



**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 'Gulab' (pronounced as Gul-Aab) over Northwest & adjoining west-central Bay of Bengal: Cyclone warning & post landfall outlook for north Andhra Pradesh and south Odisha coasts – Red Message**

The Cyclonic Storm 'Gulab' (pronounced as Gul-Aab) over northwest and adjoining westcentral Bay of Bengal moved nearly westwards with a speed of 17 kmph during last 06 hours and lay centered at 0830 hrs IST of 26<sup>th</sup> September 2021, over northwest and adjoining westcentral Bay of Bengal near Lat. 18.4°N and Long. 86.4°E, about 180 km east-southeast of Gopalpur (Odisha) & 240 km east-northeast of Kalingapatnam (Andhra Pradesh).

It is likely to move nearly westwards and cross north Andhra Pradesh - south Odisha coasts between Kalingapatnam & Gopalpur, as a Cyclonic Storm with maximum sustained wind speed of 75-85 kmph gusting to 95 kmph, around mid-night of today, the 26<sup>th</sup> September, 2021. The Landfall process will commence from late evening of today.

Currently the Cyclone is being monitored by Doppler Weather RADAR at Vishakhapatnam. Light to moderate rainfall in association with the outer spiral bands of the system has commenced over south coastal Odisha and coastal Andhra Pradesh since early morning of today.

Forecast track and intensity are given in the following table:

<b>Date/Time(IST)</b>	<b>Position (Lat. °N/ long. °E)</b>	<b>Maximum sustained surface wind speed (Kmph)</b>	<b>Category of cyclonic disturbance</b>
26.09.21/0830	18.4/86.4	70-80 gusting to 90	Cyclonic Storm
26.09.21/1130	18.4/86.0	75-85 gusting to 95	Cyclonic Storm
26.09.21/1730	18.5/85.1	75-85 gusting to 95	Cyclonic Storm
26.09.21/2330	18.6/84.2	70-80 gusting to 90	Cyclonic Storm
27.09.21/0530	18.7/83.3	55-65 gusting to 75	Deep Depression
27.09.21/1730	18.9/81.8	40-50 gusting to 60	Depression

### **Warnings:**

#### **(i) Rainfall**

- 26<sup>th</sup> Sept.: Light to moderate rainfall at most places with heavy to very heavy falls at a few places & extremely heavy falls at isolated places very likely over south Odisha and north coastal Andhra Pradesh; heavy to very heavy falls at isolated places is also likely over Telangana and heavy falls at isolated places over north interior Odisha & Chhattisgarh.
- 27<sup>th</sup> Sept.: Light to moderate rainfall at most places with heavy to very heavy & extremely heavy falls at isolated places very likely over south Chhattisgarh; heavy to very heavy falls at isolated places over Odisha, Telangana & Vidarbha and heavy rainfall at isolated places over coastal West Bengal & North Chattisgarh.

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

- Gale wind speed reaching 70-80 kmph gusting to 90 kmph very likely to prevail over Northwest and adjoining Westcentral Bay of Bengal and increase further becoming wind speed reaching 75-85 kmph gusting to 95 kmph from afternoon of 26<sup>th</sup> till late night.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely to prevail along and off Odisha-North Andhra Pradesh coasts. It will gradually increase becoming gale wind speed reaching 75-85 kmph gusting to 95 kmph from afternoon of 26<sup>th</sup> till midnight along & off north Andhra Pradesh (Srikakulam, Vizianagaram, Visakhapatnam Districts) and south Odisha coasts (Ganjam, Gajapati Districts), 55-65 kmph gusting to 75 kmph along & off Khordha, Puri, Raigada & Koraput districts, 50-60 kmph gusting to 70 kmph over Navrangpur & Malkangiri districts of Odisha. Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail along & off remaining parts of Odisha & Andhra Pradesh & West Bengal coasts and also over northeast Bay of Bengal on 26<sup>th</sup> Sept.

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

- Sea condition will be rough to very rough over east-central & adjoining northeast Bay of Bengal on 26<sup>th</sup> Sept.
- Sea condition will be 'high' over Northwest and adjoining Westcentral Bay of Bengal and along and off Odisha, West Bengal and North Andhra Pradesh till late night / early morning of tomorrow and improve gradually thereafter.

#### **(iv) Storm surge warning**

Tidal wave of about 0.5 m height above the astronomical tide likely to inundate low lying areas of Srikakulam, Vizianagaram, Ganjam districts during the time of landfall.

#### **(v) Fishermen Warning**

- The fishermen are advised not to venture into east-central & adjoining northeast Bay of Bengal and Andaman Sea on 26<sup>th</sup> Sept.
- The fishermen are advised not to venture into northwest & adjoining westcentral Bay of Bengal and along & off Odisha, West Bengal & North Andhra Pradesh coasts till 27<sup>th</sup> Sept.

**(vi) Post Landfall outlook for south Odisha, north Andhra Pradesh, south Chhattisgarh and adjoining Telangana**

After the landfall, the system is likely to maintain the cyclonic storm intensity with slight weakening of wind speed during the subsequent 06 hours over south Odisha & adjoining north coastal Andhra Pradesh. It is likely to move west-northwestwards across south Odisha & south Chhattisgarh and weaken gradually into a Depression during the subsequent 12 hours.

Gale wind speed reaching 60-70 kmph gusting to 80 kmph is likely to prevail over north Andhra Pradesh (Srikakulam, Vizianagaram, Visakhapatnam Districts) and south Odisha coasts (Ganjam, Gajapati Districts) from the mid-night of today to early morning of 27<sup>th</sup> Sept. Squally wind speed reaching 50-60 kmph gusting to 70 kmph likely to prevail over Khordha, Puri, Raigada & Koraput districts, 40-50 kmph gusting to 60 kmph over Navrangpur & Malkangiri districts of Odisha during the same period.. Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over south interior Odisha, south Chhattisgarh & adjoining north Telangana on 27<sup>th</sup> Sept.

**(vii) EXPECTED IMPACT & ACTION SUGGESTED due to Strong winds & very Heavy/Extremely heavy Rainfall.**

- Damage to thatched huts.
- Minor damage to power and communication lines due to breaking of branches and uprooting of trees.
- Major damage to Kutcha and minor damage to Pucca roads.
- Sea water inundation in low lying areas after erosion of Kutcha embankments.
- Localized Flooding of roads, inundation and water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in cities due to water logging in roads. Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides
- Damage to standing crops and horticulture including paddy, banana, papaya trees and orchards due to inundation and strong winds.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

**Action Suggested**

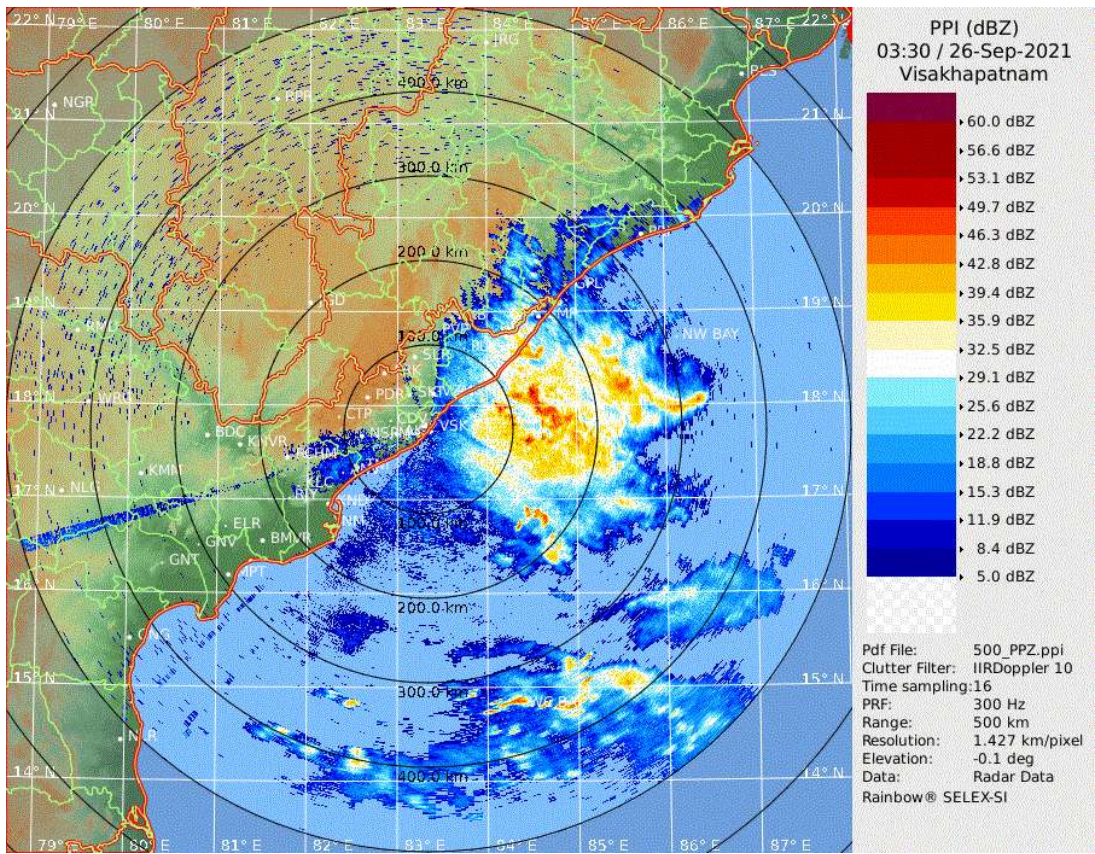
- Complete suspension of fishing operations, onshore & off-shore activities over the above region till 27<sup>th</sup> Sept. morning.
- Stay indoors and in safe places.
- Avoid staying in vulnerable structure.
- Avoid going to areas that face the water logging problems often.
- Check for traffic congestion on your route before leaving for your destination.
- Follow any traffic advisories that are issued in this regard.
- Follow IMD warnings for updates

**(Sunitha Devi. S)**  
**Scientist F, RSMC, New Delhi**

Next bulletin will be issued at 1430 hrs IST of today, the 26<sup>th</sup> September, 2021.

Copy to: ACWC Kolkata/ Chennai/CWC Bhubaneswar/CWC Visakhapatnam/MC Ranchi/MC Hyderabad/MC Raipur

**LEGEND: Heavy Rainfall:** 64.5 to 115.5mm, **Very Heavy Rainfall:** 115.6 to 204.4mm, **Extremely Heavy Rainfall:** 204.5mm or more. **Many Places:** 51% to 75% of the stations, **Most Places:** more than 76% of total stations, **Isolated Places:** Less than 25% of total stations



Reflectivity imagery from Doppler weather RADAR Vishakhapatnam based on 0900 hrs IST of 26<sup>th</sup> September 2021.

SAT : INSAT-3D IMG

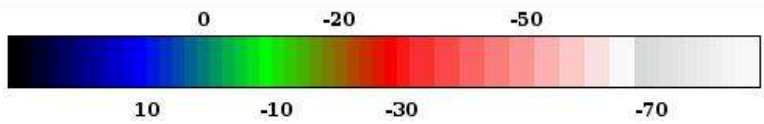
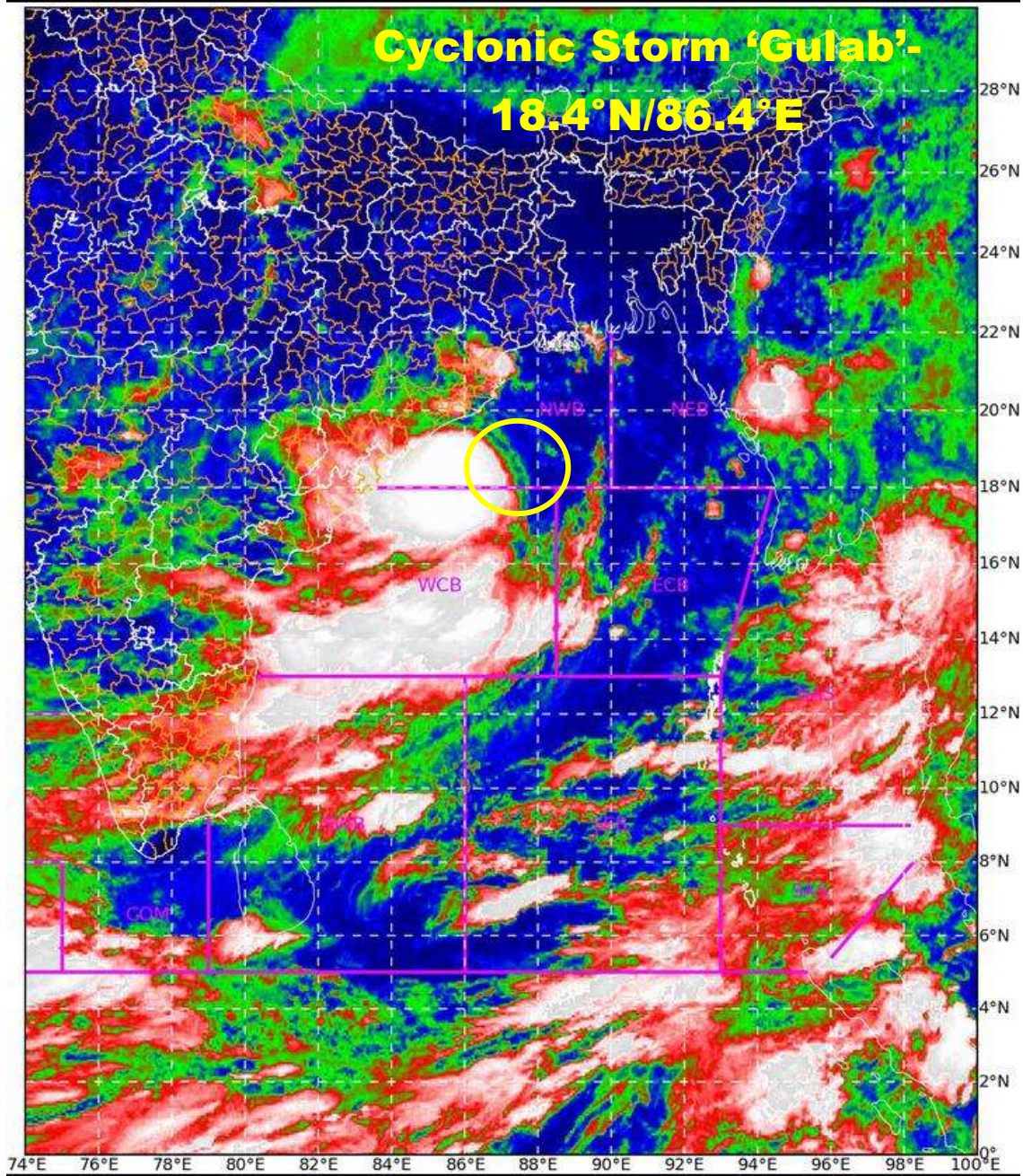
26-09-2021/(0430 to 0456) GMT

IMG\_TIR1\_TEMP 10.8 um

26-09-2021/(1000 to 1026) IST



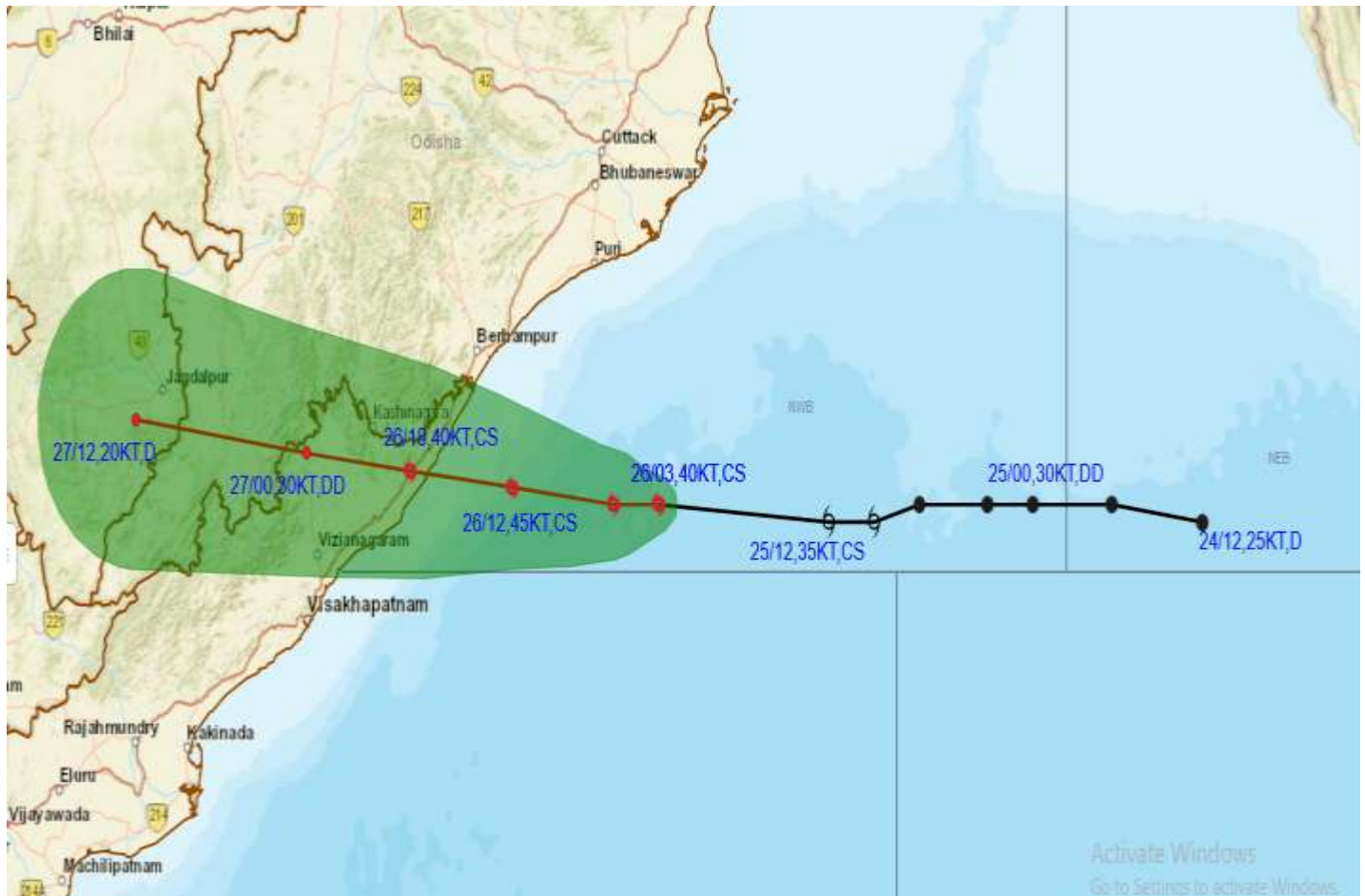
L1C Mercator



Celsius  
IMD,DELHI



# OBSERVED AND FORECAST TRACK OF CYCLONIC STORM GULAB OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 0300 UTC OF 26<sup>TH</sup> SEPTEMBER, 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

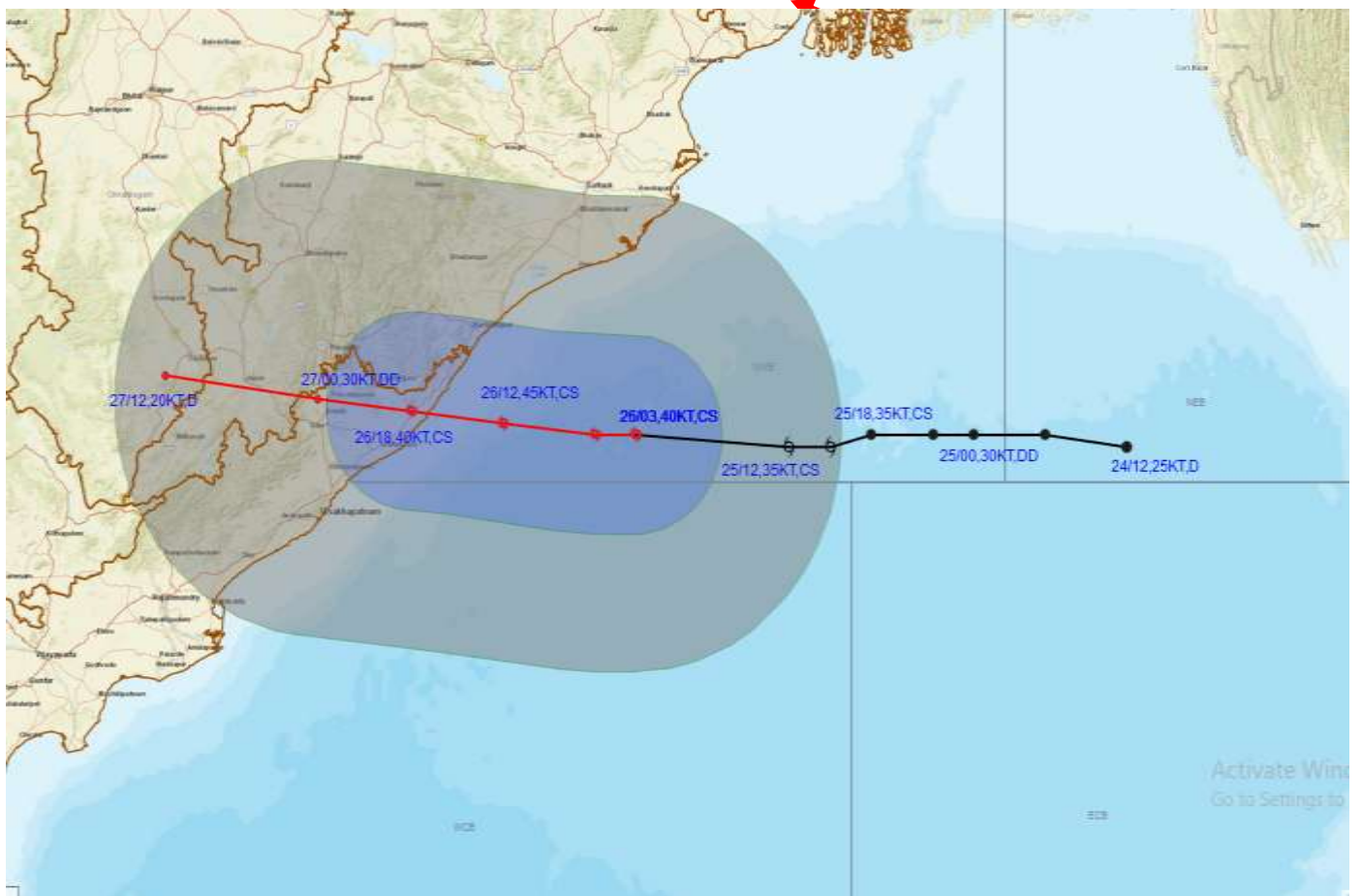
— OBSERVED TRACK

— FORECAST TRACK

▲ CONE OF UNCERTAINTY



## OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM GULAB OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 0300 UTC OF 26TH SEPTEMBER, 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)

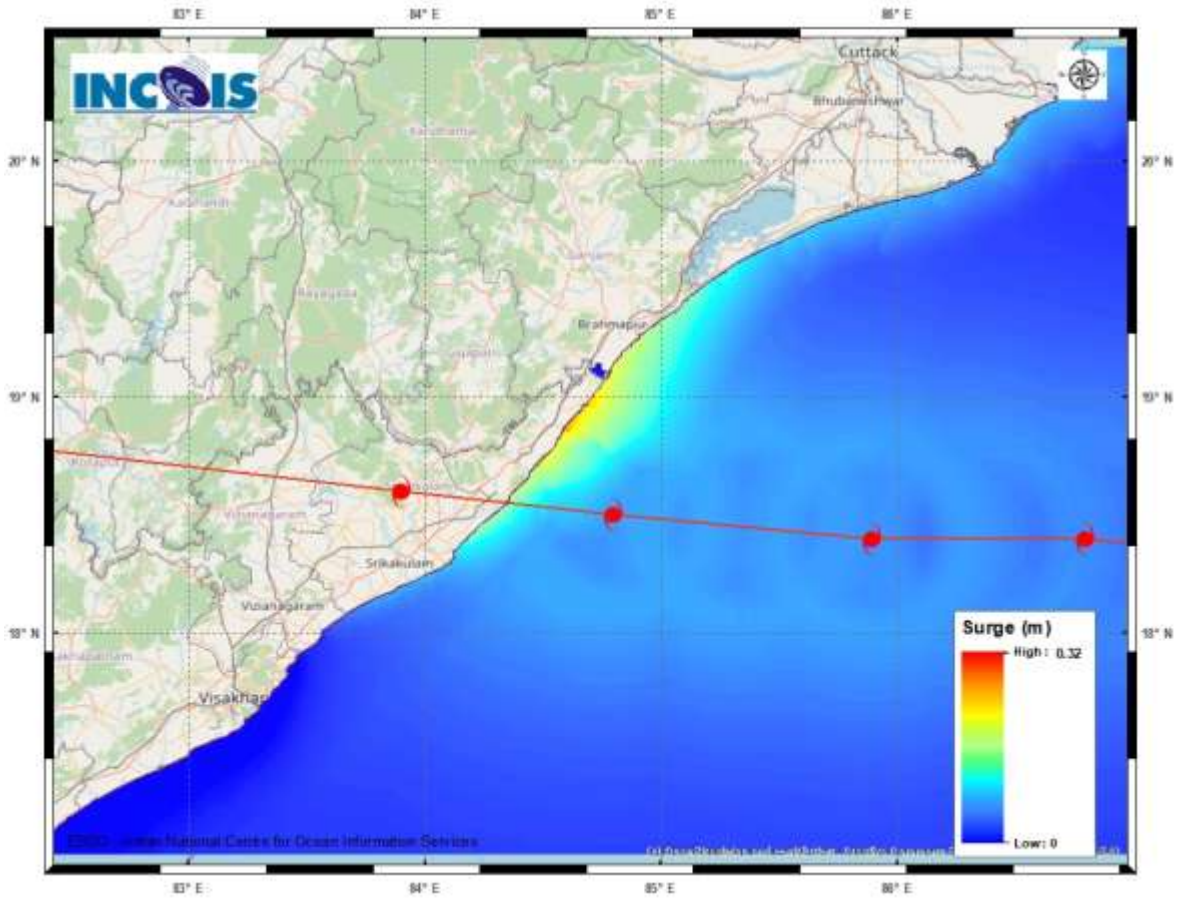
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM (≥ 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



Storm surge graphics from INCOIS for the current system (BoB/04/2021)

Peak storm surge upto 0.5 m over and above the astronomical tide near Tekkali, Sompeta Srikakulam, Andhra Pradesh.



Sub-division wise heavy rainfall warning for next 4 days

