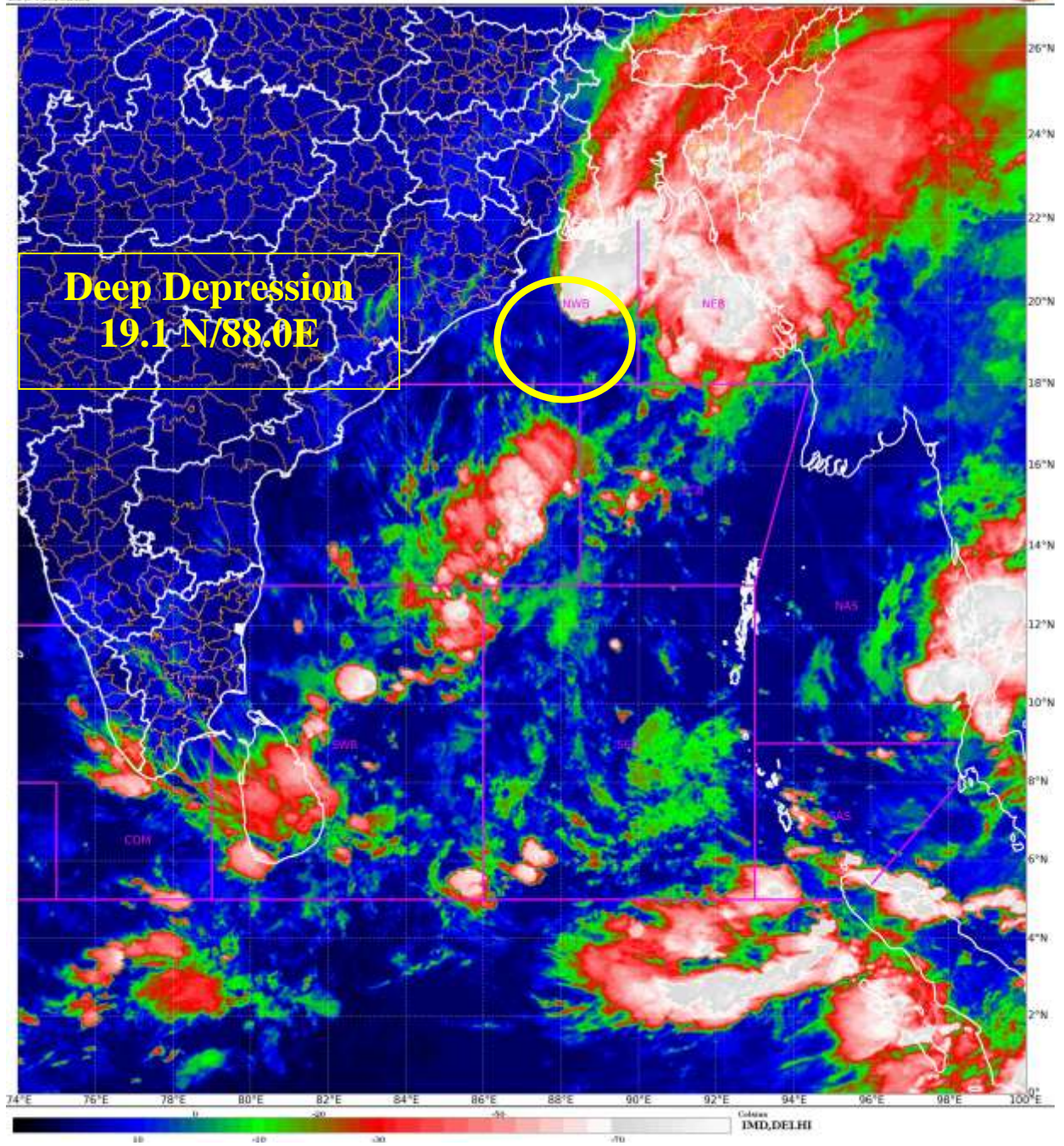
(v) Damage Expected & Action Suggested for coastal areas of Odisha & West Bengal:

- Minor damage to loose/unsecured structures.
- Minor damage to small trees like Banana. Papaya and Drumstick and ripe paddy crops.
- Partial Damage to standing crops in coastal areas of Odisha & west Bengal.
- Minor damage to Kutcha embankments.

The system is under continuous surveillance and the next message will be issued at 0830 hours IST of today, the 17th November, 2023.

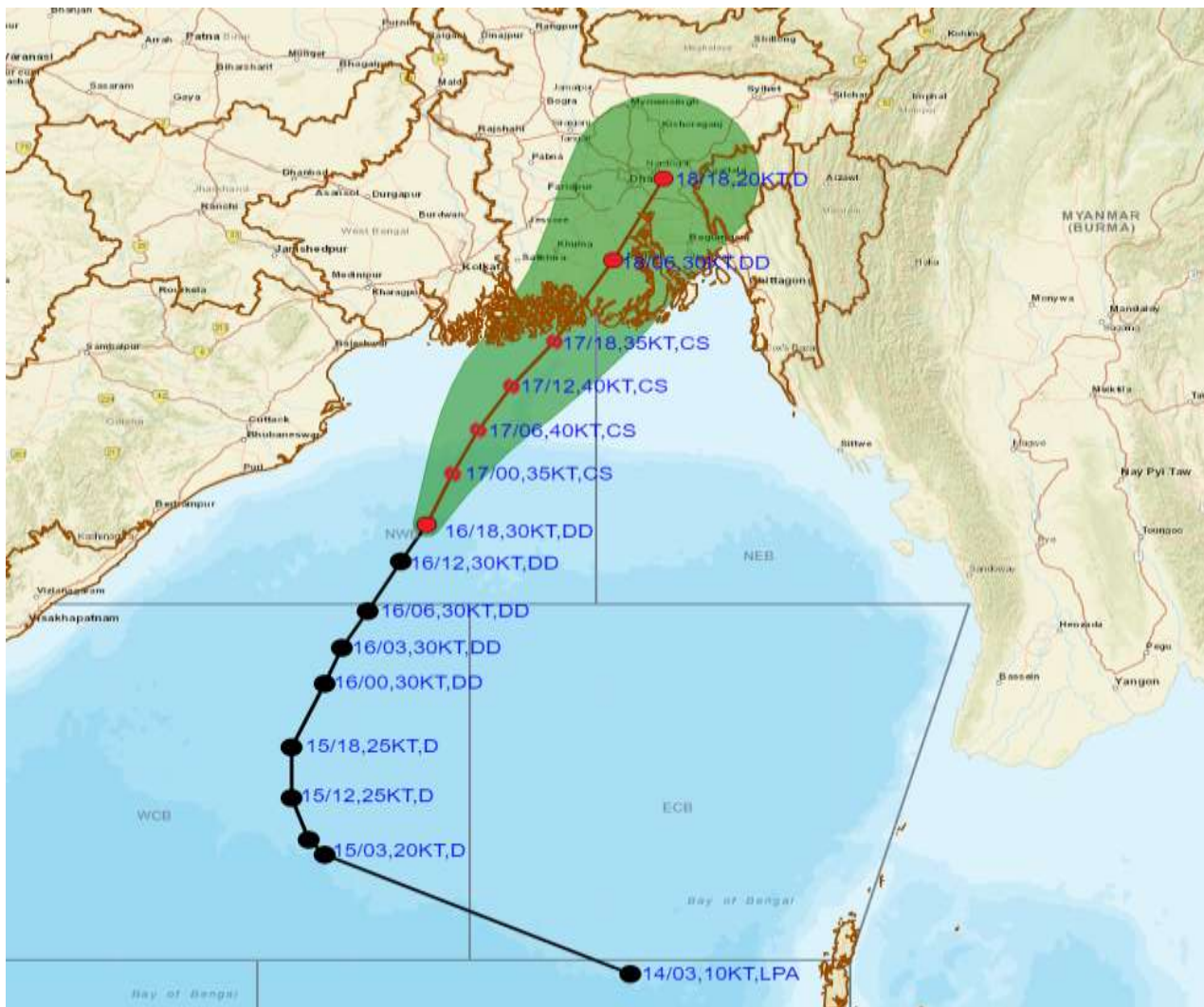
(Shashi Kant)
Scientist D, Cyclone Warning, New Delhi

Copy to:ACWC Chennai/ ACWC Kolkata/CWC Bhubaneswar/CWC Vishakhapatnam/MC Amravati/ RMC Guwahati/MC Agartala/MC Mizoram/MC Manipur/MC Nagaland/MC Shillong





OBSERVED AND FORECAST TRACK AND INTENSITY ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 16TH NOVEMBER 2023.



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

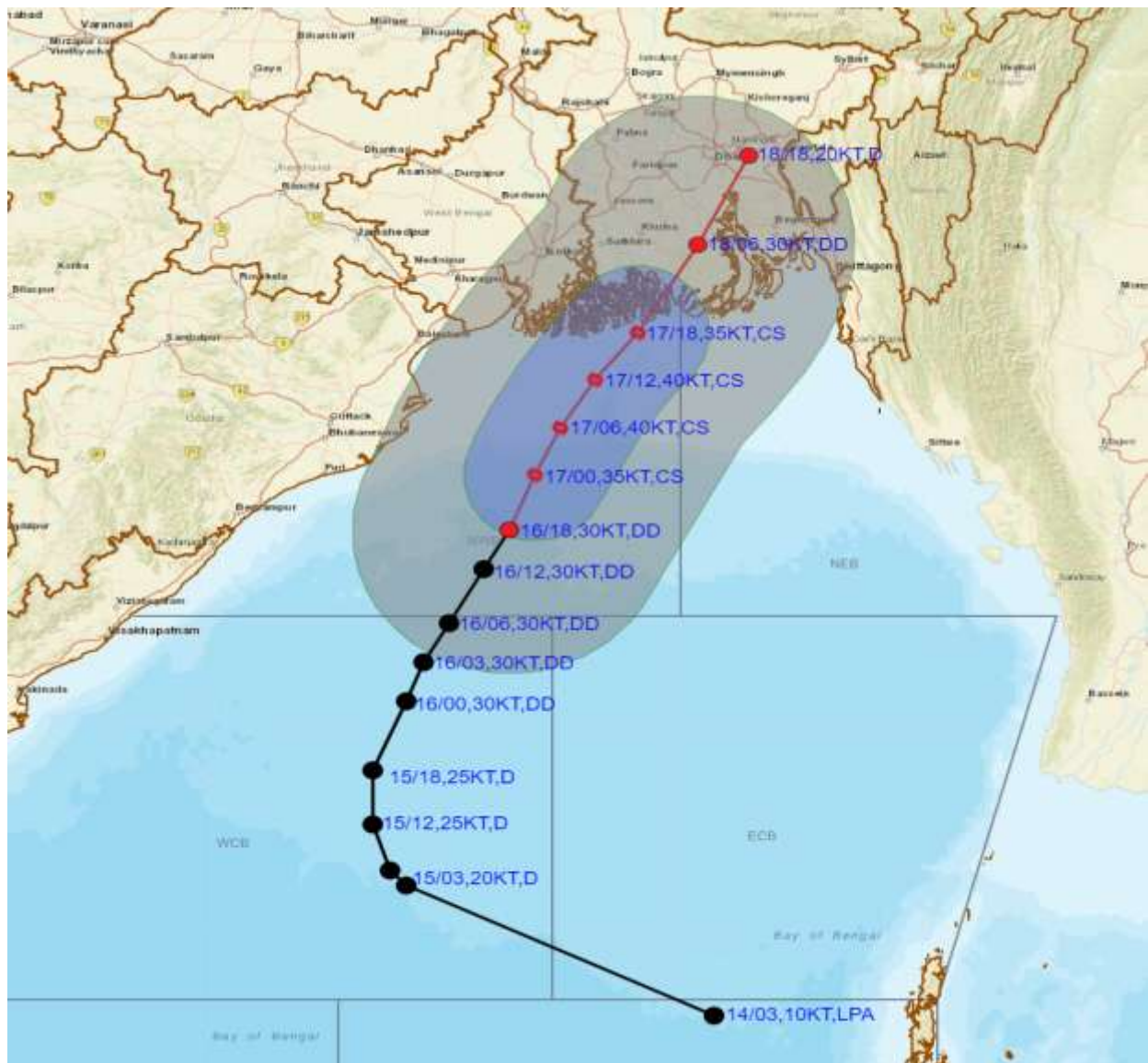
Forecast

DISTANCE (KM) AND DIRECTION FROM STATIONS

Date and Time (UTC)	RADIP (CW)	DIGHA	KHEPUPARA	CHITTAGONG (AMBAGAN)
16.11.23/1800	270, SSE	410, S	540, SSW	680 SW
17.11.23/1800	330, ENE	210, E	80, WSW	250, WSW
18.11.23/0600	460, NE	310, ENE	80, N	180, WNW
18.11.23/1800	580, NE	420, NE	210, NNE	190, NNW



OBSERVED AND FORECAST TRACK AND INTENSITY ALONG WITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 16TH NOVEMBER 2023.



DATE/TIME IN UTC
IST=UTC + 0530

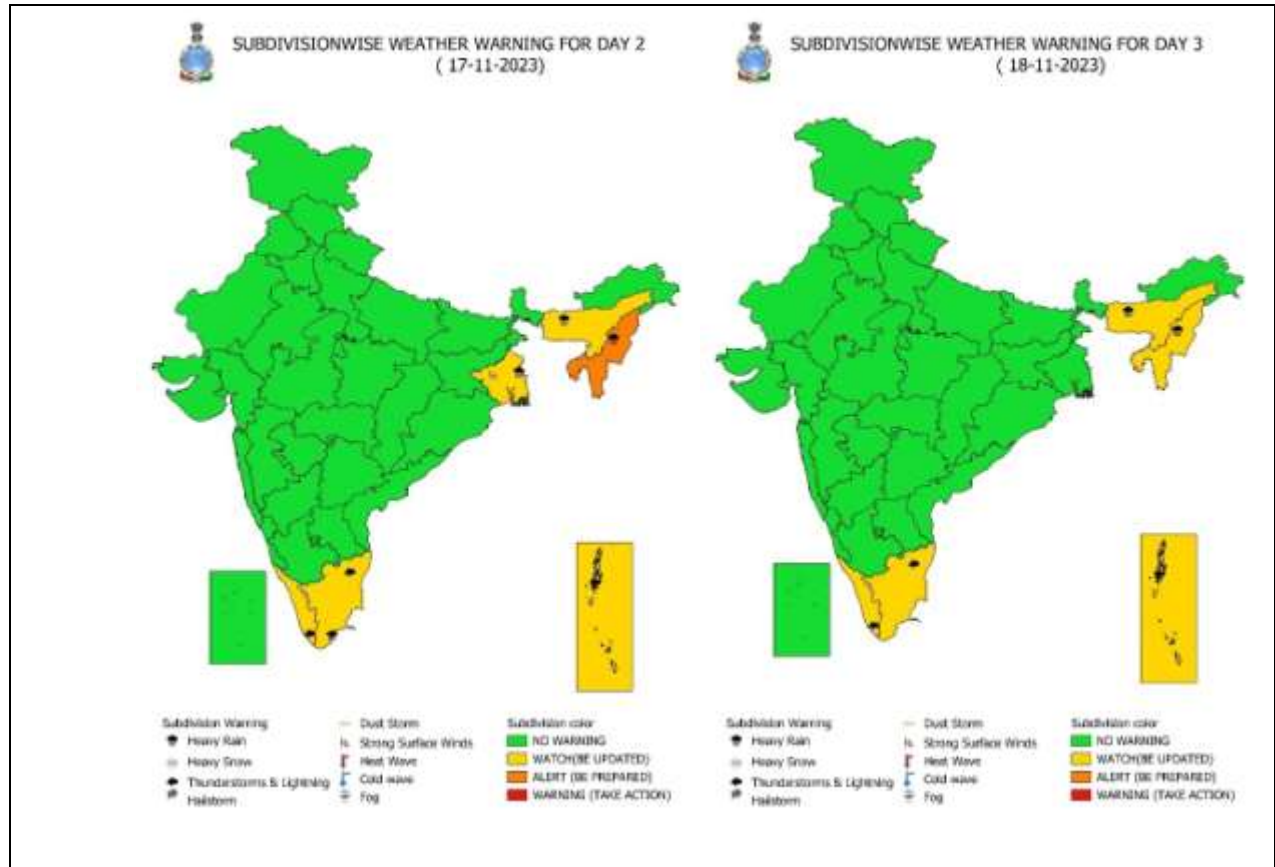
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 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

WEATHER WARNING GRAPHICS



WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)



**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
(19-11-2023)**



- | | | |
|-----------------------------|------------------------|--------------------------|
| 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) |



**SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
(20-11-2023)**



- | | | |
|-----------------------------|------------------------|--------------------------|
| 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) |



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

Fishermen warning graphics

Day 1: 16.11.2023/11:30AM to 17.11.2023/05:30AM



Day 2: 17.11.2023/05:30AM to 18.11.2023/05:30AM



Day 3: 18.11.2023/05:30AM to 19.11.2023/05:30AM



Day 4: 19.11.2023/05:30AM to 20.11.2023/05:30AM



Day 5: 20.11.2023/05:30AM to 21.11.2023/05:30AM



Squally WX with wind speed 40-45 kmph gusting to 55 kmph

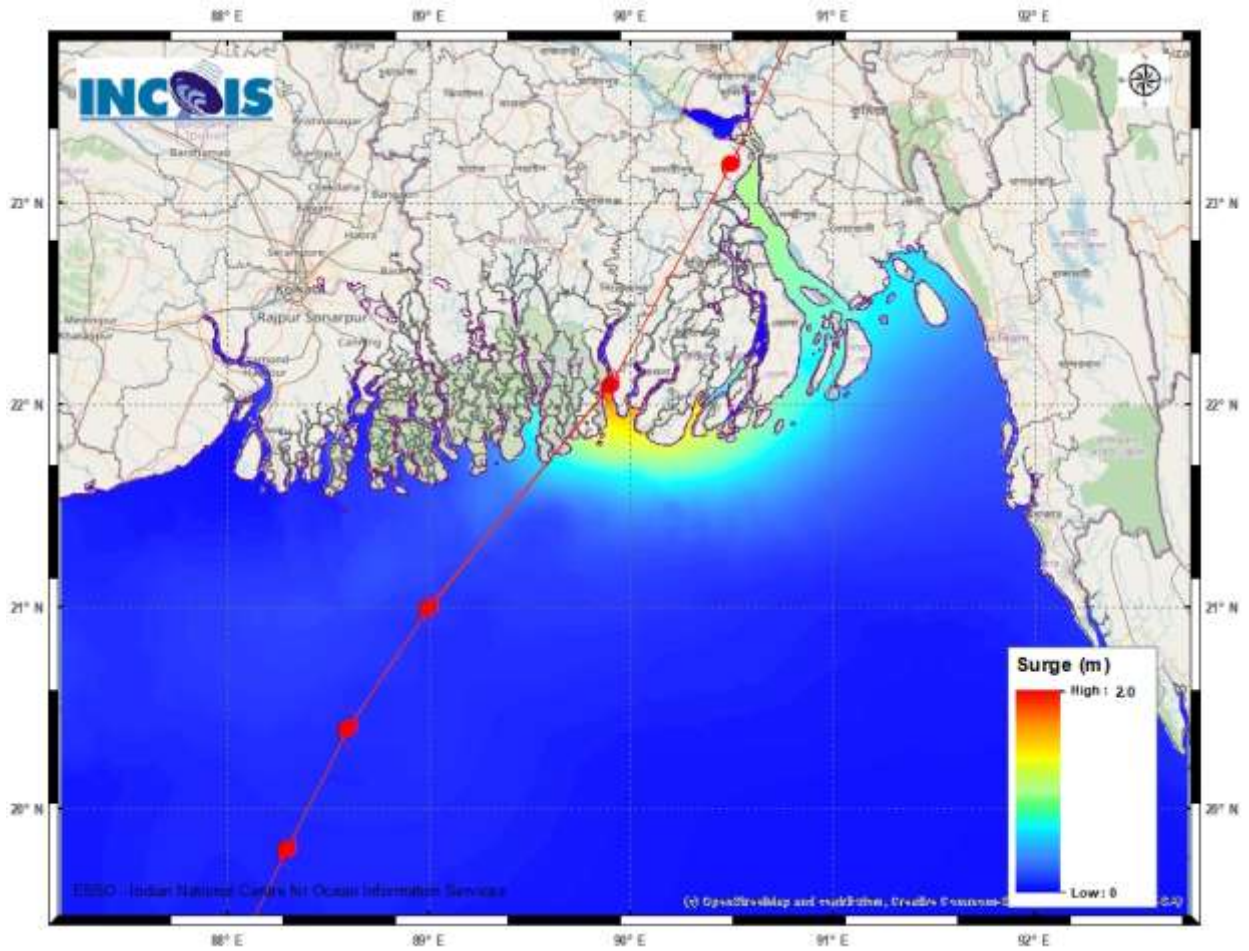
Squally WX with wind speed 45-55 kmph gusting to 65 kmph

Squally wind with speed 50-60 kmph gusting to 70 kmph

CS with Gale wind speed 60-90 kmph gusting to 110 kmph

Fishermen are advised not to venture into the marked areas.

STORM SURGE GUIDANCE



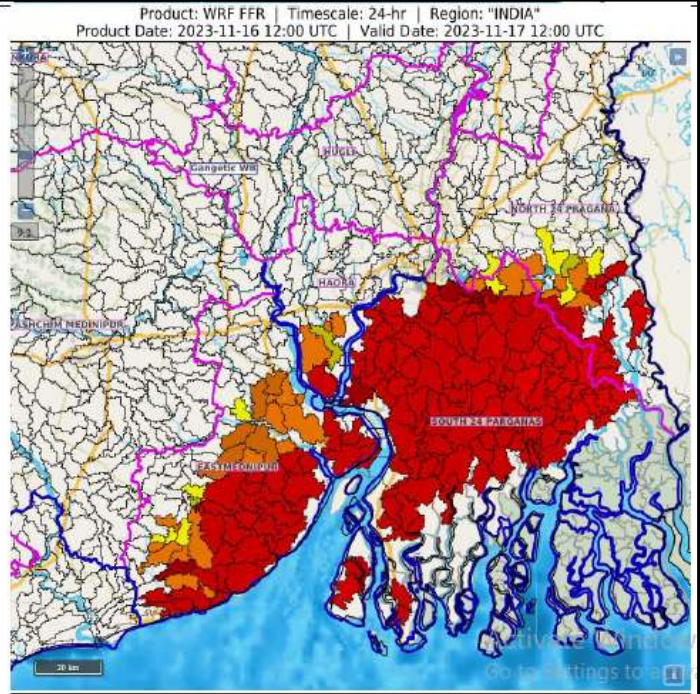
FLASH FLOOD GUIDANCE

24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 17-11-2023

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Moderate flash flood risk likely over few watersheds & neighbourhoods of Southern parts of Gangetic West Bengal Met Sub-divisions during next 24 hours.

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.



Flash Flood Risk

 High Risk (Take Action)

 Moderate Risk (Be Prepared)

 Low Risk (Be Updated)