



NCHM/NWFWC/Weather Reports/2021-22/29

Date: 8th December 2021

WEATHER INFORMATION REPORT

1	Type of event:	Cyclonic storm “JAWAD”
2	Date:	1th December 2021 - 6th December 2021.

Summary (Information source: Indian Meteorological Department):

A low pressure formed on 1 December 2021 over the central part of the Andaman Sea intensified into a cyclonic storm ‘JAWAD’ (pronounced as JOWAD) on 3rd December at 12:00 PM BST over the west-central Bay of Bengal. It weakened into depression as it reached near Puri around 5th December noon. It then tracked north-north eastwards along the Odisha coast towards West Bengal coast and weakened into a low pressure area on 6th December at 9:00 AM BST. Details of the cyclone track forecast is given in Annexure 2, below.



Figure 1: IMD Observed track of cyclone “JAWAD”



Model forecasts:

a) Medium range model forecast (More than 3 days ahead forecast)

The majority of the medium-range models forecasted rainfall over the country from the 5th to the 7th of December. The ECMWF and NCUM models predicted moderate rainfall in a few locations in southern and eastern dzongkhags. Models such as NEPS and GFS, on the other hand, predicted light to very light rain.

b) Short range model forecast (1-3 days ahead)

The WRF model forecasted light rain in most parts of the country. While a few places in the southern and eastern areas were forecasted to receive moderate rain.

Details of the rainfall forecast are given in Annexure 1.

Observation:

Very light rain was observed in one/two places of high altitude areas on 6 and 7 December due to a weak western disturbance.



Annexure 1

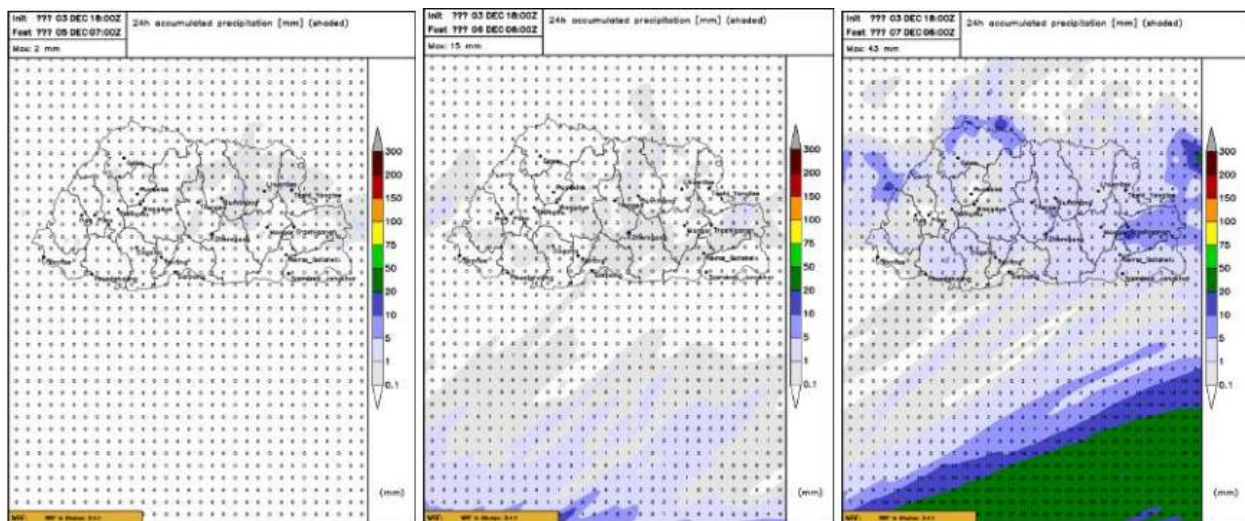
Weather Model Rainfall forecast checklist:

a) Medium Range Forecast

<u>Estimated rainfall Checklist</u>				
Prepare date: 1st December 2021 Forecast date: 5th till 7th December 2021				
	NWP Model Forecast <u>5th December till 7th December</u>			
	NCUM	NEPS	GFS	ECMWF
Northern	Light rain	Light rain	Very Light rain	Light rain/snow
Eastern	Light rain	Light rain	Very Light rain	Light to moderate
Central	Light rain	Light rain	Very Light rain	Light
Southern	Light - moderate rain	Light - moderate rain	Very Light rain	Light to moderate

b) Short range forecast

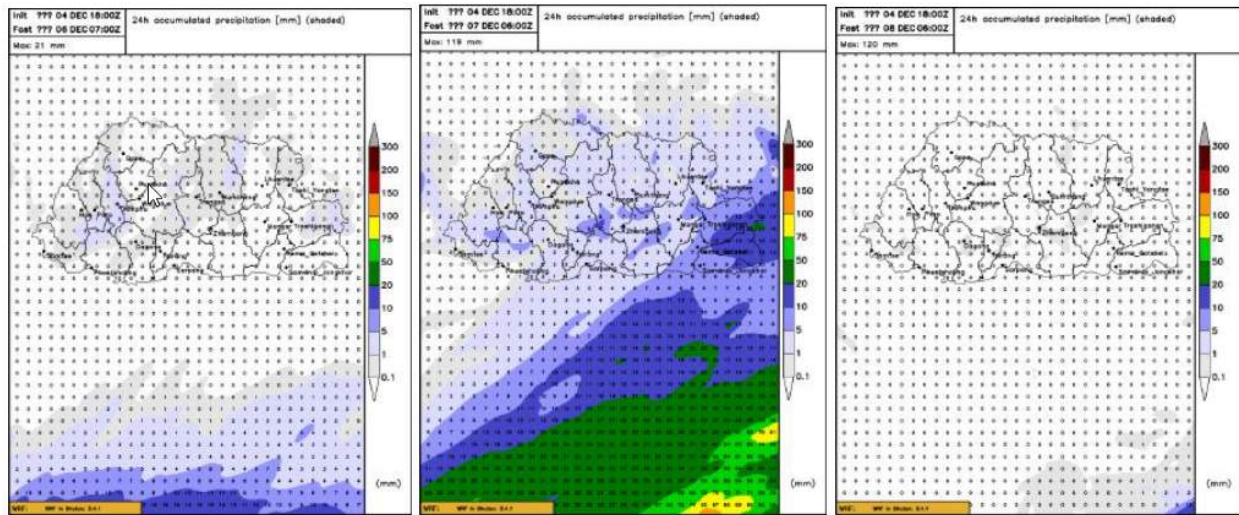
i) WRF model forecast



WRF 4th December, 18:00 UTC forecast for 5, 6 and 7 December 2021



ཀྲུལ་ཡོངས་ཁྱད་ཕྱད་དང་གནམ་གཤིས་རིག་པའི་ལྷན་ཁག།
 National Center for Hydrology and Meteorology
 Royal Government of Bhutan



WRF 5th December, 18:00 UTC forecast for 6, 7 and 8 December 2021

ii) Other Sources

<u>Estimated rainfall Checklist</u>					
Prepare date: 4th December 2021					
Forecast date: 5th till 7th December 2021					
	NWP Model Forecast				
	<u>5th December till 7th December</u>				
	NCUM	NEPS	GFS	ECMWF	Other model (Optional)
Northern	Light rain	Light rain	Very Light rain	Light rain	
Eastern	Light rain	Light rain	Very Light rain	Light rain	
Central	Light rain	Light rain	Very Light rain	Light rain	
Southern	Light to moderate rain	Light rain	Very Light rain	Light rain	



Annexure 2

Indian Meteorological Department Cyclone Track:

1) 12:00 UTC of 2nd December

The Well Marked Low Pressure Area over southeast Bay of Bengal moved west-northwestwards, concentrated into a Depression and lay centered at 1730 hrs IST of today, the 2nd December 2021, over southeast Bay of Bengal near Lat. 11.0°N and Long. 89.0°E, about 960 km south-southeast of Visakhapatnam (Andhra Pradesh), 1020 km south-southeast of Gopalpur (Odisha) & 1060 km south-southeast of Paradip (Odisha).

It is likely to move northwestwards and intensify into a Cyclonic Storm over central parts of the Bay of Bengal during next 24 hours. It is likely to reach west-central Bay of Bengal off north Andhra Pradesh – south Odisha coast around 4th December morning. Thereafter it is likely to move north - northeastwards.



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY
OF DEPRESSION OVER SOUTHEAST BAY OF BENGAL BASED ON 1200 UTC
OF 2nd 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 (48-63 KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

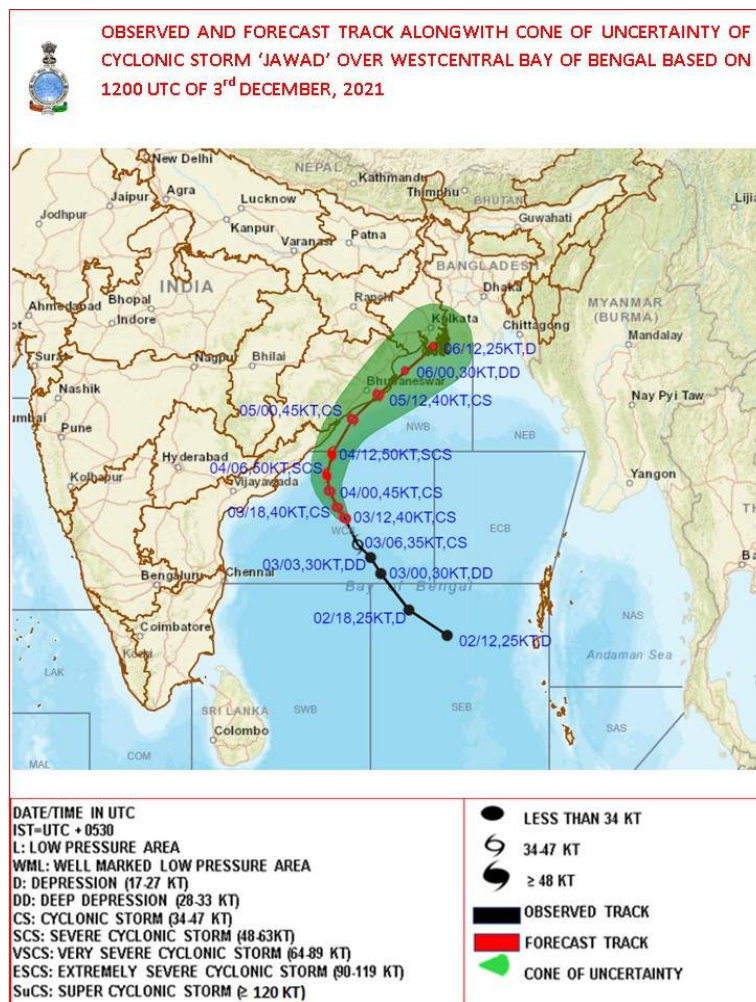
● LESS THAN 34 KT
● 34-47 KT
● ≥ 48 KT
— OBSERVED TRACK
— FORECAST TRACK
● CONE OF UNCERTAINTY

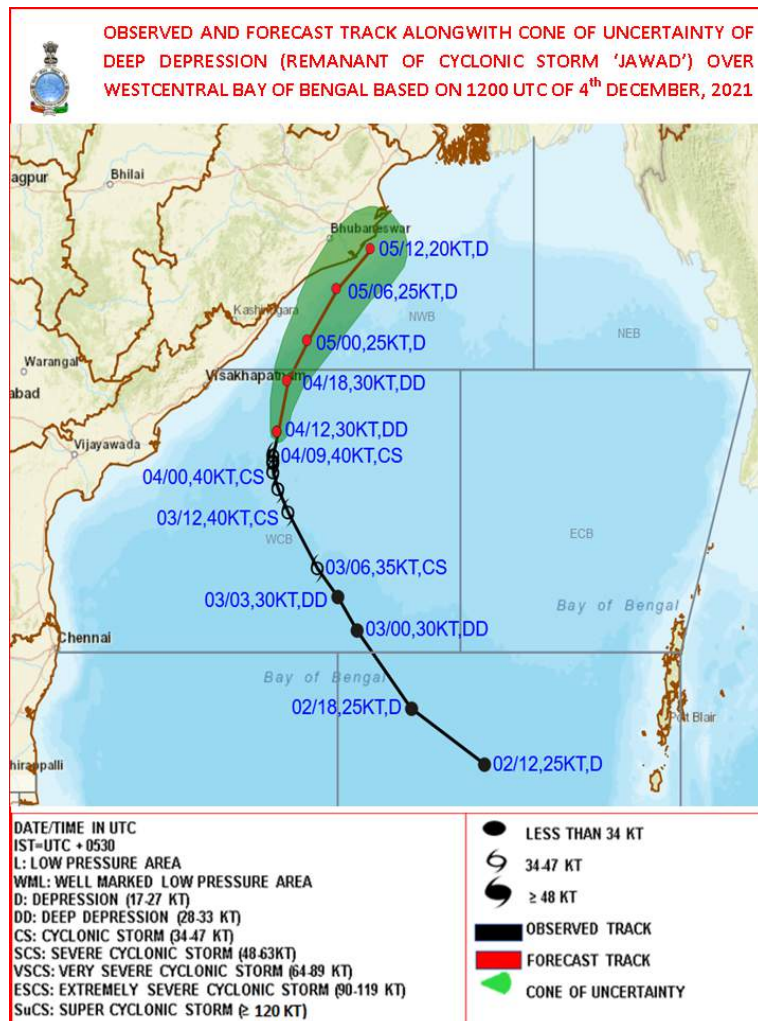


2) 12:00 UTC of 3rd December

The Cyclonic Storm 'JAWAD' (Pronounced as JOWAD) over west central Bay of Bengal continued to move north-northwestwards with a speed of 20 kmph during past 06 hours and lay centered at 1730 hrs IST of today, the 3rd December 2021, over west central Bay of Bengal near Lat. 15.5N and Long. 85.0°E, about 300 km south-southeast of Visakhapatnam (Andhra Pradesh), 420 km nearly south of Gopalpur (Odisha), 480 km south-southwest of Puri (Odisha) and 560 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 4th December morning. Thereafter it is likely to recurve north-northeast wards and move along the Odisha coast reaching near Puri around 5th December noon. Subsequently it is likely to continue to move north-northeast wards along coastal Odisha towards West Bengal coast.







4) 12:00 UTC of 5th December

The Depression (remnant of Cyclonic Storm ‘JAWAD’) over northwest Bay of Bengal near north Odisha coast moved northeast wards with a speed of 10 kmph during past 06 hours, and lay centered at 2330 hrs IST of 05th December 2021, over northwest Bay of Bengal close to north Odisha coast near Lat. 20.6°N and Long. 87.3°E, about 70 km east-northeast of Paradip (Odisha), 65 km east-southeast of Chandbali (Odisha) and 140 south-southwest of Digha (West Bengal)

It is likely to move northeast wards, towards West Bengal coast and weaken into a well marked low pressure area during next 06 hours.

