



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO.: 22 (BAY OF BENGAL 01/2020)

TIME OF ISSUE: 2230 HOURS IST

DATED: 18.05.2020

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

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CONTROL ROOM NDMA (FAX.NO. 26701729)

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CHIEF SECRETARY, TAMIL NADU (FAX NO. 044-25672304)

CHIEF SECRETARY, PUDUCHERRY (FAX NO. 0413-2337575, 2334145)

Sub: Super Cyclonic Storm 'AMPHAN' (pronounced as UM-PUN) over Westcentral Bay of Bengal: Cyclone Warning for West Bengal and north Odisha coasts: Orange Message.

The **Super Cyclonic Storm 'AMPHAN'** (pronounced as **UM-PUN**) over Westcentral and adjoining central parts of South Bay of Bengal moved nearly northwards with a speed of 15 kmph during past 06 hours and lay centred at 2030 hrs IST of today, the 18th May, 2020 near latitude 14.5°N and longitude 86.4 °E over **Westcentral Bay of Bengal** about 640 km nearly south of Paradip (Odisha), 800 km south-southwest of Digha (West Bengal) and 920 km south-southwest of Khepupara (Bangladesh).

It is very likely to move north-northeastwards across northwest Bay of Bengal and cross West Bengal – Bangladesh coasts between Digha (West Bengal) and Hatiya Islands (Bangladesh) close to Sundarbans during the Afternoon / Evening of 20th May 2020 as an Extremely Severe Cyclonic Storm with maximum sustained wind speed of 165-175 kmph gusting to 195 kmph.

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
18.05.20/2030	14.5/86.4	230-240 gusting to 265	Super Cyclonic Storm
18.05.20/2330	15.2/86.5	240-250 gusting to 275	Super Cyclonic Storm
19.05.20/0530	15.9/86.7	240-250 gusting to 275	Super Cyclonic Storm
19.05.20/1130	17.1/87.0	230-240 gusting to 265	Super Cyclonic Storm
19.05.20/1730	17.7/87.2	200-210 gusting to 230	Extremely Severe Cyclonic Storm
20.05.20/0530	19.6/87.7	180-190 gusting to 210	Extremely Severe Cyclonic Storm
20.05.20/1730	21.8/88.5	135-145 gusting to 160	Very Severe Cyclonic Storm
21.05.20/0530	23.8/89.1	80-90 gusting to 100	Cyclonic Storm
21.05.20/1730	25.9/89.8	40-50 gusting to 60	Depression

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.

(1) Heavy rainfall Warning:

Odisha

Coastal Odisha is likely to experience light to moderate rainfall at many places from tonight with heavy falls at isolated places over coastal Odisha (Gajapati, Ganjam, Puri, Jagatsinghpur & Kendrapara Districts) during night of 18th May, 2020. Rainfall at most places with heavy to very heavy rainfall at a few places over north coastal Odisha (Jagatsinghpur, Kendrapara, Jajpur, Balasore, Bhadrak & Mayurbhanj Districts) and isolated heavy falls over Khordha & Puri districts on 19th May and isolated heavy rainfall over north Odisha (Bhadrak, Balasore, Mayurbhanj, Jajpur, Kendrapara and Keonjhar Districts) on 20th May 2020.

West Bengal

Coastal districts of Gangetic West Bengal (East Medinipur, South & North 24 Parganas) are likely to experience light to moderate rainfall at many places with heavy falls at isolated places on 19th May. Rainfall at most places with heavy to very heavy falls at a few places & extremely heavy falls at isolated places likely over Gangetic West Bengal (east & west Medinipur, south & north 24 Parganas, Howrah, Hoogli, Kolkata and adjoining districts) on 20th May and isolated heavy rain over interior districts on 21st May, 2020.

Sub-Himalayan West Bengal and Sikkim

Light to moderate rainfall at most places with heavy to very heavy falls at a few places over Malda & Dinajpur districts on 20th May and over most of the districts of Sub-Himalayan West Bengal & Sikkim on 21st May, 2020.

Assam & Meghalaya

Light to moderate rainfall at most places with heavy to very heavy falls at a few places over the western districts of Assam & Meghalaya on 21st May.

(2) Wind warning

West Bengal & Odisha

- Squally wind speed reaching 45 to 55 kmph gusting to 65 kmph is likely to commence along and off south Odisha coast from 18th evening, increase becoming 55 to 65 kmph gusting to 75 kmph extend to along & off north Odisha coast from 19th morning and along and off West Bengal coast from 19th afternoon.
- The wind speed will gradually increase becoming gale wind speed reaching 75 to 85 kmph gusting to 95 kmph from 20th morning along and off north Odisha (Jagatsinghpur, Kendrapara, Bhadrak, Balasore and Mayurbhanj districts) and West Bengal (east & west Medinipur, south & north 24 Parganas, Howrah, Hoogli, Kolkata Districts). **It will gradually increase thereafter becoming 110 to 120 kmph gusting to 135 kmph along & off the above mentioned districts of North Odisha.**
- **Gale wind speed reaching 165 to 175 kmph gusting to 195 kmph very likely along & off east Medinipur and north & south 24 Parganas districts and 110-120 kmph gusting to 130 kmph over Kolkata, Hoogli, Howrah and West Medinipur Districts of West Bengal during the time of landfall (20th afternoon to night).**
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph likely to prevail over Puri, Khordha, Cuttack, Jajpur districts of Odisha during 20th May 2020.

Deep Sea area

- Gale wind speed reaching 230-240 gusting to 265 kmph is prevailing over westcentral Bay of Bengal. It is likely to increase becoming 230-240 gusting to 265 kmph over northern parts of central Bay of Bengal and adjoining North Bay of Bengal from tonight to 19th May morning.
- Gale wind speed reaching 200-210 gusting to 230 kmph over north Bay of Bengal from 19th morning and gradually decrease becoming 165-175 kmph gusting to 195 kmph by 20th evening.

(3) Sea condition: Sea condition is Phenomenal and is likely to continue for next 24 hours over southern parts of Westcentral Bay of Bengal. It will become Phenomenal over northern parts of central Bay of Bengal and adjoining north Bay of Bengal on 19th May and over north Bay of Bengal on 20th May 2020.

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.

(4) Fishermen Warning

- The fishermen are advised not to venture into west-central and adjoining central parts of south Bay of Bengal during next 24 hours, to central Bay of Bengal on 19th May and into North Bay of Bengal during 19th to 20th May 2020.
- Also, fishermen are advised not to venture into North Bay of Bengal along and off North Odisha, West Bengal and adjoining Bangladesh coasts during 18th to 20th May 2020.

(5) Storm Surge expected

- Storm Surge of about 4-6 meters above Astronomical Tide is likely to inundate low lying areas of south & north 24 Parganas and about 3-4 meters over the low lying areas of East Medinipur District of West Bengal during the time of Landfall. (Figure enclosed)

(6) Damage Expected and Action suggested

(a) West Bengal (east Medinipur, south & north 24 Parganas, Howrah, Hoogli, Kolkata districts)

Damage Expected:

- Extensive damage to all types of kutchha houses, some damage to old badly managed Pucca structures. Potential threat from flying objects.
- Extensive uprooting of communication and power poles.
- Disruption of rail/road link at several places.
- Extensive damage to standing crops, plantations, orchards.
- Blowing down of Palm and coconut trees.
- Uprooting of large bushy trees.
- Large boats and ships may get torn from their moorings.

Fishermen Warning & Action Suggested:

- Total suspension of fishing operations during 18th to 20th May 2020.
- Diversion or suspension of rail and road traffic.
- People in affected areas to remain indoors. Mobilise evacuation from Low lying areas.
- Movement in motor boats and small ships not advisable.

(b) Odisha (Jagatsinghpur, Kendrapara, Bhadrak, Balasore, Jajpur & Mayurbhanj)

Damage Expected:

- Total destruction of thatched houses/ extensive damage to kutchha houses. Potential threat from flying objects.
- Bending/ uprooting of power and communication poles.
- Major damage to Kutchha and Pucca roads. Minor disruption of railways, overhead power lines and signalling systems.
- Widespread damage to standing crops, plantations, orchards, falling of green coconuts and tearing of palm fronds. Blowing down of bushy trees like mango.
- Small boats, country crafts may get detached from moorings.

Fishermen Warning & Action Suggested:

- Total suspension of fishing operations during 18th to 20th May 2020.
- Diversion or suspension of rail and road traffic.
- People in affected areas to remain indoors.
- Movement in motor boats and small ships not advisable.

Kindly visit www.rsmcnewdelhi.imd.gov.in and www.mausam.imd.gov.in for updates on the system.

Next Bulletin will be issued at 0230 hours IST of 19th May, 2020.

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

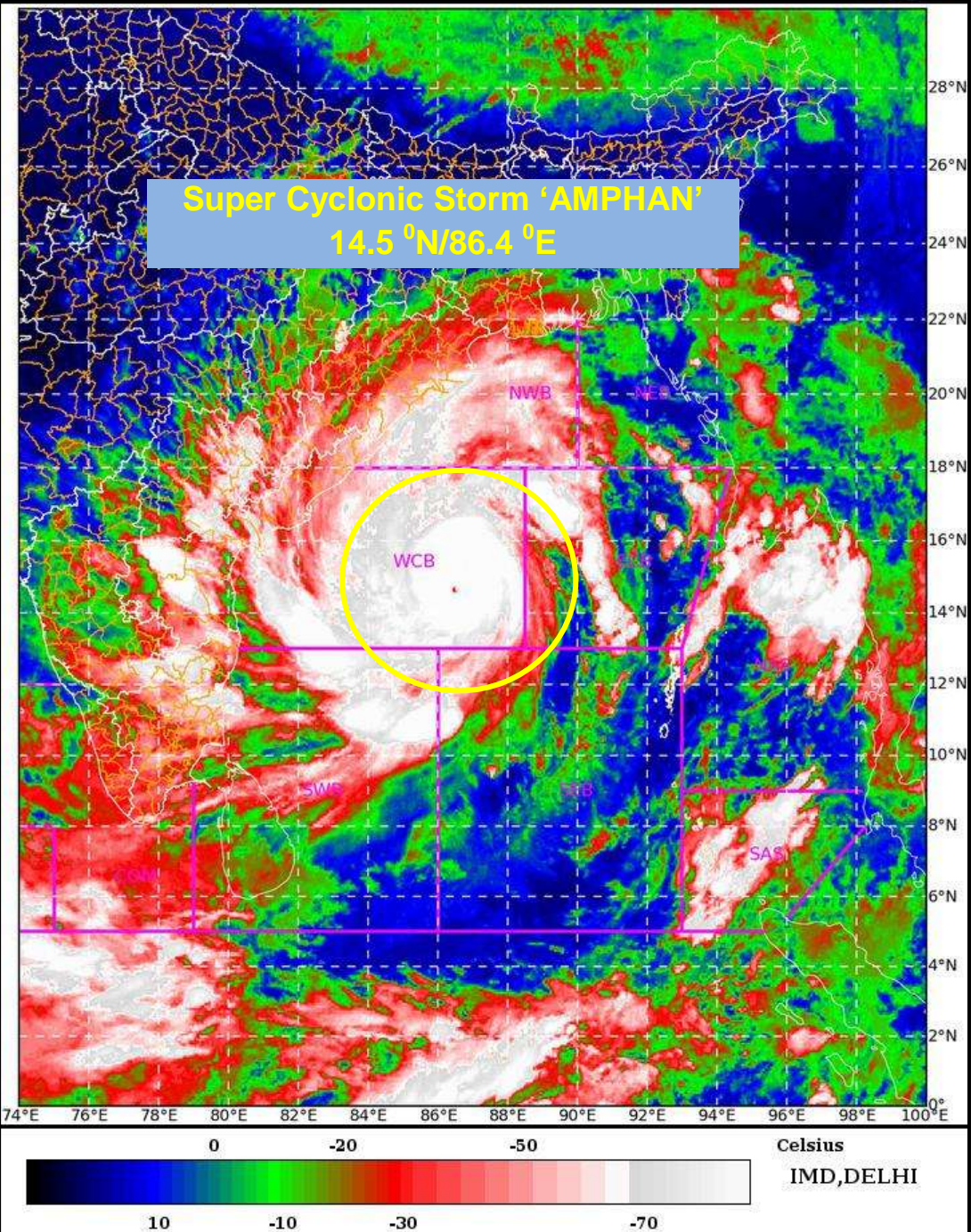
Copy to: CRS, Pune/ ACWC Chennai/ ACWC Kolkata/CWC Bhubaneswar/ /CWC Visakhapatnam

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.

SAT : INSAT-3D IMG 18-05-2020/(1530 to 1556) GMT

IMG_TIR1_TEMP 10.8 um 18-05-2020/(2100 to 2126) IST

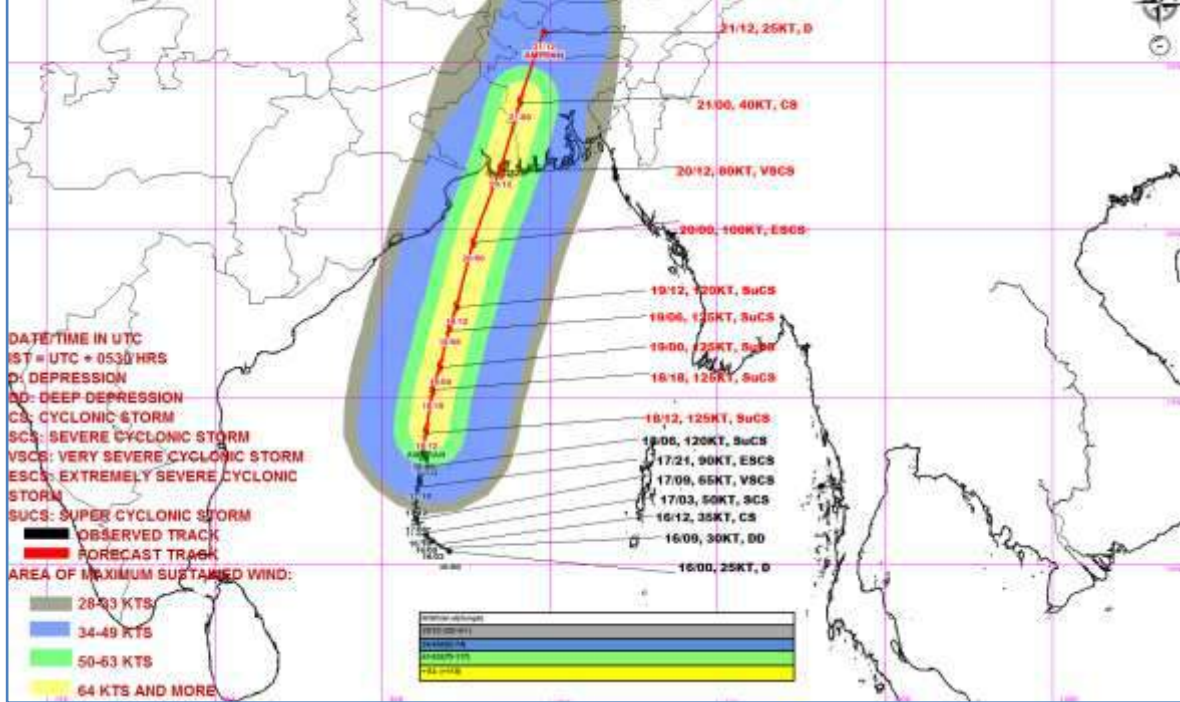
L1C Mercator



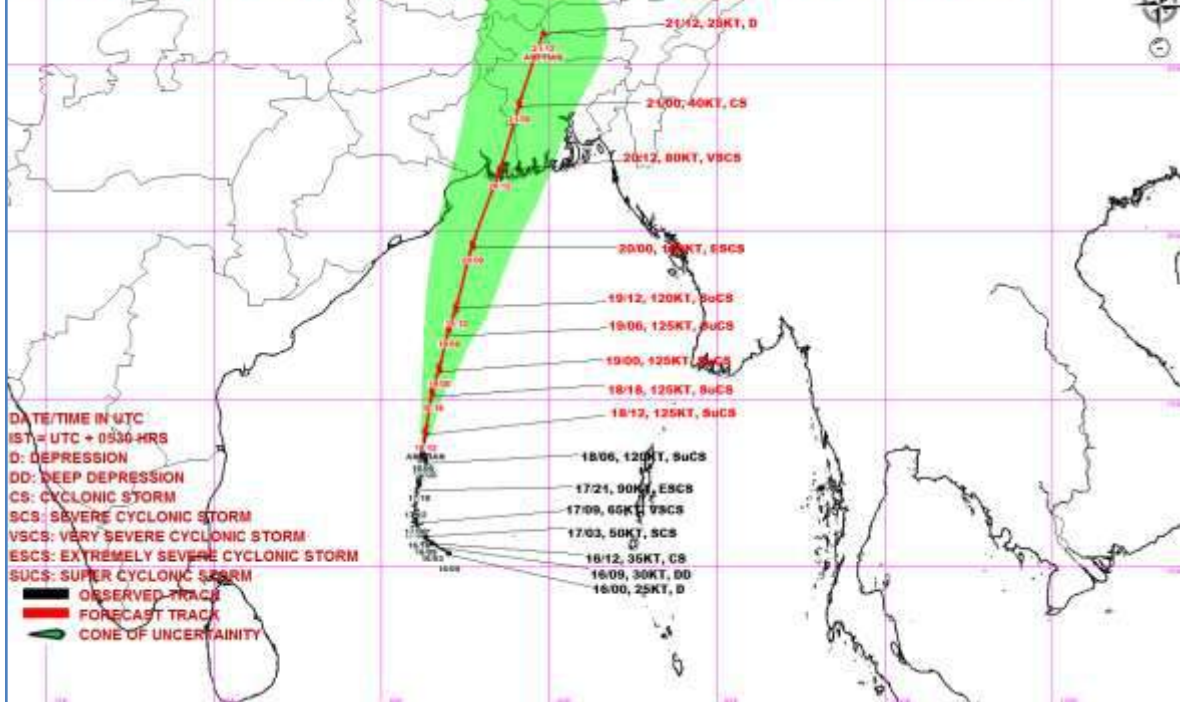
Legend: WCB – Westcentral Bay of Bengal

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

OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF SUPER CYCLONE, AMPHAN OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 18TH MAY, 2020



OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF SUPER CYCLONE, AMPHAN OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 18TH MAY, 2020



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.

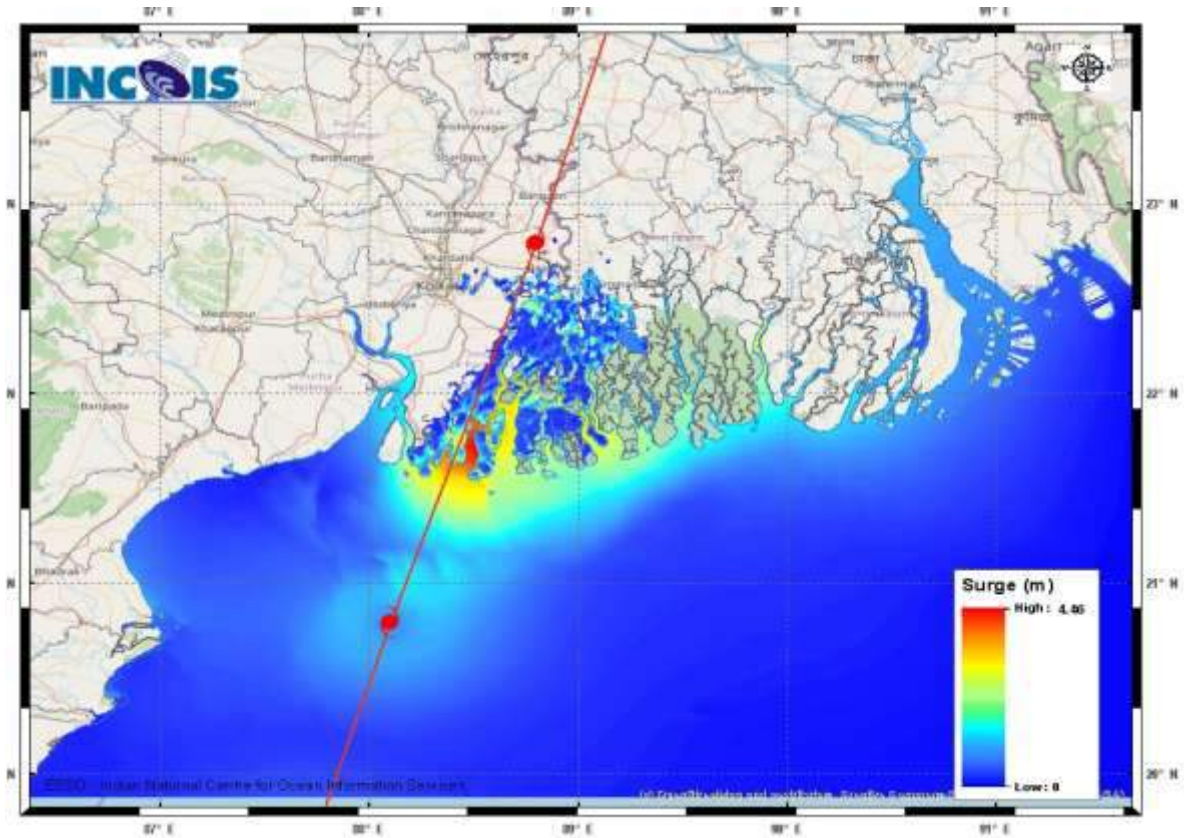


Figure: Storm Surge forecast from INCOIS issued at 1837 IST of 18th May 2020

Storm Surge of about 4-6 meters above Astronomical Tide is likely to inundate low lying areas of south & north 24 Parganas and about 3-4 meters over the low lying areas of East Medinipur District of West Bengal during the time of Landfall.

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