

SPECIALBULLETIN-13

Date: 4th December 2021

Time: 0600 Hrs IST

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 continued to move north-northwestwards with a speed of 06 kmph during past 06 hours and lay centered at 0230 hrs IST of today, the 04th December 2021, over westcentral Bay of Bengal near Lat. 16.0°N and Long. 84.9°E, about 250 km southeast of Vishakhapatnam (Andhra Pradesh), 360 km south of Gopalpur (Odisha), 430 km south-southwest of Puri (Odisha) and 510 km south-southwest of Paradip (Odisha).

It is likely to move north-northwestwards and reach Westcentral Bay of Bengal off north Andhra Pradesh–south Odisha coasts by 04th December morning. Thereafter, it is likely to recurve north-northeastwards, move along Odisha coast reaching near Puri around 5th December noon and weaken gradually. Subsequently, it is likely to continue to move north-northeastwards along Odisha coast towards West Bengal coast and weaken further.

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
04.12.21/0230	16.0/84.9	70-80 gusting to 90	CYCLONIC STORM
04.12.21/0530	16.5/84.8	75-85 gusting to 95	CYCLONIC STORM
04.12.21/1130	17.1/84.7	75-85 gusting to 95	CYCLONIC STORM
04.12.21/1730	17.9/84.7	70-80 gusting to 90	CYCLONIC STORM
04.12.21/2330	18.5/84.9	70-80 gusting to 105	CYCLONIC STORM
05.12.21/1130	19.6/85.8	65-75 gusting to 90	CYCLONIC STORM
05.12.21/2330	20.6/86.8	45-55 gusting to 65	DEPRESSION

Details Forecast and warning as follows:

Rainfall Forecast and warnings:

Day	Forecast	Heavy Rainfall Warning
Day-1 (Valid upto 0830 Hrs IST of 04.12.21):	Light to moderate rain or thundershower very likely to occur at many places over the districts of coastal Odisha & at a few places over rest districts Odisha.	Yellow Warning (Be updated) Heavy to very heavy rainfall very likely to occur at one or two places over the districts of Ganjam, Gajapati with heavy rainfall very likely to occur at one or two places over the districts of Koraput, Rayagada, Puri Jagatsinghpur and Kendrapada.
Day-2 (Valid from 0830 Hrs IST of 04.12.21 to 0830 Hrs IST of 05.12.21):	Light to moderate rain or thundershower very likely to occur at most places over districts of coastal Odisha & at many places over the districts of interior Odisha	Red warning (Take action) Heavy to very heavy rainfall very likely to occur at a few places with isolated extremely heavy falls (more than 20 cm) over the districts of Gajapati, Ganjam, Puri, and Jagatsinghpur. Orange warning (Be Prepared) Heavy to very heavy rainfall very likely to at one or two places over the districts of Kendrapada, Cuttack, Khordha, Nayagarh, Kandhamal, and Rayagada Yellow Warning (Be updated)

		Heavyrainfall very likely to occur at isolated places over the districts of Balasore, Bhadrak, Jajpur, Koraput and Malkangiri.
Day-3 (Valid from 0830 Hrs IST of 05.12.21 to 0830 Hrs IST of 06.12.21):	Light to moderate rain or thundershower very likely to occur at most places over the districts of north coastal Odisha and at many places over rest districts of Odisha	Orange warning (Be Prepared) Heavy to very heavy rainfall very likely to occur at one or two places over the districts of Mayurbhanj, Balasore, Bhadrak, Kendrapada, Jagatsinghpur, Jajpur, Cuttack, and Puri. Yellow Warning (Be updated) Heavyrainfall very likely to occur at isolated places over the districts of Keonjhar, Angul, Dhenkanal, Nayagarh, Khordha, Ganjam and Gajapati
Day-4 (Valid from 0830 Hrs IST of 06.12.21 to 0830 Hrs IST of 07.12.21):	Light to moderate rain or thundershower very likely to occur at isolated places over the districts of Odisha	NIL

Wind warning:

Gale wind, speed reaching 70-80 kmph gusting to 90 kmph, prevails over westcentral Bay of Bengal. It would gradually increase becoming 75-85 kmph gusting to 95 kmph over westcentral and adjoining northwest Bay of Bengal from the morning till evening of 4th December. It would decrease becoming 70-80 gusting to 90 kmph from evening of 4th to morning of 5th December.

Squally winds, speed reaching 45-55 kmph gusting to 65 kmph likely to prevail along & off North Andhra Pradesh–Odisha coasts till forenoon of 4th. It will gradually increase becoming 55-65 gusting to 75 kmph till midnight of 4th and Gale Winds 65-75 kmph gusting to 85 kmph from midnight of 4th to noon of 5th. It would decrease thereafter gradually.

(For district wise wind warning kindly see the attached maps.)

Sea conditions

High Sea conditions likely to prevail over westcentral & adjoining northwest Bay of Bengal during next 24 hours. It is likely to be Very Rough to High over northwest Bay of Bengal from midnight of 04th till forenoon of 5th December and become rough to very rough thereafter.

Rough to Very Rough Sea conditions will prevail along & off North Andhra Pradesh – Odisha coasts and become High to very High from 4th Afternoon for the subsequent 12 hours.

Storm surge warning. (Graphics enclosed)

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 5th 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.

Fishermen Warning:

Fishermen are advised not to venture into westcentral & northwest Bay of Bengal and along & off north Andhra Pradesh-Odisha-West Bengal coasts till 05th December 2021

Port warning:

Keep Hoisted Danger Signal No.7 (D-7) at Gopalpur and Puri ports by Danger Signal No.7 (D-7) and Local Warning Signal No. 4 (LW-4) at Dhamara and Paradeep ports of Odisha.

Expected impact and action suggested:

Districts	Expected Impact	Action suggested
Gajapati, Ganjam, Puri, Khordha, Jagatsinghpur, Kendrapada and Cuttack	<p>i) Major damage to thatched houses/huts and vulnerable structures.</p> <p>ii) Breaking of tree branches, uprooting of trees.</p> <p>iii) Minor damage to power and communication lines.</p> <p>iv) Localized Flooding of roads, inundation and water logging in low lying areas and closure of underpasses mainly in urban areas of the affected region.</p> <p>v) Occasional reduction in visibility due to heavy rainfall.</p> <p>vi) Disruption of traffic in major cities due to water logging in roads leading to increased travel time.</p> <p>viii) Localized Landslides/Mudslides in hilly areas</p> <p>ix) Damage to horticulture and standing crops in some areas due to inundation. Damage to banana, Papaya & Moringa (Drumstick) trees.</p> <p>x) It may lead to riverine flooding in some river catchments (Nagavali, Rushikulya, Vanshadhara) (for riverine flooding please visit Web page of CWC)</p>	<p>i) Total suspension of fishing operations.</p> <p>ii) Check for traffic congestion on your route before leaving for your destination.</p> <p>iii) Follow any traffic advisories that are issued in this regard.</p> <p>iv) Avoid going to areas that face the water logging problems often.</p> <p>v) Avoid staying in vulnerable structure.</p> <p>vi) Harvest the ripen crops like Paddy & Horticultural crops and also secure the harvested crops securely from the damage due to rain and strong winds.</p> <p>vii) Harvest of matured paddy crop and the harvested paddy should be shifted to safer places. Also harvest the rabi vegetables like cauliflower and cabbage if heads are ready to use.</p> <p>viii) Do arrangement for Drainage of excess water from standings crops in growing stage and vegetable fields.</p> <p>ix) Postpone sowing of rabi crop like Green gram, black gram and Mustard and vegetables like potato, Onion and coriander.</p> <p>x) Provide support to young fruit plants like Papaya and Banana and vegetables like ridge gourd. Cover the vegetable nursery with white polythene.</p> <p>xi) Keep the livestock indoors during rainfall if possible keep them loose inside the shed. Keep feed for 3-5 days, in case of any emergency</p>

**Balasore, Bhadrak
Jajpur, Malkangiri
Nayagarh,
Kandhamal,
Rayagada Koraput,
Mayurbhanj
Keonjhar, Angul, and
Dhenkanal**

i) Breaking of tree branches
iii) Localized Flooding of roads, inundation and water logging in low lying areas and closure of underpasses mainly in urban areas of the affected region.
v) Occasional reduction in visibility due to heavy rainfall.
vi) Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
vii) Minor Damage to Kutchha roads and vulnerable structure and wall collapsed of vulnerable kutchha houses
xi) Localized Landslides/Mudslides in hilly areas
Damage to horticulture and standing crops in some areas due to inundation. Damage to banana, Papaya & Moringa (Drumstick) trees.

i) Check for traffic congestion on your route before leaving for your destination.
iii) Follow any traffic advisories that are issued in this regard.
iv) Avoid going to areas that face the water logging problems often.
v) Avoid staying in vulnerable structure.
vi) Harvest the ripen crops like Paddy & Horticultural crops and also secure the harvested crops securely from the damage due to rain and strong winds.
vii) Harvest of matured paddy crop and the harvested paddy should be shifted to safer places. Also harvest the rabi vegetables like cauliflower and cabbage if heads are ready to use.
viii) Do arrangement for Drainage of excess water from standings crops in growing stage and vegetable fields.
ix) Postpone sowing of rabi crop like Green gram, black gram and Mustard and vegetables like potato, Onion and coriander.
x) Provide support to young fruit plants like Papaya and Banana and vegetables like ridge gourd. Cover the vegetable nursery with white polythene.
xi) Keep the livestock indoors during rainfall if possible keep them loose inside the shed. Keep feed for 3-5 days, in case of any emergency

Advisory to along & off shore Installations

The off-shore & alongshore operations along Odisha coast (Viz., All ports of Odisha, ITR Chandipur, Army Defence College, Gopalpur, INS Chilika, Chilika Development Authority establishment, ICZMP activity, Bhitarkanika wildlife sanctuary, Kendrapada, ONGC Odisha etc) are advised to be judiciously regulated on 3rd December and to be suspended on 4th December 2021, to ensure safety of life & property.

N.B: 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. PROBABILISTIC FORECAST: UNLIKELY =< 25%, LIKELY 26-50%, VERY LIKELY 51-75%, MOST LIKELY > 75%

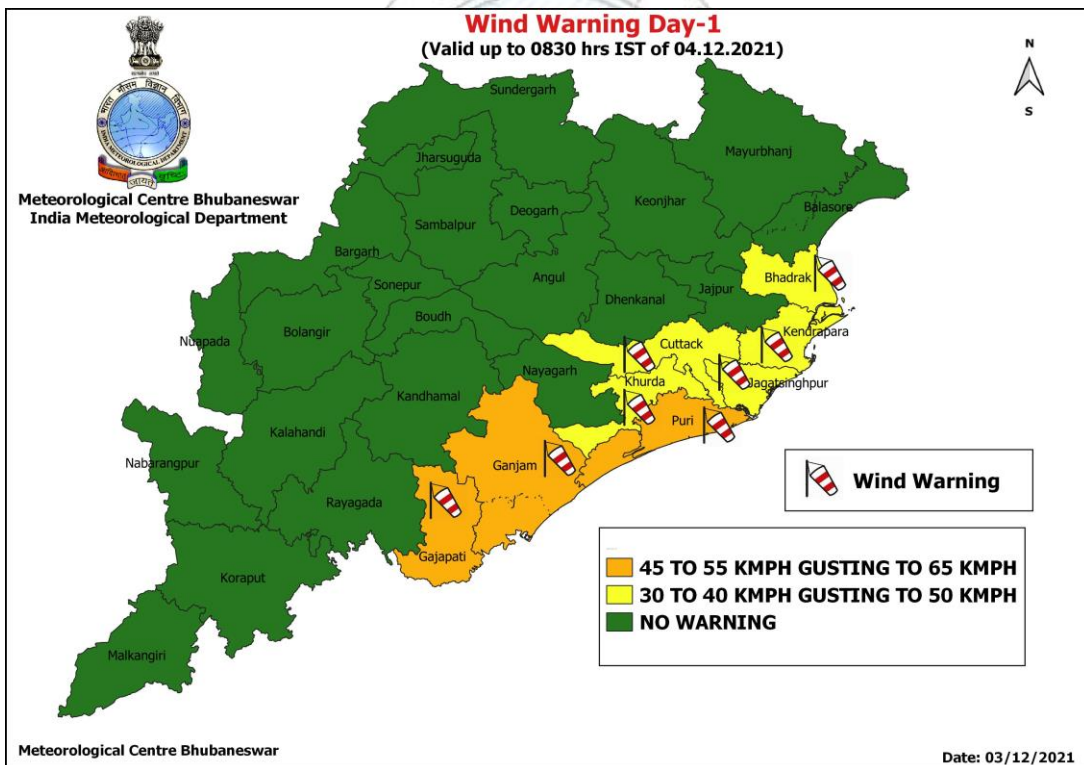
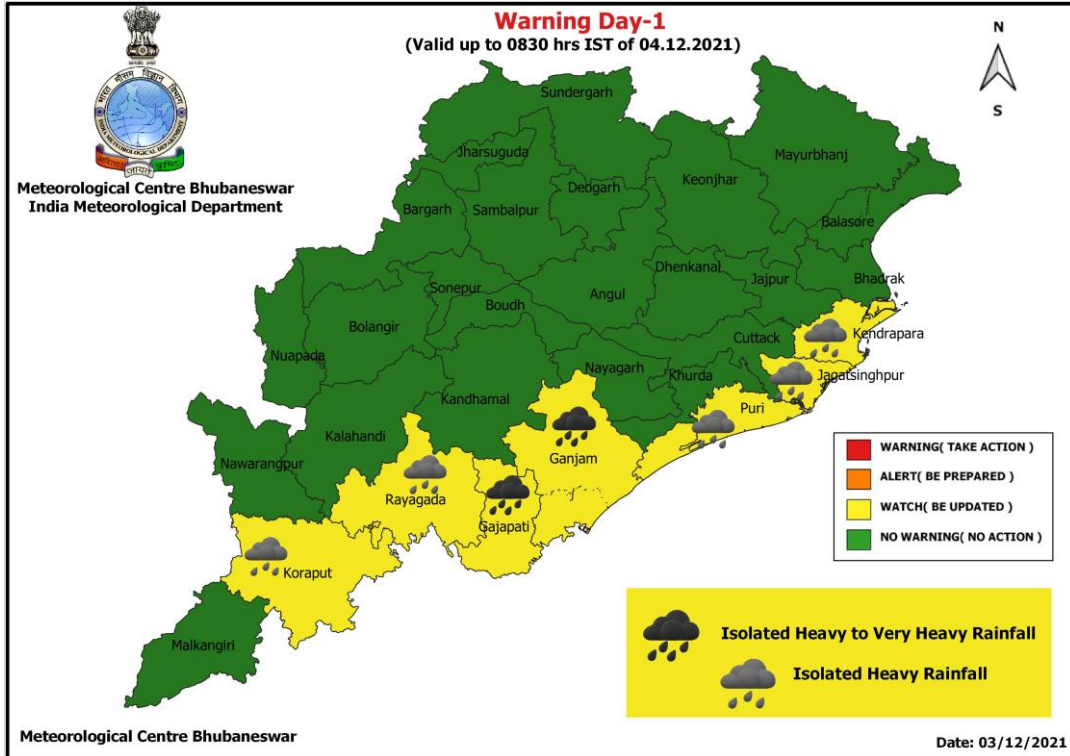
Dr.H.R. Biswas,
Head & Scientist-E,
Met .Centre Bhubaneswar

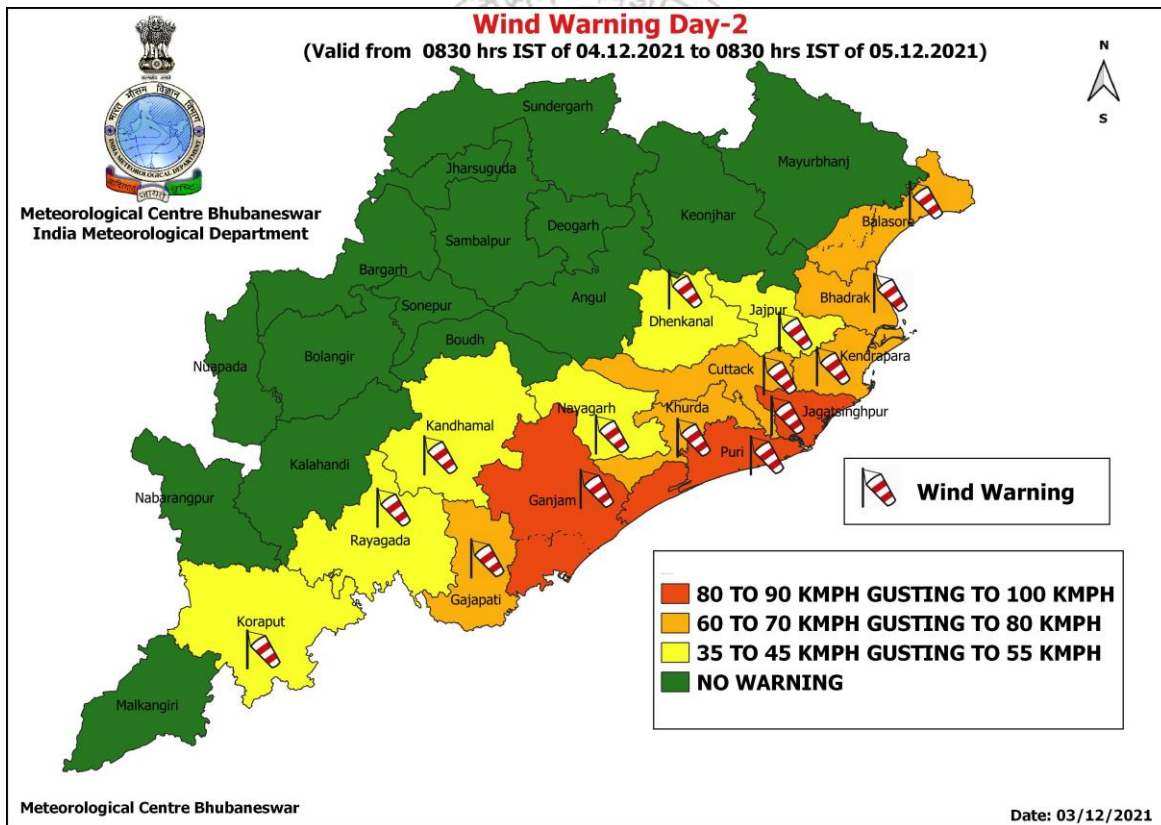
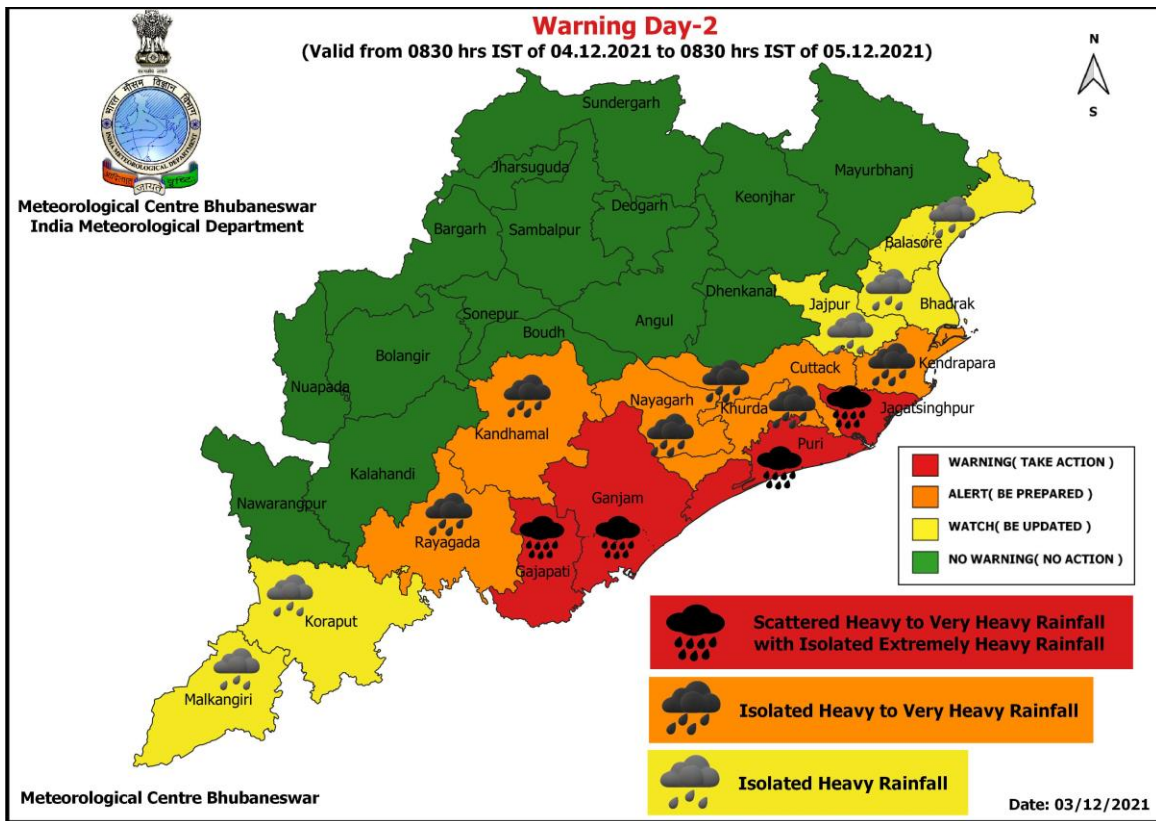
To

1. CHIEF SECRETARY , GOVT. OF ODISHA
2. PRINCIPAL SECRETARY, REVENUE & DISASTER MANAGEMENT, GOVT. OF ODISHA.
3. PRINCIPAL SECRETARY, DEPT. OF AGRICULTURE, GOVT. OF ODISHA.
4. PRINCIPAL SECRETARY, DEPARTMENT OF WATER RESOURCES, GOVT. OF ODISHA.
5. SPECIAL RELIEF COMMISSIONER (SRC), GOVT. OF ODISHA BHUBANESWAR.
6. REVENUE SECRETARY, GOVT. OF ODISHA, BHUBANESWAR.
7. M.D., OSDMA, GOVT. OF ODISHA, BHUBANESWAR.
8. RDC, CENTRAL DIVISION/ SOUTHERN DIVISION/ NORTHERN DIVISION.
9. AIR CUTTACK / DOORDARSHAN.



Warning Maps for Day-1 to Day-3



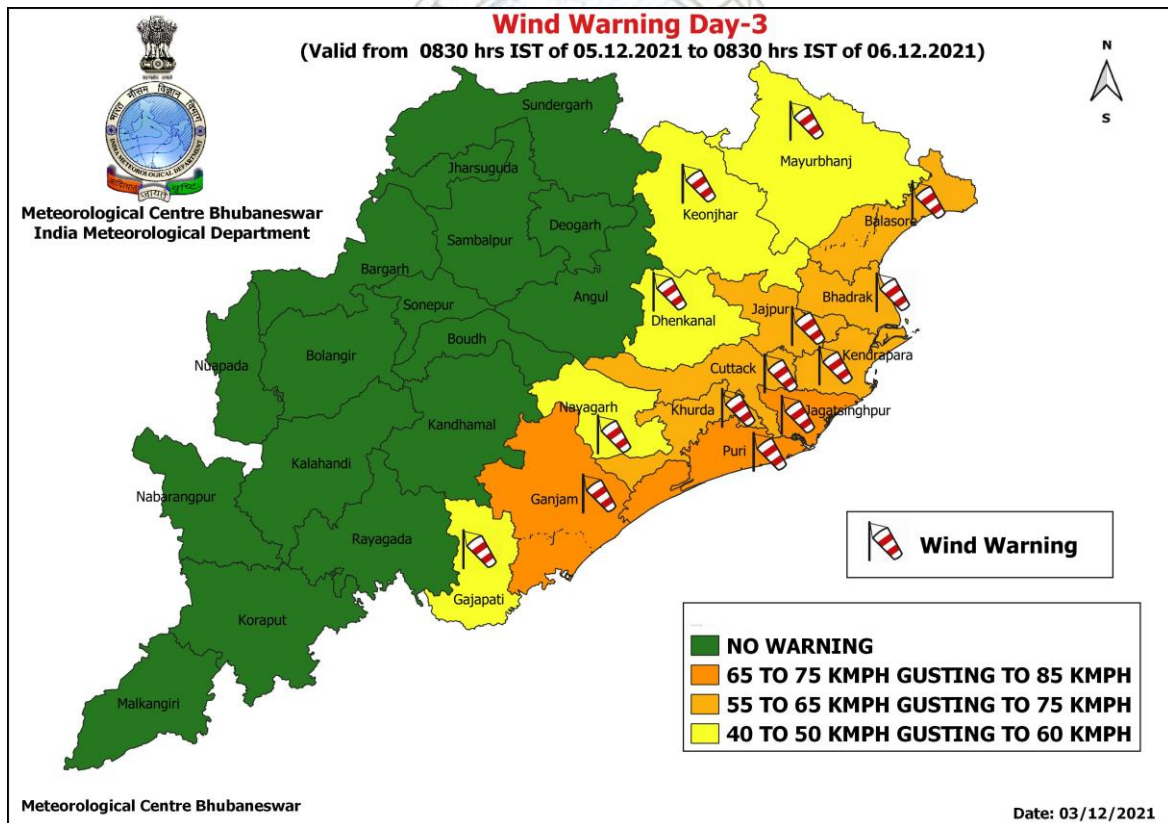
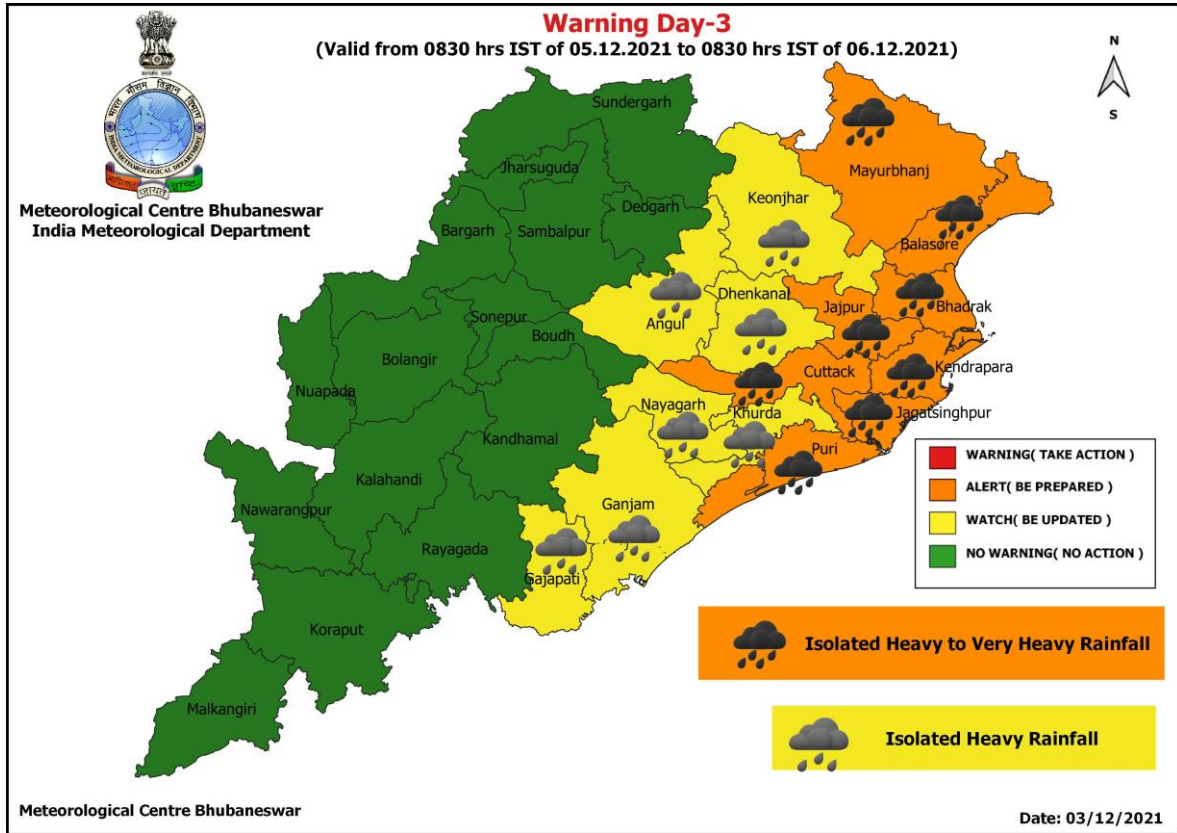


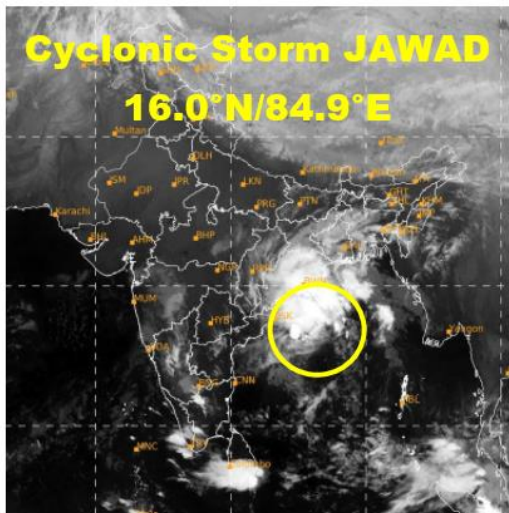
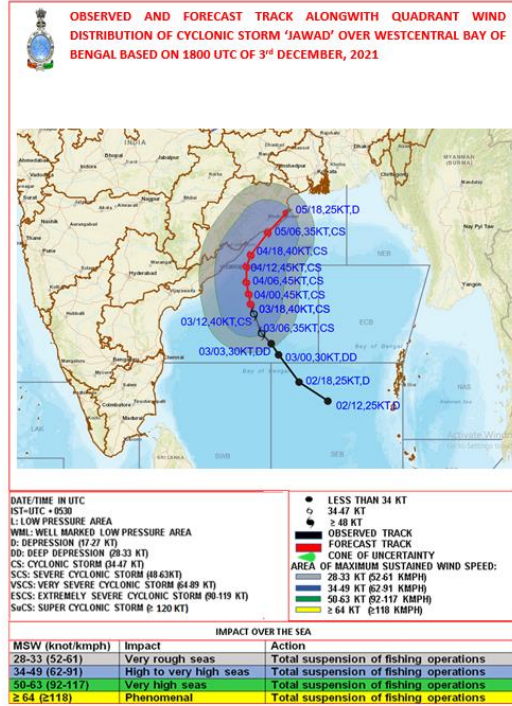
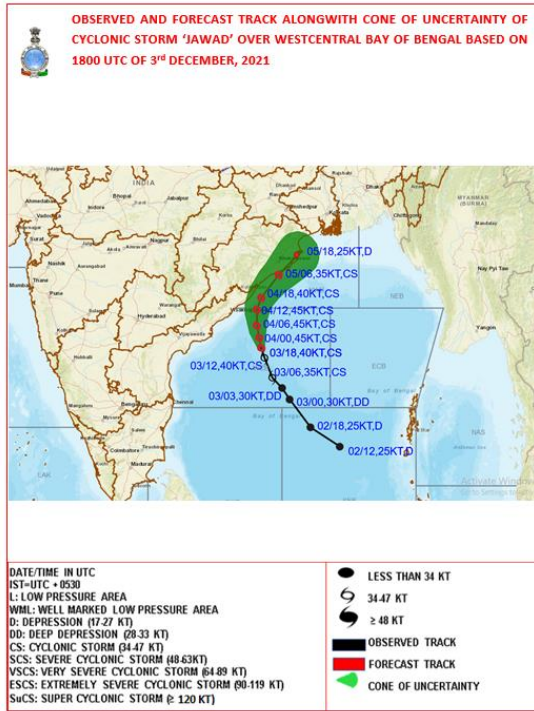
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 पृथ्वीविज्ञानमंत्रालय
 भारतमौसमविज्ञानविभाग
 मौसमविज्ञानकेंद्र
 भुवनेश्वर, ओडिशा-751020



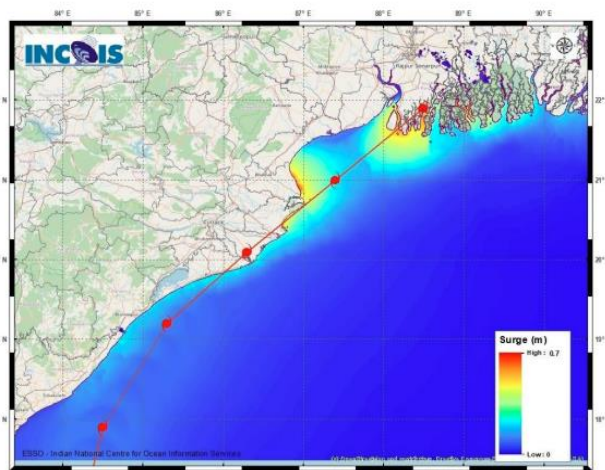
GOVERNMENT OF INDIA
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 INDIA METEOROLOGICAL DEPARTMENT
 METEOROLOGICAL CENTRE
 BHUBANESWAR, ODISHA-751020

ଭାରତସରକାର
 ପୃଥିବୀବିଜ୍ଞାନମନ୍ତ୍ରାଳୟ
 ଭାରତପାଣିପାଗବିଜ୍ଞାନବିଭାଗ
 ପାଣିପାଗବିଜ୍ଞାନକେନ୍ଦ୍ର
 ଭୁବନେଶ୍ୱର, ଓଡ଼ିଶା-୭୫୧୦୨୦





Model predicted storm surge heights in association with the Cyclone



STORM SURGE HEIGHT INFORMATION:

* The below listed surge heights are over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m) *	EXPECTED INUNDATION EXTENT (km)
Bhadrak	Bhadrak	Odisha	Mohanpur	0.4-0.7	Upto 0.64
Kendraparha	Kendrapara	Odisha	Tikayat Nagar	0.2-0.6	Upto 2.64
Jagatsinghpur	Jagatsinghapur	Odisha	Musadia	0.3-0.5	Upto 2.24
Puri	Puri	Odisha	Chhuriana	0.2-0.5	Upto 1.03
Basirhat	North 24 Parganas	West Bengal	Amlamethi	0.3-0.7	Upto 0.26
Diamond Harbour	South 24 Parganas	West Bengal	Rantanunagar	0.3-0.6	Upto 0.78