



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

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Sub: Deep Depression over Southwest Bay of Bengal (Cyclone Alert for Andhra Pradesh and adjoining North Tamil Nadu-Puducherry Coasts: **Yellow Message)**

The Deep Depression over Southwest Bay of Bengal moved northwestwards with a speed of 10 kmph during past 06 hours and lay centered at 2330 hours IST of 2nd December, 2023 over the same region near Latitude 11.2°N and Longitude 82.7°E, about 330 km east-southeast of Puducherry, 340 km southeast of Chennai, 470 km southeast of Nellore, 580 km south-southeast of Bapatla and 580 km south-southeast of Machilipatnam.

It is likely to move northwestwards and intensify into a Cyclonic Storm over Southwest Bay of Bengal during next 12 hours and reach Westcentral Bay Of Bengal off south Andhra Pradesh and adjoining north Tamilnadu coasts by 4th December forenoon.

Thereafter, it would move nearly northwards almost parallel and close to south Andhra Pradesh coast and cross South Andhra Pradesh coast between Nellore and Machilipatnam during forenoon of 5th December as a **Cyclonic Storm** with a maximum sustained wind speed of 80-90 kmph gusting to 100 kmph.

Track and Intensity Forecasts:

Date/Time (IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.12.23/2330	11.2/82.7	55-65 kmph gusting to 75 kmph	Deep Depression
03.12.23/0530	11.7/82.3	60-70 kmph gusting to 80 kmph	Cyclonic Storm
03.12.23/1130	12.2/81.9	65-75 kmph gusting to 85 kmph	Cyclonic Storm
03.12.23/1730	12.6/81.5	70-80 kmph gusting to 90 kmph	Cyclonic Storm
03.12.23/2330	13.1/81.2	75-85 kmph gusting to 95 kmph	Cyclonic Storm
04.12.23/1130	14.0/80.8	80-90 kmph gusting to 100 kmph	Cyclonic Storm
04.12.23/2330	15.0/80.7	80-90 kmph gusting to 100 kmph	Cyclonic Storm
05.12.23/1130	16.0/80.9	80-90 kmph gusting to 100 kmph	Cyclonic Storm
05.12.23/2330	17.0/81.7	65-75 kmph gusting to 85 kmph	Cyclonic Storm
06.12.23/1130	18.0/82.9	45-55 kmph gusting to 65 kmph	Depression

Warnings:

(i) Rainfall Warning (graphics enclosed):

- **North Coastal Tamil Nadu & Puducherry:** Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places is very likely on 3rd, isolated heavy rainfall on 4th December and decrease thereafter.
- **Coastal Andhra Pradesh:** Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places over south coastal Andhra Pradesh on 3rd and heavy to very heavy rainfall with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 4th & 5th December. Isolated heavy rainfall is likely over north coastal Andhra Pradesh on 6th December.
- **Rayalaseema:** Light to moderate rainfall at most places with **isolated heavy rainfall** during 3rd-4th with **very heavy rainfall** at isolated places on 3rd December.
- **Odisha:** Light to moderate rainfall at most places with **isolated heavy rainfall** is likely over south Coastal and adjoining south Interior Odisha during 4th -6th with **isolated very heavy rainfall** over the same region on 5th December.

(ii) Wind warning:

- **Southwest Bay of Bengal along & off north Tamil Nadu-Puducherry Coasts:**
Squally wind speed reaching **55-65 kmph gusting to 75 kmph** is prevailing over Southwest Bay of Bengal. It is likely to gradually increase becoming **Gale Wind** speed reaching **60-70 kmph gusting to 80 kmph** from 3rd December early morning to 4th December evening and it will gradual decrease thereafter.
- **Westcentral Bay of Bengal and along & off south Andhra Pradesh Coast:**
Squally wind speed reaching **40-50 kmph gusting to 60 kmph** is prevailing over westcentral Bay of Bengal and It is likely to gradually increase becoming **55-65 kmph gusting to 75 kmph** from 3rd December morning. It is likely to increase further becoming **Gale Wind** speed reaching **70-80 kmph gusting to 90 kmph** from 3rd evening and **80-90 kmph gusting to 100 kmph** from 4th evening to 5th Dec. noon. It would gradually decrease thereafter.
- **Along & off north Andhra Pradesh Coast:**
Squally wind speed reaching **45-55 kmph gusting to 65 kmph** likely from 4th December evening, likely to gradually increase becoming **55-65 kmph gusting to 75 kmph** from 5th December evening for subsequent 12 hours. It would gradually decrease thereafter.
- **Along & off Odisha Coast:**
Squally wind speed reaching **35-45 kmph gusting to 55 kmph** likely from 4th December evening, likely to gradually increase becoming **40-50 kmph gusting to 60 kmph** from 5th December evening for subsequent 12 hours. It would gradually decrease thereafter.

(iii) Sea Condition:

• **Southwest Bay of Bengal and along & off north Tamil Nadu-Puducherry Coasts:**

Rough to Very Rough sea condition is prevailing over the region. It is likely to become **very rough to high** from 3rd December for subsequent 24 hours and improve thereafter gradually.

• **Westcentral Bay of Bengal and along & off south Andhra Pradesh Coast:**

Rough to Very Rough sea condition is prevailing over the region. It is likely to become **very rough to high** from 3rd December morning till 5th December.

• **Along & off North Andhra Pradesh Coast:**

Rough to Very Rough to sea condition is likely from 4th December, very rough to high on 5th and very rough to rough on 6th December.

• **Along & off Odisha Coast:**

Rough to Very Rough to sea condition is likely from 4th December evening till 6th December morning.

(iv) Fishermen Warning (graphics attached):

Fishermen are advised not to venture into:

- Southwest Bay of Bengal and along & off North Tamil Nadu-Puducherry Coasts during 3rd to 4th December.
- Westcentral Bay of Bengal and along & off Andhra Pradesh Coast from 3rd December to 6th December.
- Along & off Odisha coast from 4th December evening till 6th December

The Fishermen out at sea are advised to return to coast.

(v) Storm Surge (Graphics enclosed):

Storm surge of about 1-1.5 meter above astronomical tide likely to inundate south Coastal Andhra Pradesh districts at the time of landfall.

(vi) Damage Expected over coastal districts of South Andhra Pradesh and adjoining coastal districts of North Tamil Nadu-Puducherry:

- Damage to thatched huts.
- Possibilities of damage to vulnerable structure.
- Breaking of tree branches and uprooting of small & medium sized trees.
- 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 due to heavy rain.
- Damage to paddy crops, horticultural crops and orchards.
- Sea water inundation in low lying areas after erosion of Kutcha embankments
- Inundation of low lying areas in coastal districts due to heavy rainfall and flash flood
- Localized Flooding of roads and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic due to water logging and squally winds
- Localized Landslides/Mudslides
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

(vi) Action Suggested for coastal districts of South Andhra Pradesh and adjoining coastal districts of North Tamil Nadu-Puducherry:

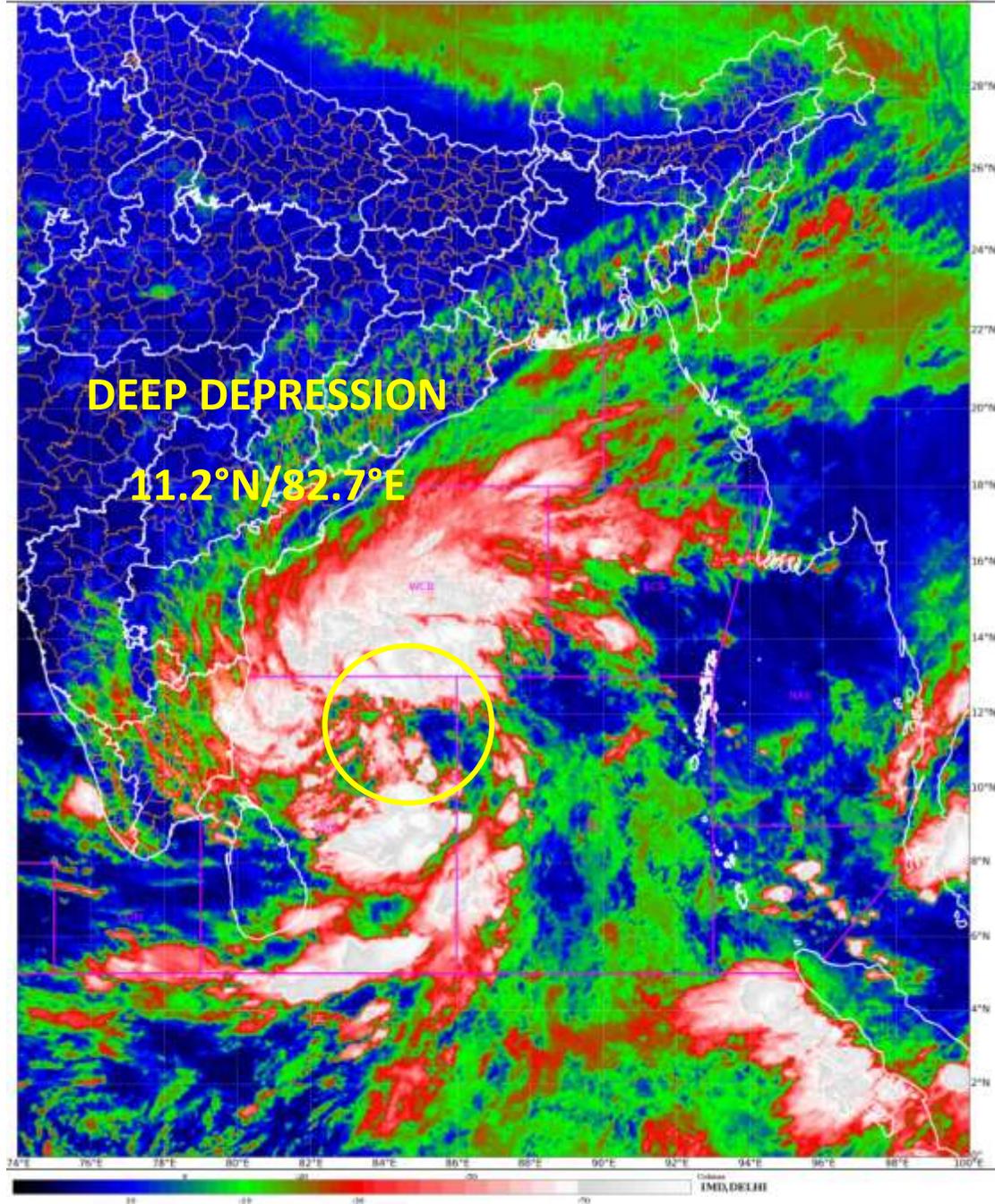
- Total suspension of fishing operations.
- Fishermen out at sea are advised to return to coast.

- Surface transport and shipping operations need to be regulated
- Onshore & Offshore operation need to be regulated as per guidelines
- Coastal hutment dwellers to be in safer places.
- People in affected areas to remain indoors.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

The system is under continuous surveillance and the next message will be issued at 0830 hours IST of today, the 03rd December, 2023.

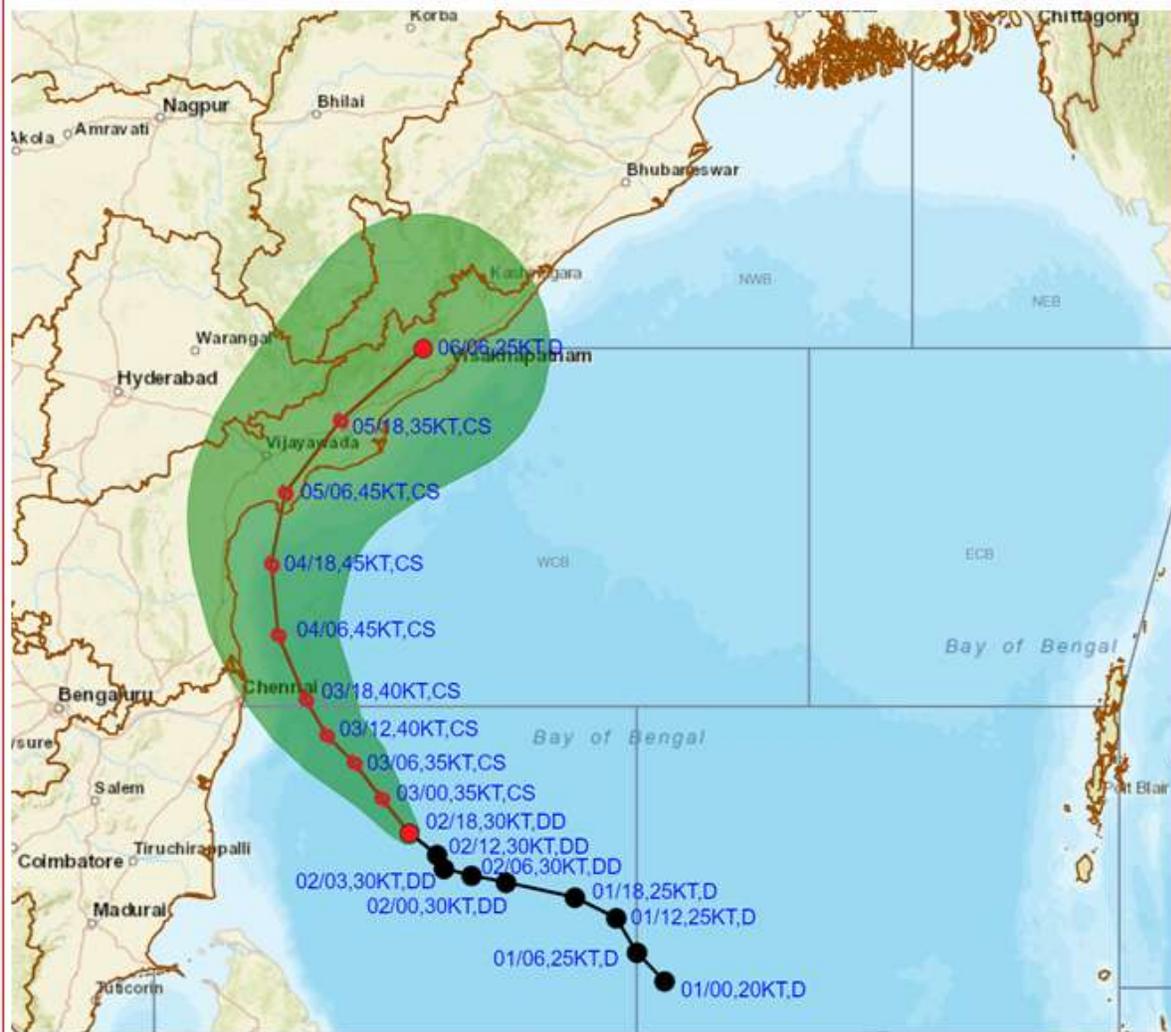
**(Akhil Srivastava)
Scientist D, Cyclone Warning, New Delhi**

Copy to: ACWC Chennai/ ACWC Kolkata/ CWC Bhubaneswar/ CWC Vishakhapatnam/ MC Amravati





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 02ND DECEMBER 2023.



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

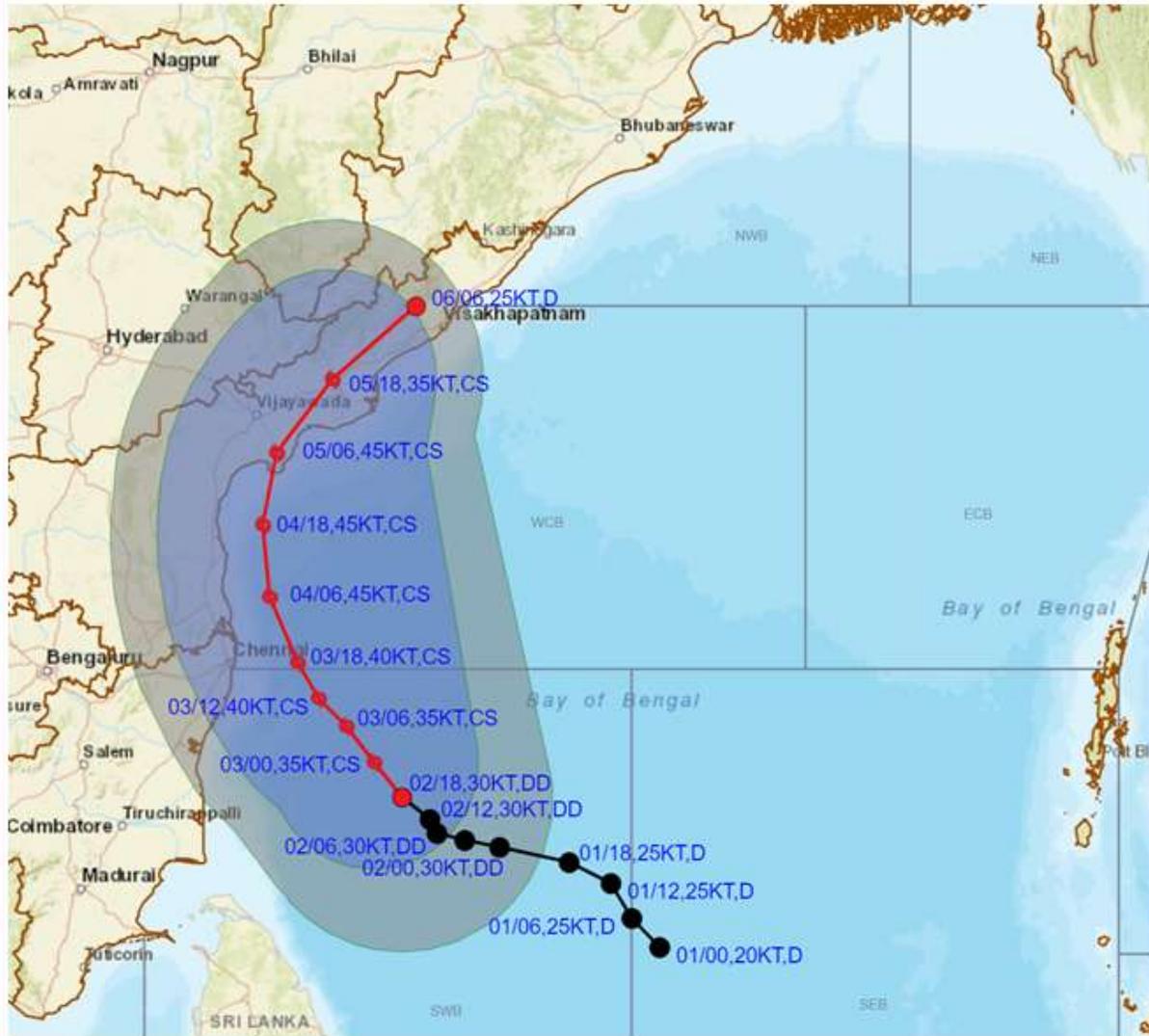
— FORECAST TRACK

▲ CONE OF UNCERTAINTY

Forecast Date and Time (UTC)	DISTANCE (KM) AND DIRECTION FROM STATIONS				
	MO PONDICHERRY	CHENNAI/MINAMBAKKAM	NELLORE	BAPATLA	MACHILIPATNAM/FRANCHPET
02.12.23/0600	390, ESE	410, SE	540, SE	650, SSE	650, SSE
03.12.23/0600	210, E	180, ESE	300, SE	420, SSE	430, S
04.12.23/0600	250, NNE	130, NNE	100, ESE	210, S	240, S
05.12.23/0600	470, NNE	350, NNE	200, NNE	50, ENE	40, SW
06.12.23/0600	760, NNE	640, NNE	520, NE	360, NE	290, NE



OBSERVED & FORECAST TRACK, MAXIMUM SUSTAINED WIND AND QUADRANT WIND IN ASSOCIATION WITH DD OVER SOUTHWEST BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 02ND DECEMBER 2023.



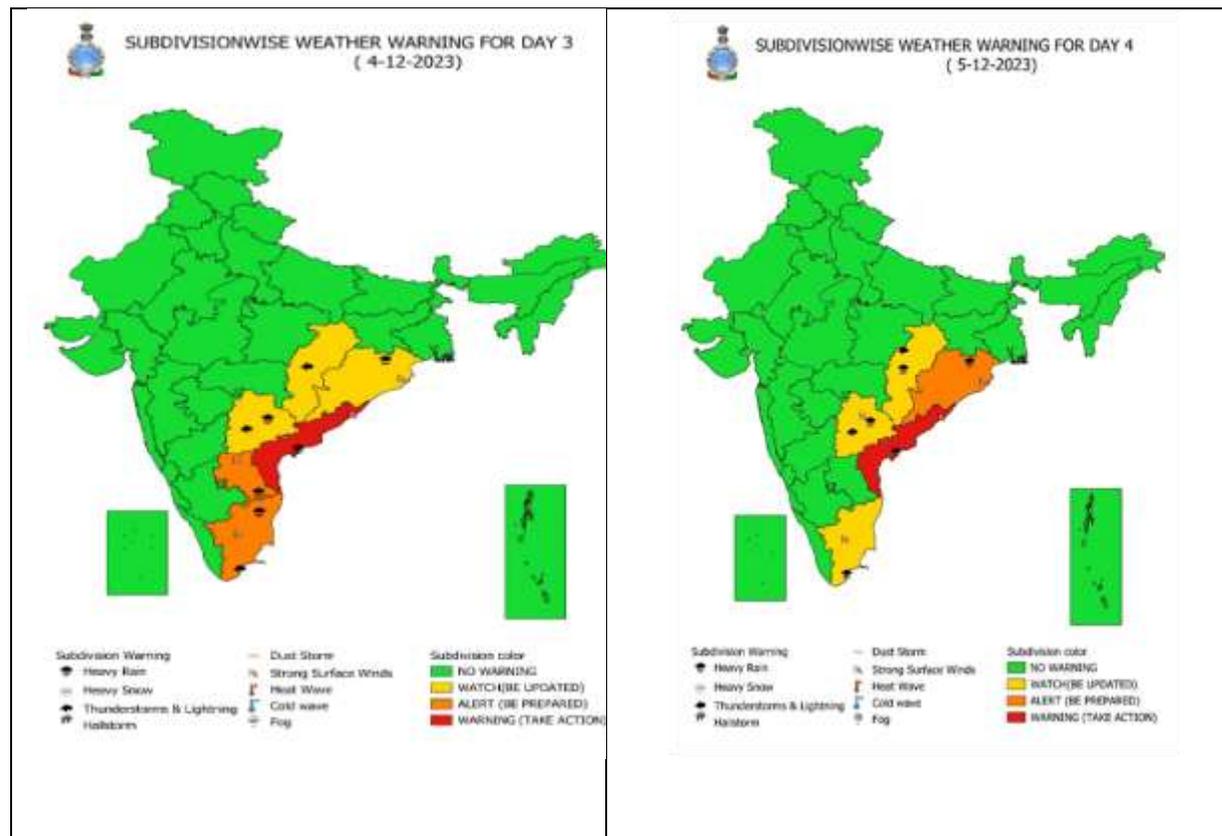
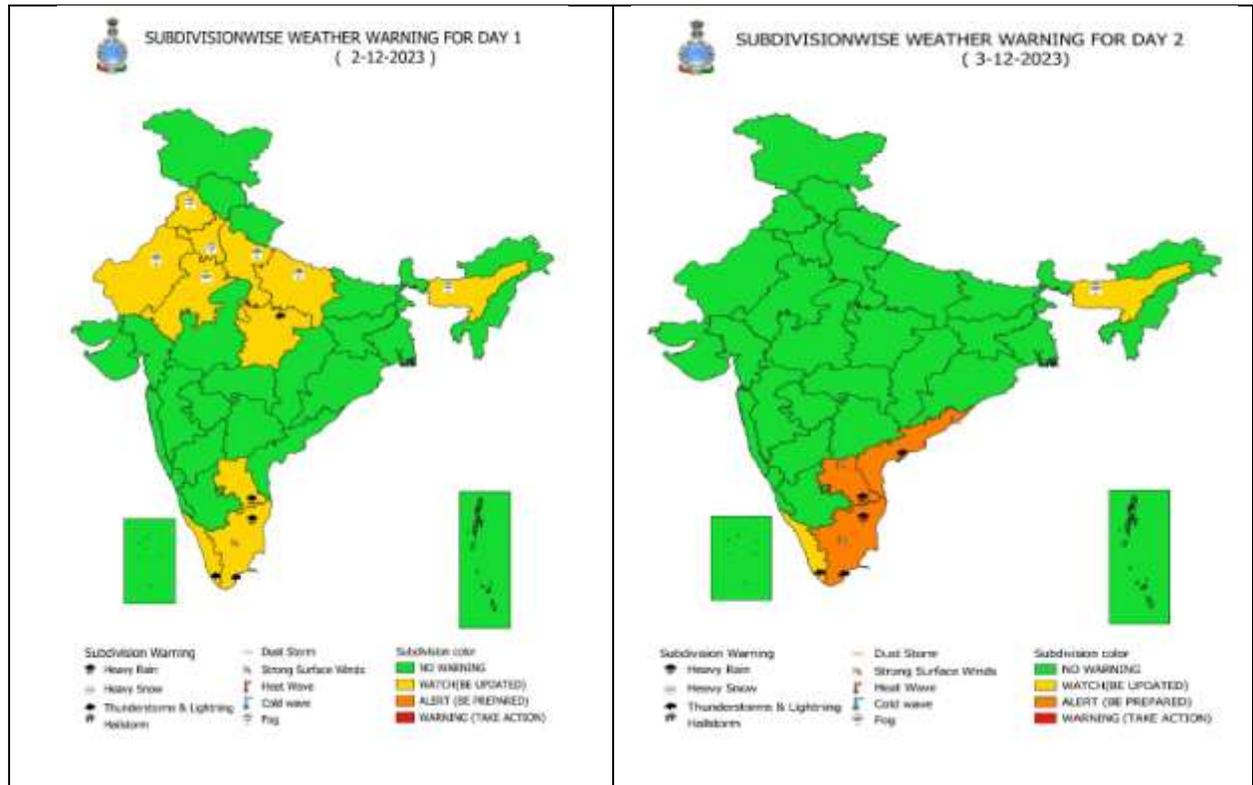
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (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

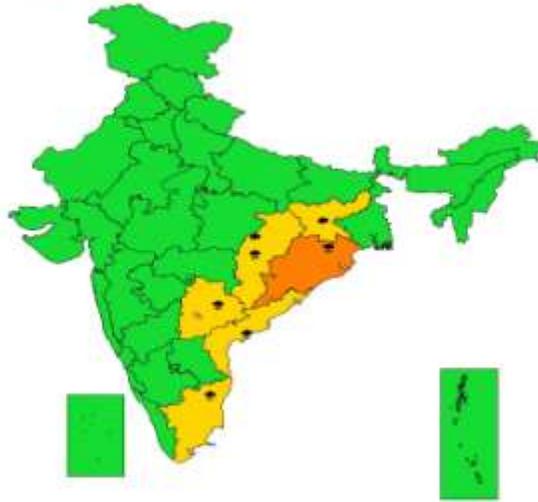
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

Weather Warning Graphics





**SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
(6-12-2023)**



- | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ☁ Heavy Rain ❄ Heavy Snow ⚡ Thunderstorms & Lightning 🌨 Hailstone | <ul style="list-style-type: none"> ☁ Dust Storm 🌀 Strong Surface Winds 🌡 Heat Wave 🌡 Cold wave 🌀 Fog | <ul style="list-style-type: none"> 🟢 Sub-division color 🟢 NO WARNING 🟡 WATCH (BE UPDATED) 🟠 ALERT (BE PREPARED) 🔴 WARNING (TAKE ACTION) |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

WARNING



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

Fishermen warning graphics

Day 1: 02.12.2023/11:30 PM to 03.12.2023/05:30 AM



Day 2: 03.12.2023/05:30 AM to 04.12.2023/05:30 AM



Day 3: 04.12.2023/05:30 AM to 05.12.2023/05:30 AM



Day 4: 05.12.2023/05:30 AM to 06.12.2023/05:30 AM



Day 5: 06.12.2023/05:30 AM to 07.12.2023/05:30 AM



Squally WX with wind speed 40-45 kmph gusting to 55 kmph

Squally WX with wind speed 45-55 kmph gusting to 65 kmph

Squally wind with speed 50-60 kmph gusting to 70 kmph

CS with Gale wind speed 60-90 kmph gusting to 110 kmph

Fishermen are advised not to venture into the marked areas.

Storm Surge Warning Graphics based on Forecast Track

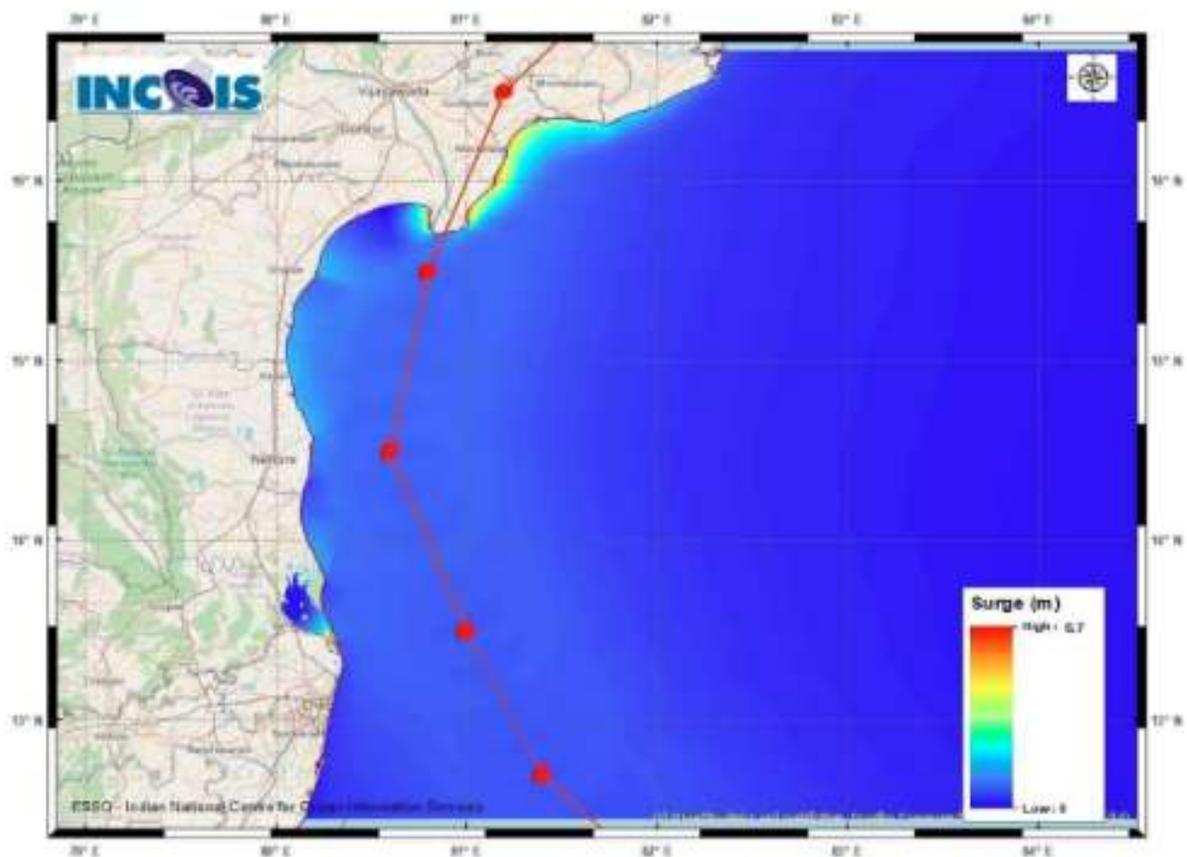


Figure: Storm Surge Map

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)
Avanigadda	Krishna	Andhra Pradesh	Ramakrishnapuram	0.3-0.7	Upto 0.15
Machilipatnam	Krishna	Andhra Pradesh	Perupalem	0.3-0.6	Upto 0.17
Repalle	Guntur	Andhra Pradesh	Repalle	0.2-0.5	Upto 0.25
Ponneri	Thiruvallur	Tamil Nadu	Karimanal	0.2-0.5	Upto 0.15

Hazard Map with Deep Depression over Southwest Bay of Bengal

