



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

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

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**Sub: Cyclonic Storm 'JAWAD' over westcentral Bay of Bengal: Cyclone Warning for north Andhra Pradesh and Odisha coasts – Orange Message.**

The **Cyclonic Storm 'JAWAD'** (Pronounced as JOWAD) over westcentral Bay of Bengal moved north-northwestwards with a speed of 22 kmph during past 06 hours and lay centered at 1430 hrs IST of today, the 3<sup>rd</sup> December 2021, over westcentral Bay of Bengal near Lat. 15.0°N and Long. 85.3°E, about 360 km south-southeast of Vishakhapatnam (Andhra Pradesh), 470 km south-southeast of Gopalpur (Odisha), 530 km south-southwest of Puri (Odisha) and 600 km south-southwest of Paradip (Odisha).

It is likely to move north-northwestwards, intensify further and reach west-central Bay of Bengal off north Andhra Pradesh – south Odisha coasts by tomorrow, the 4<sup>th</sup> December morning. Thereafter it is likely to recurve north-northeastwards and move along Odisha coast reaching near Puri around 5<sup>th</sup> December noon. Subsequently it is likely to continue to move north-northeastwards along coastal Odisha towards West Bengal coast.

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
03.12.21/1430	15.0/85.3	60-70 gusting to 80	Cyclonic Storm
03.12.21/1730	15.0/85.1	70-80 gusting to 90	Cyclonic Storm
03.12.21/2330	15.7/84.6	75-85 gusting to 95	Cyclonic Storm
04.12.21/0530	16.5/84.3	80-90 gusting to 100	Cyclonic Storm
04.12.21/1130	17.1/84.2	90-100 gusting to 110	Severe Cyclonic Storm
04.12.21/2330	18.4/84.7	90-100 gusting to 110	Severe Cyclonic Storm
05.12.21/1130	19.5/85.6	80-90 gusting to 100	Cyclonic Storm
05.12.21/2330	20.7/86.9	60-70 gusting to 80	Cyclonic Storm

### **Warnings:**

#### **(i) Rainfall (warning graphics enclosed)**

**3<sup>rd</sup> Dec.:** Light to moderate rainfall at many places with heavy to very heavy rainfall at isolated places over north coastal Andhra Pradesh and south coastal Odisha.

**4<sup>th</sup> Dec.:** Light to moderate rainfall at most places with heavy to very heavy rainfall & extremely heavy falls at isolated places very likely over south coastal Odisha and north coastal Andhra Pradesh and heavy to very heavy rainfall at isolated places over north coastal Odisha & adjoining interior districts and also over coastal districts of Gangetic west Bengal.

**5<sup>th</sup> Dec.:** Light to moderate rainfall at many places with heavy to very heavy rainfall at isolated places likely over Gangetic West Bengal & north Odisha and heavy rainfall at isolated places over Assam & Meghalaya, Mizoram and Tripura.

**6<sup>th</sup> Dec.:** Light to moderate rainfall at many places with heavy to very heavy rainfall at isolated places likely over Assam & Meghalaya, Mizoram and Tripura and heavy rainfall at isolated places over west Bengal.

#### **(ii) Wind warning**

- Squally wind speed reaching 60-70 kmph gusting to 80 kmph over westcentral and adjoining southeast & eastcentral Bay of Bengal during next 06 hours.
- Gale winds speed reaching 70-80 kmph gusting to 90 kmph likely to prevail over westcentral & adjoining northwest Bay of Bengal from today evening and gradually increase becoming 90-100 kmph gusting to 110 kmph over northwest & adjoining west-central Bay of Bengal from the evening of 4<sup>th</sup> December for the subsequent 12 hours.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely to commence along & off North Andhra Pradesh – Odisha coasts from the mid-night of today, the 3<sup>rd</sup> December and increase gradually becoming 80-90 kmph gusting to 100 kmph from 4<sup>th</sup> evening, for the subsequent 12 hours.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph also likely to commence along & off West Bengal coast from 4<sup>th</sup> December evening and become Gale wind speed reaching 60-70 kmph gusting to 80 kmph from the morning of 5<sup>th</sup> December for the subsequent 12 hours.

#### **(iii) Sea condition**

- Sea condition would be High over central Bay of Bengal during next 12 hours and High to very High over west-central & northwest Bay of Bengal from the early morning of 4<sup>th</sup> December for the subsequent 24 hours.

- Sea condition will be rough to very rough over along & off North Andhra Pradesh – Odisha coast from the mid-night of 3<sup>rd</sup> December and become High to very High from 4<sup>th</sup> Afternoon, for the subsequent 12 hours.
- It will be rough to very rough along & off West Bengal coast from 4<sup>th</sup> morning and very rough to High from the same evening for the subsequent 12 hours.

**(iv) Storm surge warning.**

- Storm surge of about 0.5 – 1m height above astronomical tide is likely to inundate low lying areas of coastal districts of Odisha around noon of 5<sup>th</sup> December.
- Fourth December being a new Moon day, higher astronomical tides of about 2-4 m height are likely along the coast of Odisha & West Bengal.

**(v) Fishermen Warning**

Fishermen are advised not to venture into westcentral and adjoining southeast & eastcentral Bay of Bengal on 3<sup>rd</sup> December, over west-central & northwest Bay of Bengal and along & off north Andhra Pradesh - Odisha- West Bengal coasts during 3<sup>rd</sup> - 5<sup>th</sup> December 2021 (Graphics enclosed).

**(vi) Advisory to along & off shore Installations**

The off-shore & alongshore operations along north Andhra Pradesh, Odisha & West Bengal coasts are advised to be judiciously regulated on 3<sup>rd</sup> December and to be suspended on 4<sup>th</sup> & 5<sup>th</sup> December 2021, to ensure safety of life & property.

**(vii) EXPECTED IMPACT & ACTION SUGGESTED (For Srikakulam, Vizianagaram & Vishakhapatnam districts of north Coastal Andhra Pradesh; Gajapati, Ganjam, Puri, Nayagarh, Khurda, Cuttack, Jagatsinghpur & Kendrapara districts of Odisha)**

**A. Impact Expected**

- Major damage to thatched houses/ huts and possible of damage to vulnerable structure.
- Breaking of tree branches, uprooting of trees.
- Minor damage to power and communication lines.
- Localized Flooding, water logging and inundation in low lying areas due to Heavy rain & Tidal waves and closure of underpasses mainly in urban areas of the affected region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in roads of major cities due to water logging leading to delayed travel.
- Minor damage to kutcha roads.
- Localized Landslides/Mudslides
- Damage to horticulture and standing crops in some areas due to inundation. Damage to banana, Papaya & Moringa (Drumstick) trees due to strong winds.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

**B. Action Suggested**

- Total suspension of fishing operations.
- 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.
- Harvest the ripen crops like Paddy & Horticultural crops and also secure the harvested crops securely from the damage due to rain and strong winds.

Next Bulletin will be issued at 2030 hrs IST of 3<sup>rd</sup> December 2021.

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

Copy to: ACWC Kolkata/ CWC Vishakhapatnam/CWC Bhubaneswar/RMC Guwahati

*LEGEND: Heavy Rainfall: 64.5 to 115.5mm, Very Heavy Rainfall: 115.6 to 204.4mm Most Places: more than 76% of total stations, Isolated Places: Less than 25% of total stations*

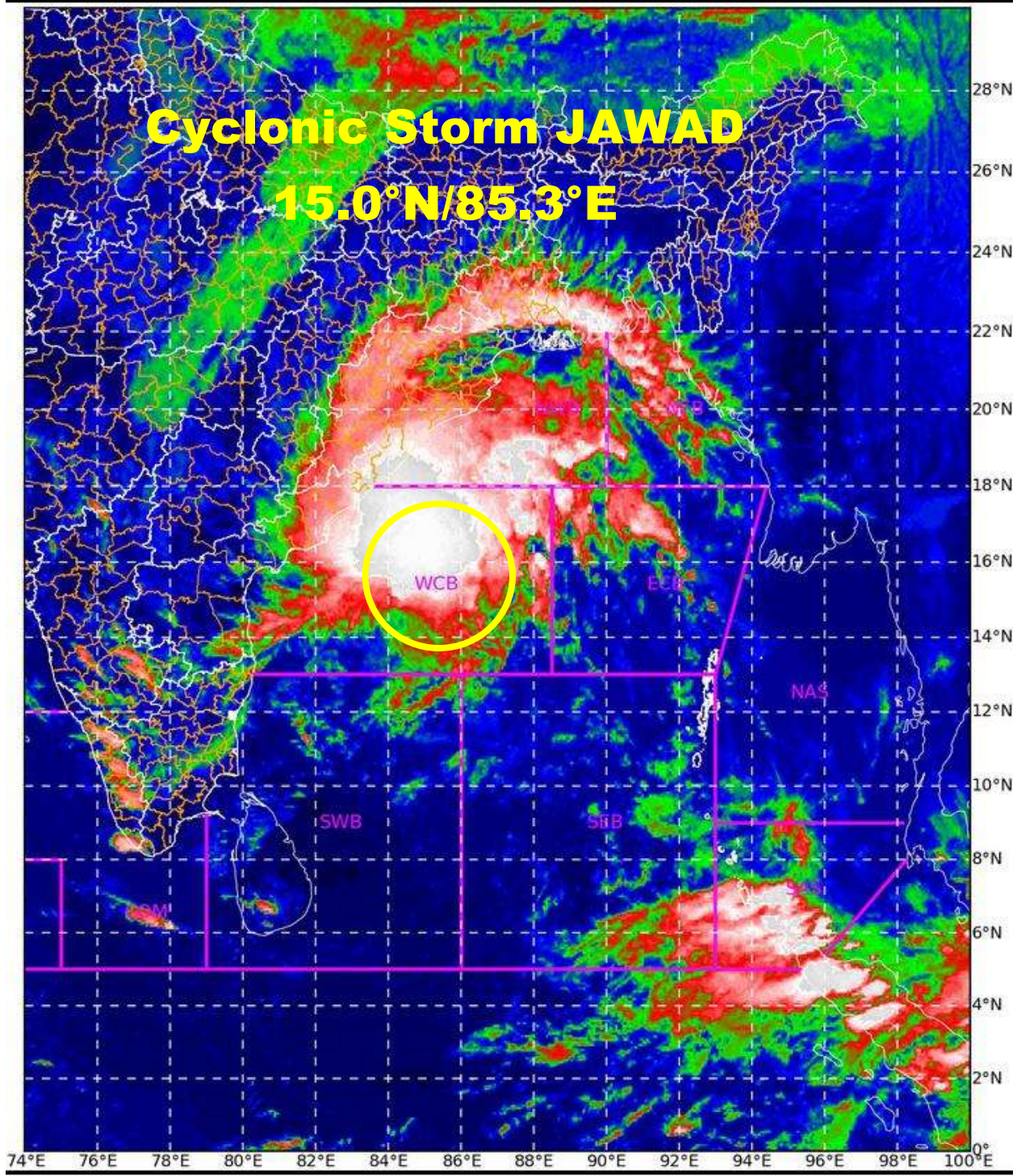
SAT : INSAT-3D IMG

03-12-2021/(0930 to 0956) GMT

IMG\_TIR1\_TEMP 10.8 um

03-12-2021/(1500 to 1526) IST

L1C Mercator



# Cyclonic Storm JAWAD

## 15.0°N/85.3°E

WCB

ECB

NAS

SWB

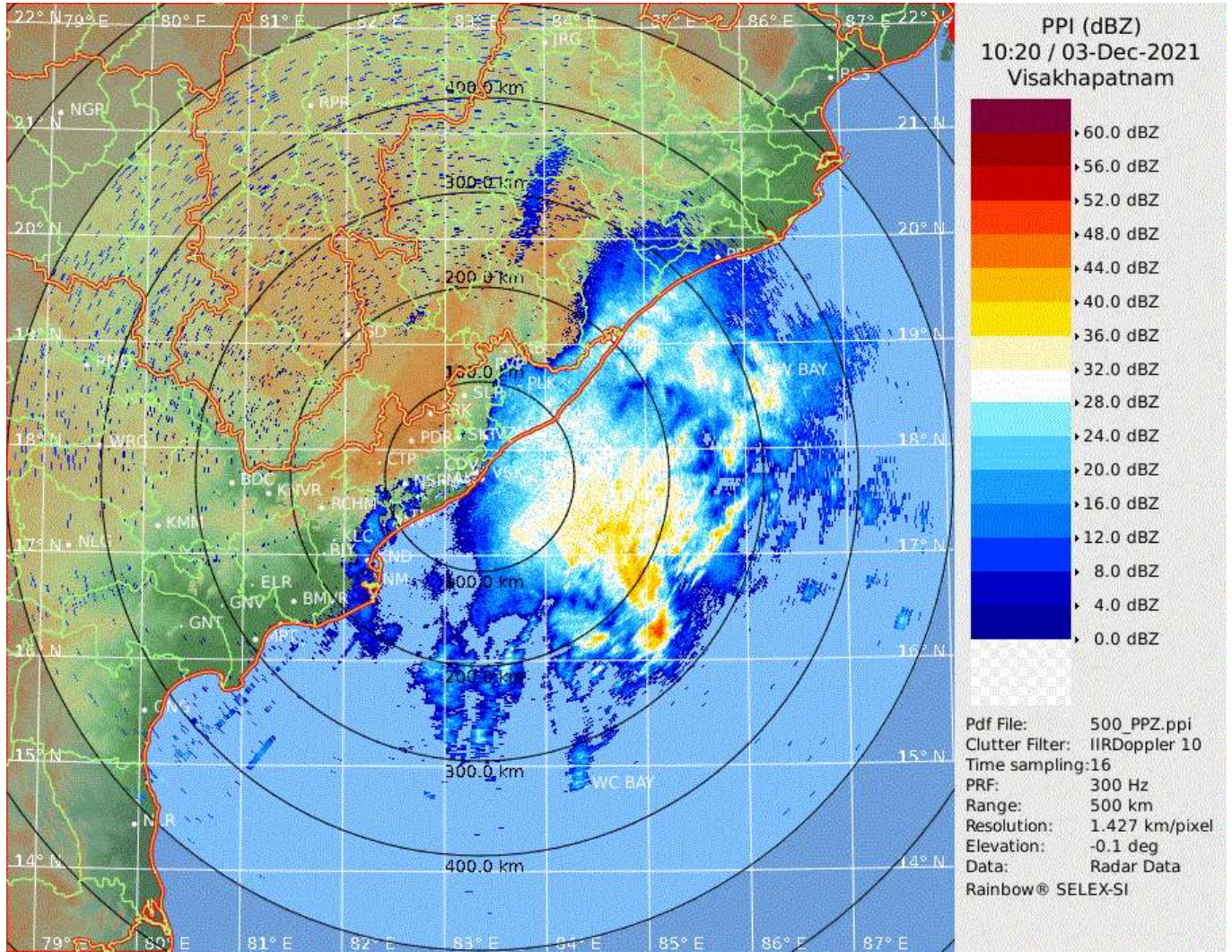
SIB

74°E 76°E 78°E 80°E 82°E 84°E 86°E 88°E 90°E 92°E 94°E 96°E 98°E 100°E



Celsius  
IMD, DELHI

10 0 -10 -20 -30 -40 -50 -60 -70



**Doppler Weather RADAR imagery from Vishakhapatnam, depicting the approaching convective cloud towards north Andhra Pradesh coast.**



## OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM 'JAWAD' OVER WESTCENTRAL BAY OF BENGAL BASED ON 0600 UTC OF 3<sup>rd</sup> DECEMBER, 2021



**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

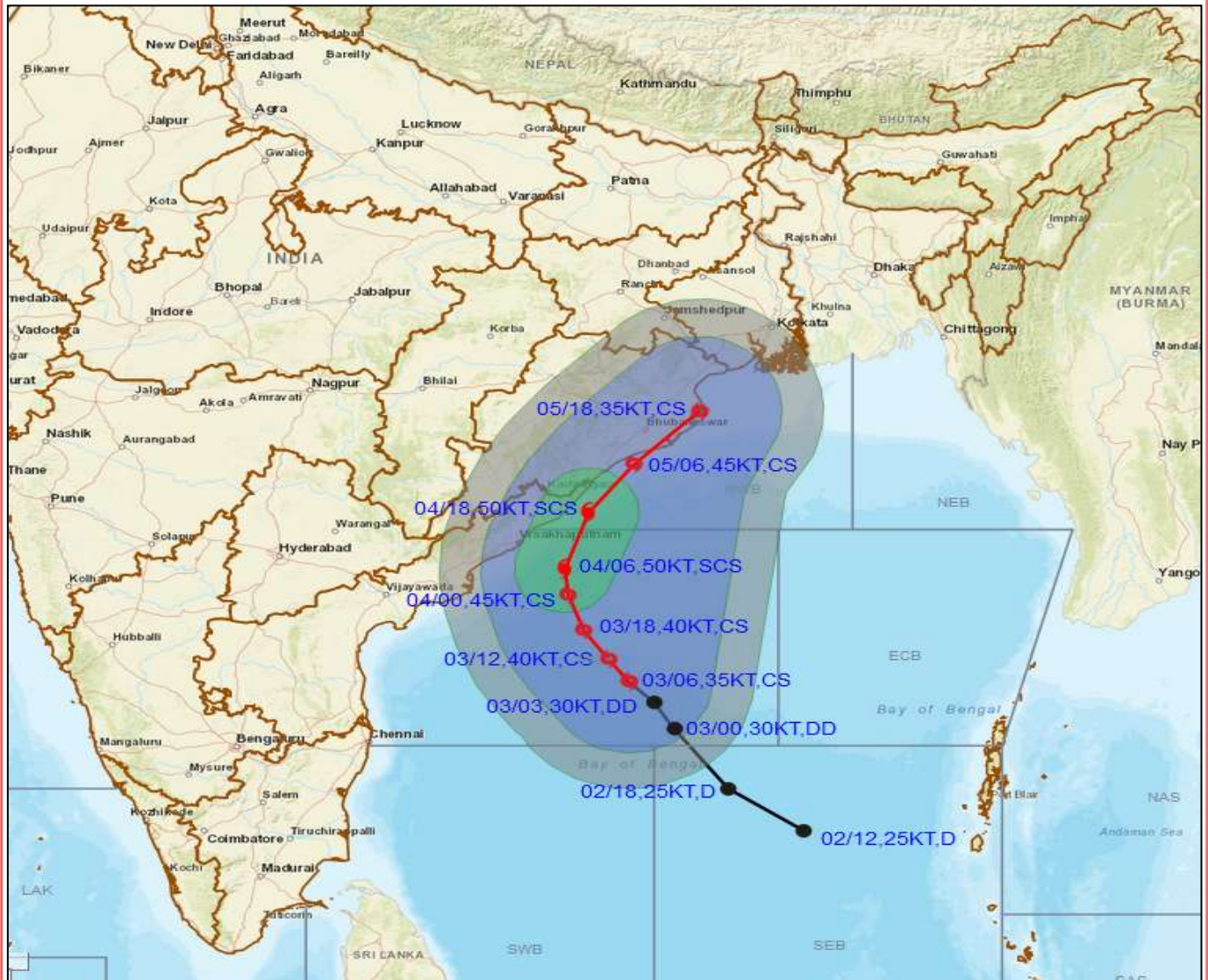
OBSERVED TRACK

FORECAST TRACK

CONE OF UNCERTAINTY



## OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM 'JAWAD' OVER WESTCENTRAL BAY OF BENGAL BASED ON 0600 UTC OF 3<sup>rd</sup> DECEMBER, 2021



**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)**

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**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

**AREA OF MAXIMUM SUSTAINED WIND SPEED:**

■ 28-33 KT (52-61 KMPH)

■ 34-49 KT (62-91 KMPH)

■ 50-63 KT (92-117 KMPH)

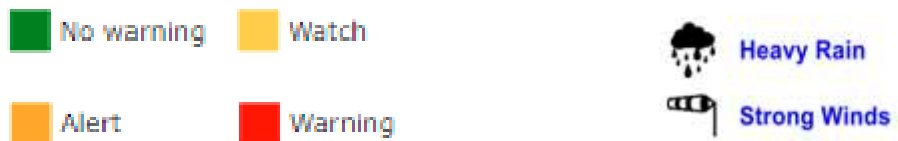
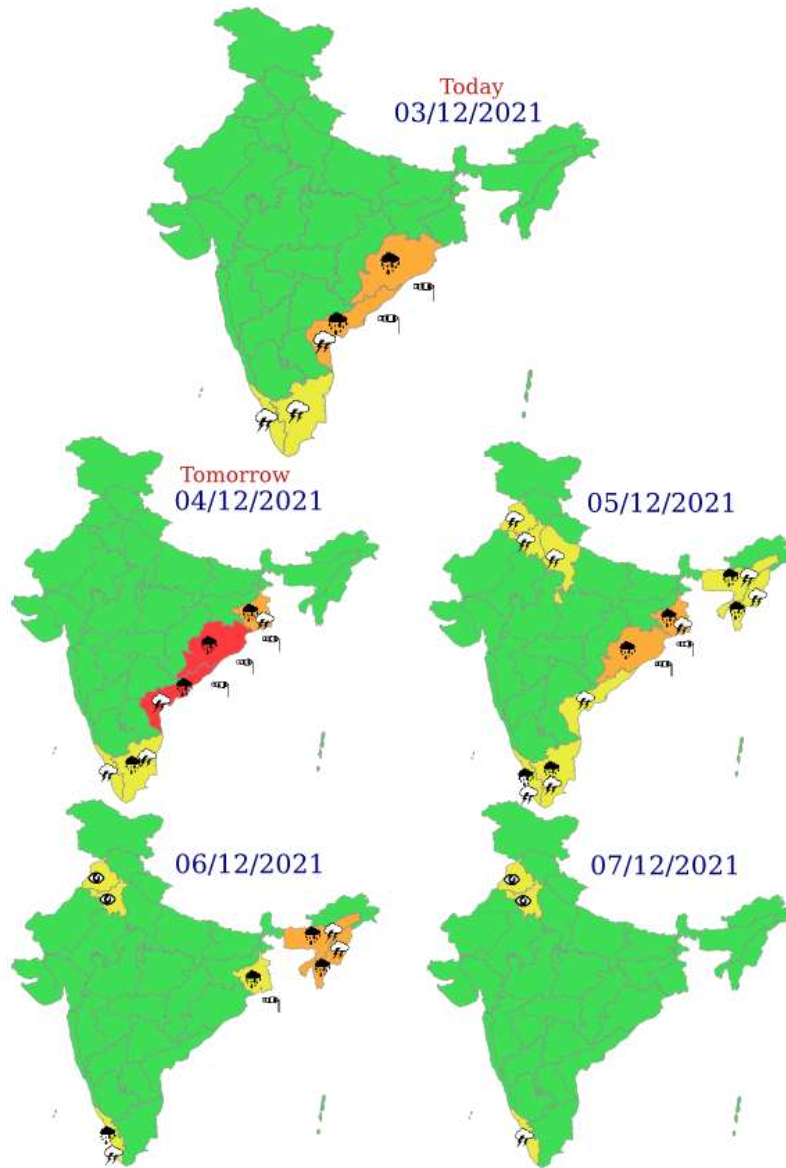
■  $\geq 64$  ( $\geq 118$  KMPH)

### 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
$\geq 64$ ( $\geq 118$ )	Phenomenal	Total suspension of fishing operations



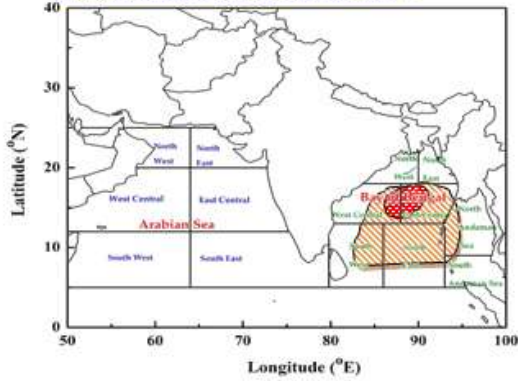
# Sub-division wise heavy rainfall warning for next 5 days



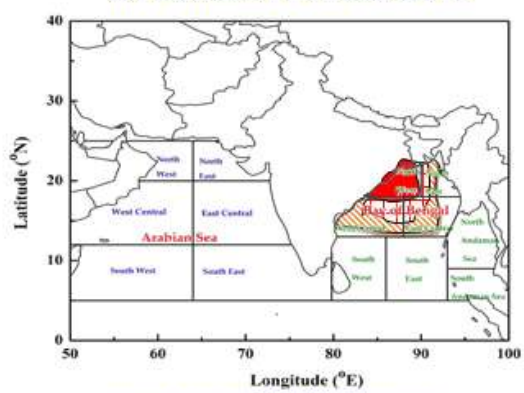
# Fishermen Warning

## INDIA METEOROLOGICAL DEPARTMENT FISHERMAN WARNING FOR BAY OF BENGAL AND ARABIAN SEA

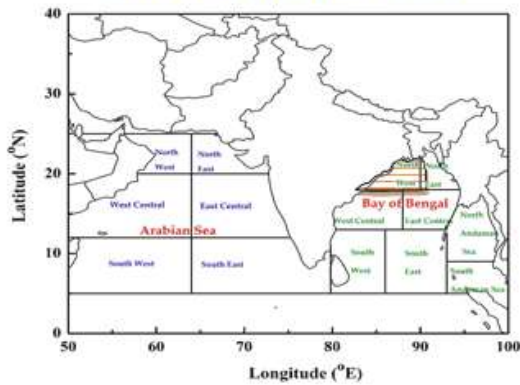
DAY-1: 03-12.2021/0600 UTC TO 04.12.2021/0600 UTC



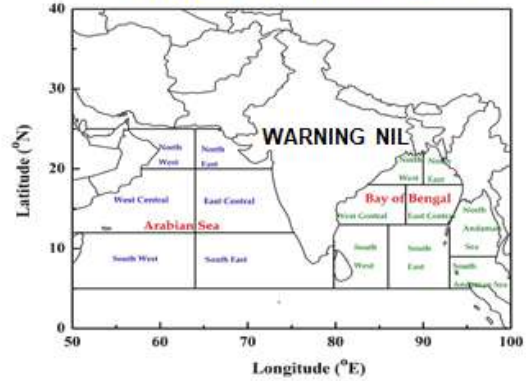
DAY-2: 04.12.2021/0600 UTC TO 05.12.2021/0600 UTC



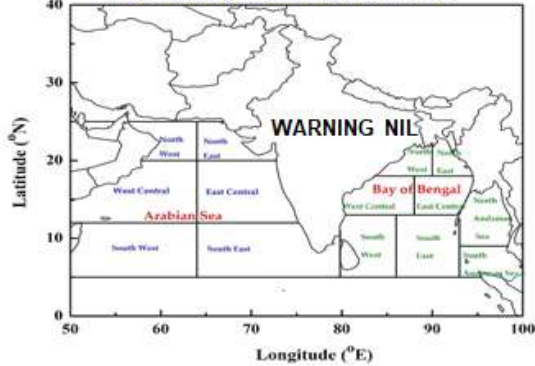
DAY-3: 05.12.2021/0600 UTC TO 06.12.2021/0600 UTC




DAY-4: 06.12.2021/0600 UTC TO 07.12.2021/0600 UTC



DAY-5: 07.12.2021/0600 UTC TO 08.12.2021/0600 UTC



### AREA UNDER FISHERMEN WARNING

-  40-50 KMPH G TO 60 KMPH (SQ.WEATHER)
-  45-55 KMPH GUSTING TO 65 KMPH
-  50-60 KMPH G TO 70 KMPH
-  60-70 KMPH G TO 80 KMPH
-  70-80 KMPH G TO 90 KMPH
-  80-90 KMPH G TO 95 KMPH
-  90-100 KMPH G TO 110 KMPH