



## India Meteorological Department

(Ministry of Earth Sciences)

**BULLETIN NO. : 08(BOB/05/2020)**

**TIME OF ISSUE: 1430 HOURS IST**

**DATED: 01.12.2020**

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### **Sub: Deep Depression over southwest Bay of Bengal (Cyclone Alert for South Tamilnadu and South Kerala coasts: **Yellow Message**)**

The **Deep Depression** over southwest and adjoining southeast Bay of Bengal moved westwards with a speed of 13 kmph during past six hours and lay centered at 1130 hrs IST of 01<sup>st</sup> December 2020 over southwest Bay of Bengal near Lat. 7.8° N and Long. 85.3°E, about 460 km east-southeast of Trincomalee (Sri Lanka) and 860 km east-southeast of Kanniyakumari (India).

It is very likely to intensify further into a cyclonic storm during next 12 hours. It is very likely to move west-northwestwards and cross Sri Lanka coast between latitude 7.5°N and 9.0°N close to Trincomalee during evening/night of 2<sup>nd</sup> December as a Cyclonic Storm with a wind speed of 75-85 kmph gusting to 95 kmph. It is very likely to move nearly westwards thereafter, emerge into Gulf of Mannar and adjoining Comorin area on 3<sup>rd</sup> December morning. It would then move nearly west-southwestwards and cross south Tamilnadu coast between Kanniyakumari and Pamban around early morning of 4<sup>th</sup> December.

Forecast track and intensity are given below:

<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>
01.12.20/1130	7.8/85.3	55-65 gusting to 75	Deep Depression
01.12.20/1730	7.9/84.6	60-70 gusting to 75	Cyclonic Storm
01.12.20/2330	8.1/84.0	65-75 gusting to 85	Cyclonic Storm
02.12.20/0530	8.3/83.2	70-80 gusting to 90	Cyclonic Storm
02.12.20/1130	8.5/82.4	75-85 gusting to 95	Cyclonic Storm
02.12.20/2330	8.7/80.8	70-80 gusting to 90	Cyclonic Storm
03.12.20/1130	8.8/79.7	65-75 gusting to 85	Cyclonic Storm
03.12.20/2330	8.8/78.7	70-80 gusting to 90	Cyclonic Storm
04.12.20/1130	8.2/77.5	65-75 gusting to 85	Cyclonic Storm

**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.**

## Warnings:

### (i) Rainfall

- **Heavy to very heavy rainfall** at a few places with isolated **Extremely heavy falls** very likely over **south Tamilnadu (Kanniyakumari, Tirunelveli, Thoothukudi, Tenkasi, Ramanathapuram and Sivagangai)** on 2<sup>nd</sup> and 3<sup>rd</sup> December, 2020; **over south Kerala (Thiruvananthapuram, Kollam, Pathanamthitta and Alappuzah)** on 3<sup>rd</sup> December and isolated heavy to very heavy rainfall likely over south Tamilnadu on 2<sup>nd</sup> & 4<sup>th</sup> December 2020 and south Kerala on 3<sup>rd</sup> & 4<sup>th</sup> December, 2020.
- Heavy to very heavy rainfall at isolated places very likely over north Tamilnadu, Puducherry, Mahe & Karaikal and north Kerala on 2<sup>nd</sup> & 3<sup>rd</sup> December, isolated heavy rainfall on 4<sup>th</sup> December and isolated heavy rainfall over coastal Tamilnadu on 1<sup>st</sup> December, 2020.
- Heavy rainfall at isolated places very likely over south Coastal Andhra Pradesh on 2<sup>nd</sup> & 03<sup>rd</sup> December and over Lakshadweep on 03<sup>rd</sup> & 4<sup>th</sup> December, 2020.

Sub-Divisions	01 Dec 2020*	02 Dec 2020*	03 Dec 2020*	04 Dec 2020*
<b>South Tamilnadu</b>	Rainfall at many places with heavy rainfall at isolated places	Rainfall at most places with heavy to very heavy rainfall at few places and extremely heavy fall at isolated places	Rainfall at most places with heavy to very heavy rainfall at few places and extremely heavy fall at isolated places	Rainfall at many places with heavy to very heavy rainfall at isolated places
<b>North Tamilnadu, Puducherry &amp; Karaikal</b>	Rainfall at a few places with heavy rainfall at isolated places	Rainfall at many places with heavy to very heavy rainfall at isolated places	Rainfall at many places with heavy to very heavy rainfall at isolated places	Rainfall at many places with heavy fall at isolated places
<b>South Kerala</b>	Rainfall at many places with heavy rainfall at isolated places	Rainfall at most places with heavy to very heavy rainfall at isolated places	Rainfall at most places with heavy to very heavy rainfall at few places and extremely heavy fall at isolated places	Rainfall at many places with heavy to very heavy rainfall at isolated places
<b>North Kerala &amp; Mahe</b>	Rainfall at many places with heavy rainfall at isolated places	Rainfall at many places with heavy to very heavy rainfall at isolated places	Rainfall at most places with heavy to very heavy rainfall at isolated places	Rainfall at a few places with heavy fall at isolated places
<b>South Coastal Andhra Pradesh</b>	Rainfall at isolated places	Rainfall at a few places with heavy rainfall at isolated places	Rainfall at a few places with heavy rainfall at isolated places	Rainfall at a few places
<b>Lakshadweep</b>	Rainfall at a few places	Rainfall at most places	Rainfall at most places with heavy to very falls at isolated places	Rainfall at most places with heavy to very falls at isolated places

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.

## (ii) Wind warning

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely over central parts of South Bay of Bengal during next 12 hours.
- It would gradually increase becoming gale wind speed reaching 60-70 kmph gusting to 80 kmph over southwest and adjoining southeast Bay of Bengal from 1<sup>st</sup> December evening. It would gradually increase becoming 70-80 kmph gusting to 90 kmph over southwest Bay of Bengal, along & off Sri Lanka coast from 2<sup>nd</sup> December morning for subsequent 24 hours.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely over Comorin Area, Gulf of Mannar and south Tamilnadu coast (**Kanniyakumari, Tirunelveli, Thoothukudi and Ramanathapuram districts**) and south Kerala coasts (**Thiruvananthapuram district**) from 2<sup>nd</sup> December forenoon. It will gradually increase becoming 55-65 kmph gusting to 75 kmph over Gulf of Mannar, along & off south Tamilnadu coast (**Kanniyakumari, Tirunelveli, Thoothukudi and Ramanathapuram districts**) and south Kerala coast (**Thiruvananthapuram and Kollam districts**), over Comorin Area, Lakshadweep-Maldives area and adjoining southeast Arabian Sea from 3<sup>rd</sup> December morning and 70-80 kmph gusting to 90 kmph from evening of 3<sup>rd</sup> December for subsequent 12 hours.

## (iii) Sea condition

- Prevailing rough to very rough sea condition over southeast Bay of Bengal will continue during 1<sup>st</sup> December and very rough to high over southeast & adjoining southwest Bay of Bengal and along & off east Sri Lanka coast during 1<sup>st</sup> & 2<sup>nd</sup> December, and rough to very rough over Comorin Area, Gulf of Mannar & along & off south Tamilnadu-Kerala coasts from 2<sup>nd</sup> to 4<sup>th</sup> December.
- Sea condition will be rough to very rough over Lakshadweep-Maldives area and adjoining southeast Arabian Sea during 3<sup>rd</sup> – 4<sup>th</sup> December.

## (iv) Fishermen warning

- **Total suspension** of fishing operation **during 1<sup>st</sup> December to 4<sup>th</sup> December** over the areas as mentioned below.
- Fishermen are advised not to venture into southeast Bay of Bengal during 1<sup>st</sup> December, southwest Bay of Bengal and along & off east Sri Lanka coast from **1<sup>st</sup> to 3<sup>rd</sup> December**; Comorin Area, Gulf of Mannar and south Tamilnadu-Kerala coasts from **2<sup>nd</sup> to 4<sup>th</sup> December**, over Lakshadweep-Maldives area & adjoining southeast Arabian Sea **from 3<sup>rd</sup> to 4<sup>th</sup> December**.
- Fishermen out at Sea are advised to return to the coast by today.

**The next bulletin will be issued at 1730 hrs IST of 1<sup>st</sup> December, 2020.**

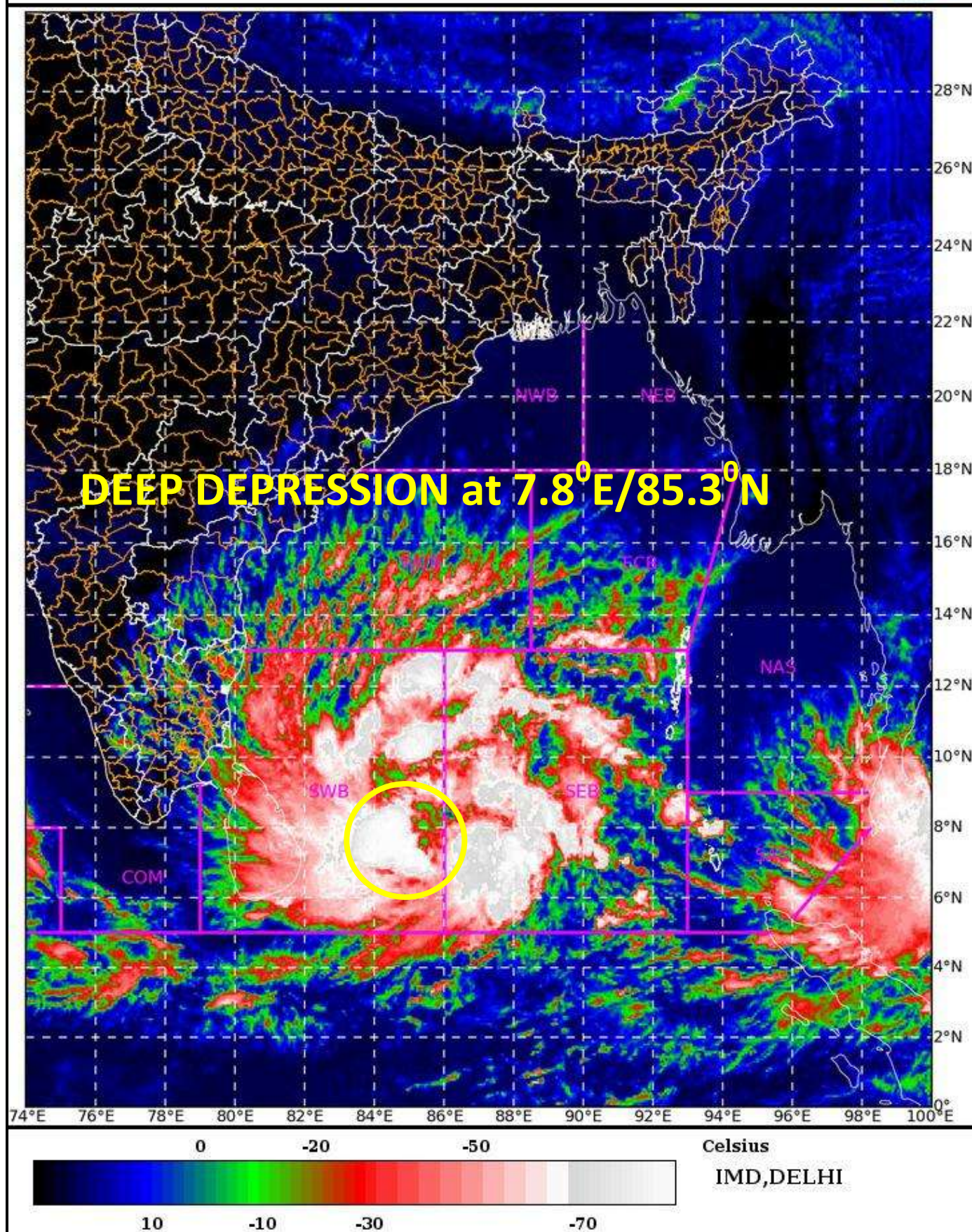
**(R.K. Jenamani)**  
**Scientist-F, RSMC, New Delhi**

*Copy to: ACWC Kolkata/Chennai/CWC Bhubaneswar/CWC Visakhapatnam/CWC Thiruvananthapuram*

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.



SAT : INSAT-3D IMG 01-12-2020/(0700 to 0727) GMT  
 IMG\_TIR1\_TEMP 10.8 um 01-12-2020/(1230 to 1257) IST  
 L1C Mercator

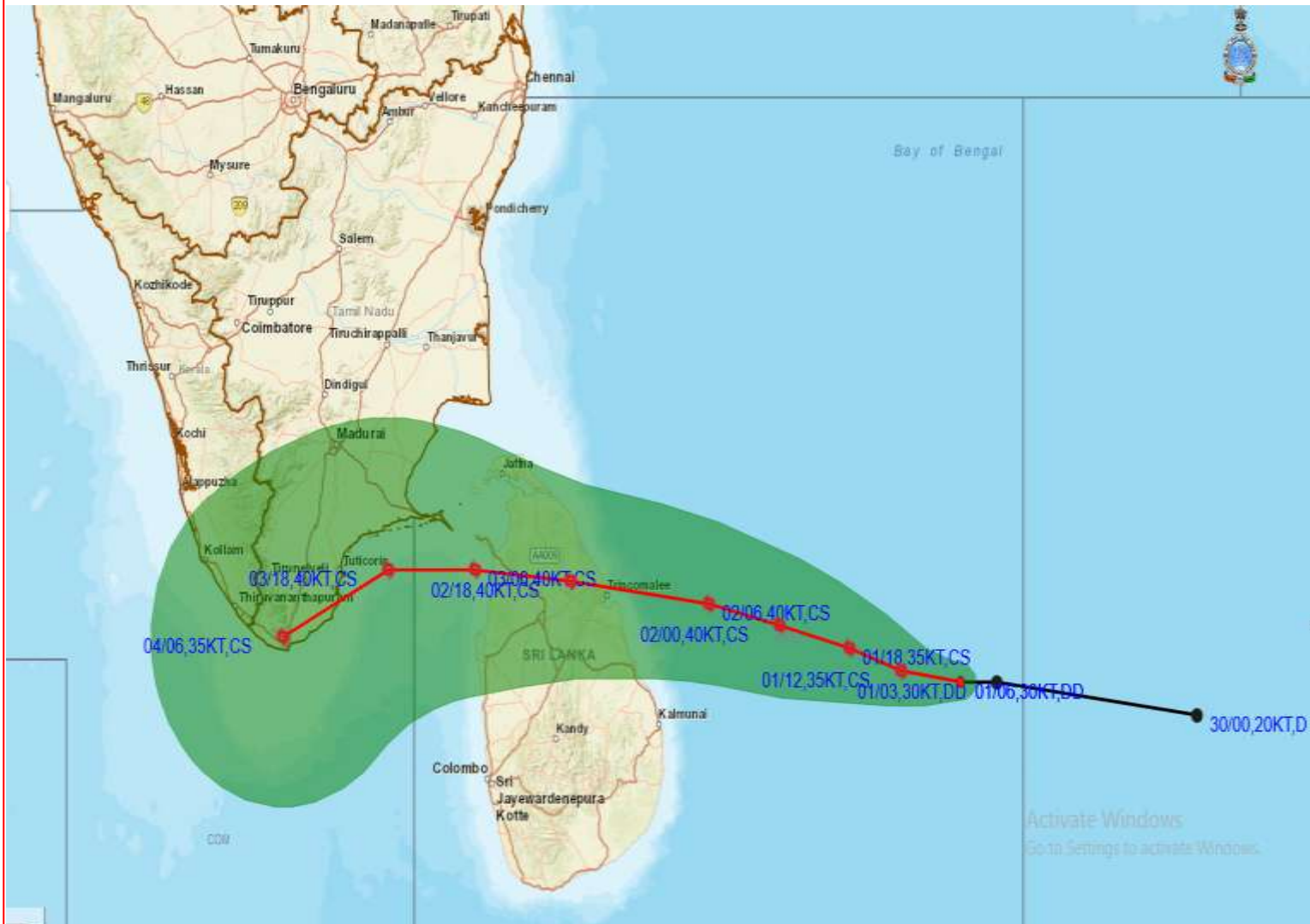


Spatial rainfall distribution: Isolated: ≤25%, A few: 26-50%, Many: 51-75%, Most: 76-100%  
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.





# OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0600 UTC OF 1st DECEMBER, 2020.



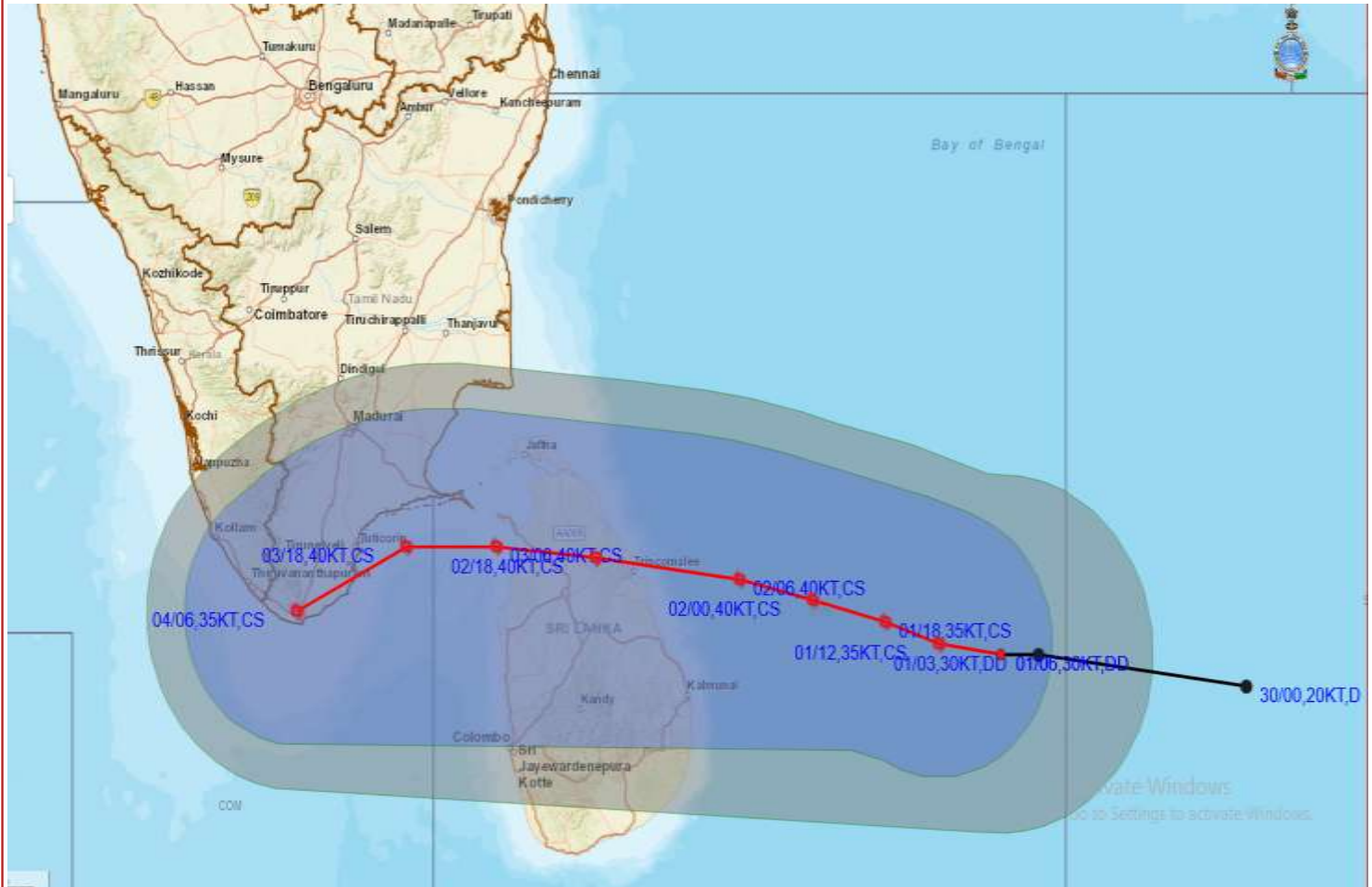
DATE/TIME IN UTC  
IST=UTC + 0530  
L: LOW PRESSURE AREA  
WML: WELL MARKED LOW PRESSURE AREA  
D: DEPRESSION (17-27 KT)  
DD: DEEP DEPRESSION (28-33 KT)  
CS: CYCLONIC STORM (34-47 KT)  
SCS: SEVERE CYCLONIC STORM (48-63KT)  
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)  
SuCS: SUPER CYCLONIC STORM ( $\geq$  120 KT)

- LESS THAN 34 KT
- 6 34-47 KT
- 6  $\geq$  48 KT
- OBSERVED TRACK
- FORECAST TRACK
- ▲ CONE OF UNCERTAINTY

Spatial rainfall distribution: Isolated:  $\leq$ 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.



# OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0600 UTC OF 1st DECEMBER, 2020.



**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

**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

**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.



### 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)
Arantangi	Pudukkottai	Tamil Nadu	Manamelkudi	0.2-0.3	Nil
Peravurani	Thanjavur	Tamil Nadu	Adaikkathevan	0.2-0.3	Nil
Ramanathapuram	Ramanathapuram	Tamil Nadu	Devipattinam	0.2-0.6	Upto 0.57
Tiruvadanai	Ramanathapuram	Tamil Nadu	Vattanam	0.3-0.5	Upto 0.12

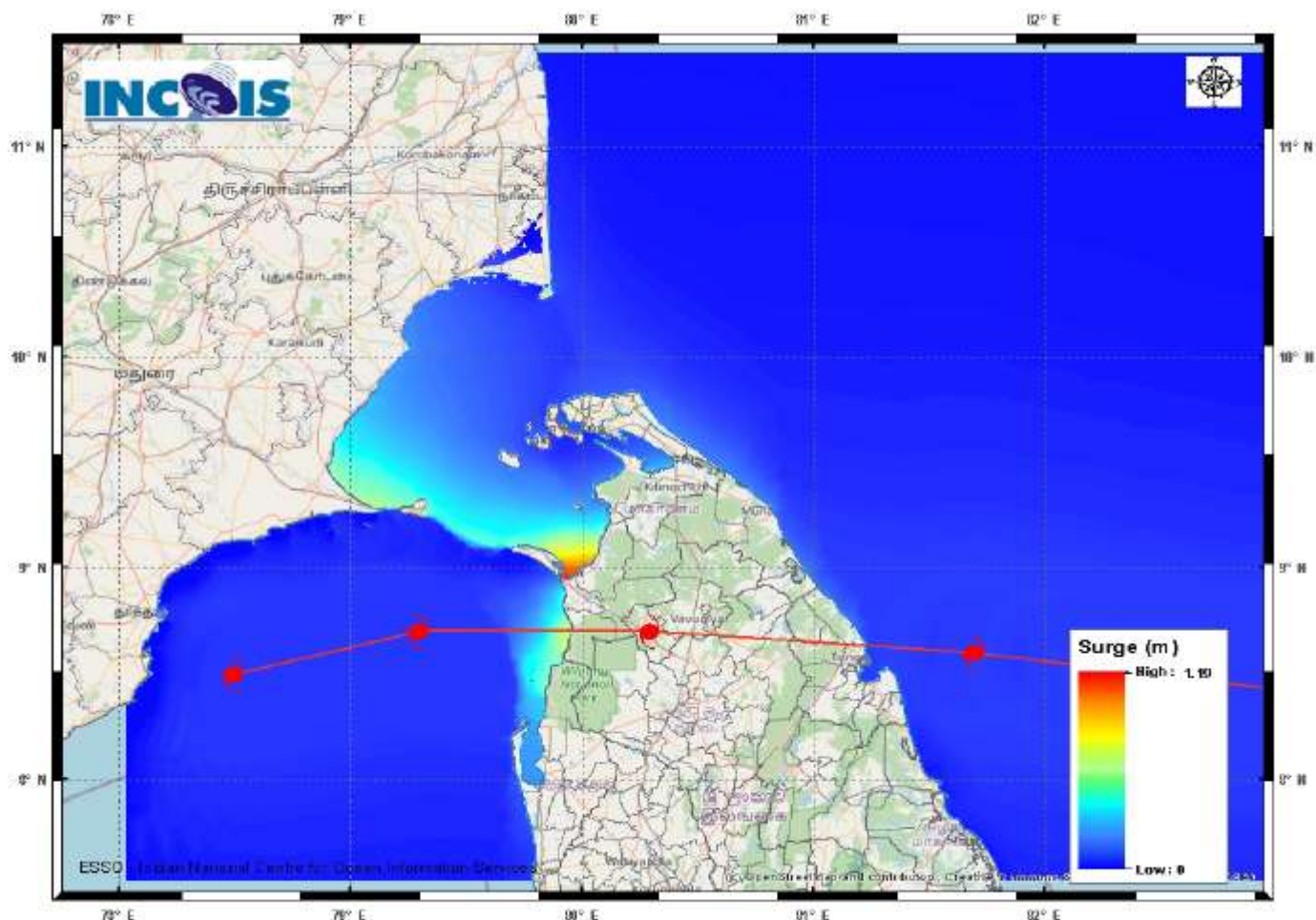


Figure: Storm Surge Map

### *Storm Surge Forecast by INCOIS Model*

Spatial rainfall distribution: Isolated:  $\leq 25\%$ , 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.