Ministry of Earth Sciences
India Meteorological Department
Cyclone Warning Division, New Delhi

Tropical Cyclone Forecast Programme
Report Dated 09th December 2022

Time of Issue: 1200 UTC

Synoptic features (based on 0600 UTC analysis):

Yesterday's cyclonic storm "Mandous" pronounced as "Man-Dous" over Southwest Bay of Bengal moved nearly west-northwestwards, intensified into a Severe Cyclonic Storm in the evening (1730 hours IST) of 8th December. It then continued to move nearly west-northwestwards, with a speed of 12 kmph, weakened into Cyclonic Storm over Southwest Bay of Bengal off north Tamilnadu and Puducherry coasts in the morning and lay centred at 0830 hours IST of today, the 9th December, near latitude 11.1°N and longitude 81.5°E, about 280 km north of Trincomalee (Sri Lanka), 230 km northeast of Jaffna (Sri Lanka), 180 km east-northeast of Karaikal and about 260 km south-southeast of Chennai. The cyclone is being monitored by Doppler Weather Radar Karaikal and Chennai.

It is very likely to move nearly northwestwards and cross north Tamilnadu, Puducherry and adjoining south Andhra Pradesh coasts between Puducherry and Sriharikota around Mamallapuram (Mahabalipuram) as a cyclonic storm with a maximum sustained wind speed of 65-75 kmph gusting to 85 kmph during midnight of today, the 09th December to early hours of tomorrow, the 10th December.

Dynamical and thermo-dynamical features

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) ºC	Around 27°C-28°C over over southwest and central BoB and along and off north Tamil Nadu and adjoining Andhra Pradesh coasts.	About 28-29°C over the southeast and adjoining southwest AS along and off Karnataka and Kerala, 26-28°C over eastcentral and adjoining north AS, 25-26°C over south Gujarat coasts, southwest AS.
Tropical Cyclone Heat Potential (TCHP) kJ/cm^2	50-80 KJ/cm2 over southwest BoB and less than 50 KJ/cm2 over westcentral BoB along east coast of India.	70-90 over southeast and adjoining eastcentral and adjoining southwest AS, and less than 40 over remaining AS and also off west coast of India, Comorin area.
Cyclonic Relative vorticity (X10^{-6}s^{-1})	200 around the system center with peak to the south of the system center.	10-20 over north AS, southeast AS & adjoining EIO.
Low Level convergence (X10^{-5} s^{-1})	20 to the to the north of system center.	5-10 over southwest AS.
Upper Level divergence (X10^{-5} s^{-1})	5 to the north of system center.	10-20 over central & north AS. 5-10 over southwest AS, Lakshadweep, Maldives and

		Comorin area.
Vertical Wind Shear (VWS knots)	Moderate to high 20-25 knots over & around the system center and decreasing along the predicted track.	10-15 over parts of southeast AS, more than 25 over rest of AS.
Wind Shear Tendency (knots)	Decreasing over system area.	Decreasing over south AS.
Upper tropospheric Ridge	Along 17.0°N over the BoB.	Along 15.0°N over the AS.
Trough in westerlies	No significant trough	

Satellite observations based on INSAT imagery (0600 UTC):

a) Over the BoB & Andaman Sea: -

As per INSAT 3D Imagery, current intensity is T3.0/3.5 and shows curved band pattern. The associated broken low and medium clouds with embedded isolated intense to very intense convection lies over south & west Bay of Bengal between area latitude 8°N to 14.0°N west of long 82.5°E, over Tamil Nadu, Sri Lanka, Palk strait and Gulf of Mannar.

b) Over the Arabian Sea: -

Scattered to broken low and medium clouds with embedded isolated intense to very intense convection lay over southwest Arabian sea and Comorin area. Scattered low and medium clouds with embedded isolated moderate to intense convection lay over eastcentral & southeast Arabian sea, Lakshadweep Islands area. Scattered low and medium clouds with embedded isolated weak to moderate convection over northeast arabian sea off south guj coast.

M.J.O. Index:

The Madden Julian Oscillation (MJO) Index is currently in Phase 3 with amplitude less than 1. It will continue in same phase for next 1 day. Thereafter, it will move to phase 4 and remain there for another 2 days.

Storms and Depression over South China Sea/ South Indian Ocean:

NIL

Model guidance based on 0000 UTC for the next 7 days

MODEL GUIDANCE	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	The severe cyclonic storm (SCS) over southwest BoB on 00UTC of 9th Dec. It moves west-northwestward and weakens to CS over southwest BoB by 03 UTC of 9th Dec off north Tamil Nadu – south Andhra Pradesh coasts. It will make landfall along north Tamil Nadu – south Andhra Pradesh coasts between 1500UTC of 9th as a CS (with MSD 44kts) near lat/lon of 12.5°N/80.1°E.	No significant system
IMD-GEFS	The severe cyclonic storm (SCS) over southwest BoB as on today, 0000UTC of 9th Dec. It will move in west-northwest ward and weaken into a CS over southwest BoB on	No significant system

	06UTC of 9th Dec, off north Tamil Nadu – south Andhra Pradesh coast. It will make landfall along north Tamil Nadu – south Andhra Pradesh coasts between 1800UTC of 9th Dec. and 0000UTC of 10th Dec as a DD (with MSD 28kts) near lat/lon of 12.5°N/79.8°E.	
GEFS Probabilistic guidance	Based on the models guidance, 70-95 % probability is indicating that system to make landfall along north Tamil Nadu – south Andhra Pradesh coast as a DD between lat/lon 12.5°N/79.8°E to lat/lon 13.0°N/80.2°E with probability as 70-95% of MSD more than (with MSD 28 kts).	Not available
IMD WRF	The severe cyclonic storm (SCS) over southwest BoB on 9th, will move in west-northwest wards. It weakens to CS and then will make landfall along north Tamil Nadu – south Andhra Pradesh coasts 0000 UTC of 10th Dec. as a CS (with MSD 40 kts) near lat/lon of 13.0°N/80.2°E.	No significant system within forecast duration.
NCMRWF-NCUM	The Severe Cyclonic storm on 00UTC of 9th Dec. over southwest BoB, weakens into CS at 12 UTC of 9th Dec. It likely to move to west-northwestwards and cross near north TamilNadu and adjoining south Andhra Pradesh coast by late night of 9th (2100 UTC 9th Dec as a CS (with MSD 42kts) near lat/lon 12.2°N/80.1°E	No significant system
NCMRWF-NEPS	The SCS over southwest BoB close to northeast of Sri Lanka coast at 0000 UTC on 9th, over SW BoB off north Tamil Nadu – south Andhra Pradesh coast. It weakens into CS pver SW BoB and then makes landfall as CS around 00UTC of 10th Dec (with MSD 37kts) near lat/lon 12.2°N/79.8°E	No significant system
NCMRWF-UM (Regional)	The Severe Cyclonic storm on 00UTC of 9th Dec. over southwest BoB, weakens into CS at 12 UTC of 9th Dec. It likely to move to west-northwestwards and cross near north TamilNadu and adjoining south Andhra Pradesh coast by late 9th or early 10th Dec as a CS (with MSD 42kts) near lat/lon 12.8°N/80.2°E	No significant system
ECMWF	The SCS over SW BoB at 0000UTC of 9th Dec weakens into CS at 03 UTC of 9th over the same region. It moves west-northwestwards towards north Tamil Nadu – south Andhra Pradesh coasts. It will make landfall close to north Tamil Nadu – south Andhra Pradesh coast on 9th between 1800 UTC and 2100 UTC as a CS (with MSD 35kts) near lat/lon 13.0°N/80.2°E	No significant system
ECMWF ensemble	The Cyclonic Storm over southwest BoB on the 9th morning moved west-northwestwards as CS with 70-90% probability on 9th Dec. and	No significant system

	will reach north Tamil Nadu – south Andhra Pradesh coast on 12 UTC of 9th Dec. It will make landfall as DD (with MSD 32kts) near lat/lon 13.2°N/80.2°E	
NCEP-GFS	The SCS over southwest BoB on 0000 UTC of 9th Dec. It will move west-northwestwards close to north Tamil Nadu – south Andhra Pradesh coasts and weaken into a CS by 1200UTC of 9th Dec. It will make landfall close to north Tamil Nadu – south Andhra Pradesh coast between 12UTC-18UTC of 9th as a CS (with MSD 40kts) near lat/lon 12.4°N/80.3°E	No significant system
IMD MME	The CS over southwest BoB on 0000 UTC 9th Dec. It will then move west-northwestwards and will weaken into DD over southwest Bay close to north Tamil Nadu – south Andhra Pradesh coast on 0000UTC of 10th Dec. It will make landfall close to north Tamil Nadu – south Andhra Pradesh coast on 10th 0300 UTC as a DD (with MSD 29kts) near lat/lon 12.5°N/79.6°E	No significant system
IMD HWRF	The severe cyclonic storm (SCS) 0000 UTC of 9th Dec. It moves west-northwestwards gradually decrease into CS on 1200UTC of 9th Dec. It will make landfall close to north Tamil Nadu – south Andhra Pradesh coasts around 0000UTC of 10th as a CS (with MSD 34kts) near lat/lon 13.1°N/80.4°E	No significant system
IMD-Genesis Potential Parameter	No potential zone over BoB during next 7 days	No potential zone over Arabian Sea during next 7 days

Summary and conclusion:

Most of the NWP models are indicating the present Severe Cyclonic Storm "Mandous" (pronounced as "Man-Dous") over Southwest Bay of Bengal likely to continue to move west-northwestwards and weaken into cyclonic storm by 06 UTC of 9th Dec. Most of the Models are also indicating its nearly northwestwards movement from 0900 UTC towards north Tamilnadu, Puducherry and adjoining south Andhra Pradesh coasts with intensity as CS.

Table 1 and 2 show summary of various models in terms of Landfall timing, location and intensity at the time of crossing coasts based upon MME-IMD, ECMWF, HWRF, NCUM, IMD-GFS, IMD-GEFS, NEPS, NEPS-R. Most of the models are indicating landfall by mid-night of 9th Dec between 1800 UTC to 2100 UTC of 9th Dec (except HWRF which indicates its landfall between 2100 of 9th till 0000 UTC of 10th Dec). There is a model consensus regarding the system maintaining its intensity as CS during landfall with MSD as 40 kts (with a maximum sustained wind speed of 65-75 kmph gusting to 85 kmph) along north Tamil Nadu, Puducherry-south Andhra Pradesh coasts. Most of the models are also indicating the CS likely to make landfall between 12°N to 12.8°N (Puducherry and Sriharikota near) near 12.7°N/80.2°E Mamallapuram (Mahabalipuram).

In view of all the above, it is inferred that

1. For the Bay of Bengal:

The cyclonic storm “Mandous” pronounced as “Man-Dous” over Southwest Bay of Bengal very likely very likely to move nearly north-westwards and cross north Tamilnadu, Puducherry and adjoining south Andhra Pradesh coasts between Puducherry and Sriharikota around Mamallapuram (Mahabalipuram) as a cyclonic storm with a maximum sustained wind speed of 65-75 kmph gusting to 85 kmph during 1800 to 2100 UTC pf 9th December.

2. For the Arabian Sea:

No significant system during next 7 days

Probability of cyclogenesis (formation of depression and above intensity systems) over the BAY OF BENGAL of Bengal and Andaman Sea during next 168 hours

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
--	NIL	NIL	NIL	NIL	NIL	NIL

Probability of cyclogenesis (formation of depression and above intensity systems) over the Arabian Sea during next 168 hours:

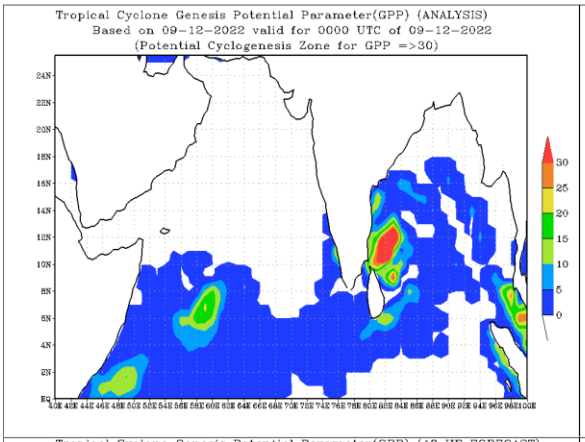
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

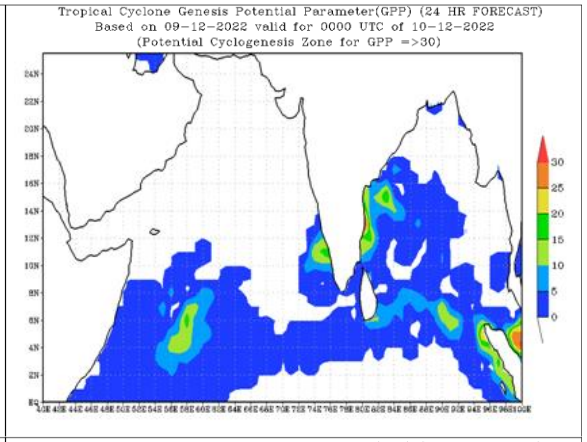
Advisory:

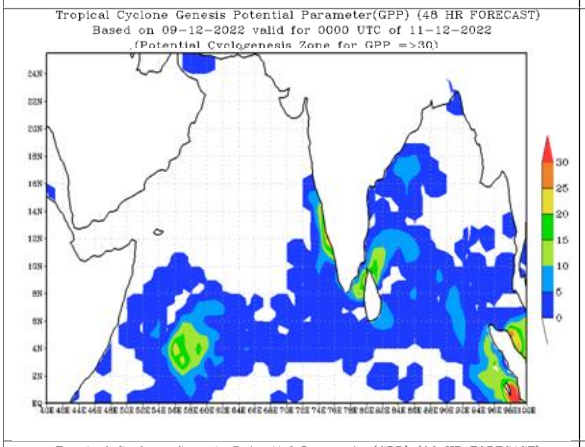
System is under continuous surveillance

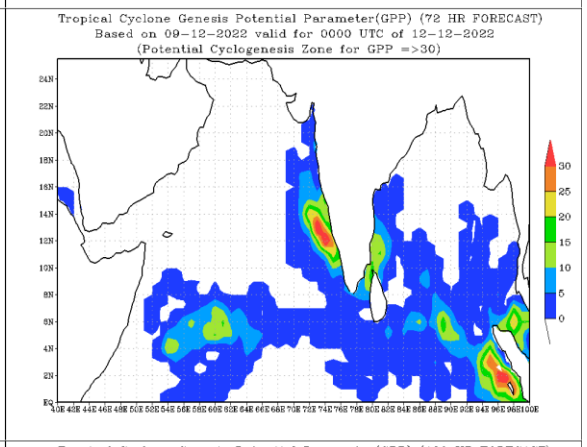
IOP: NIL

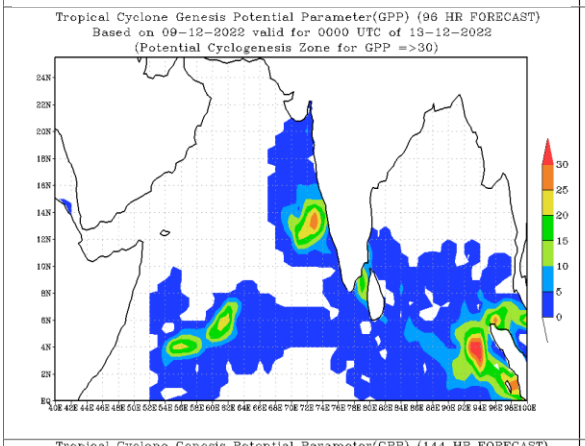
Annexure

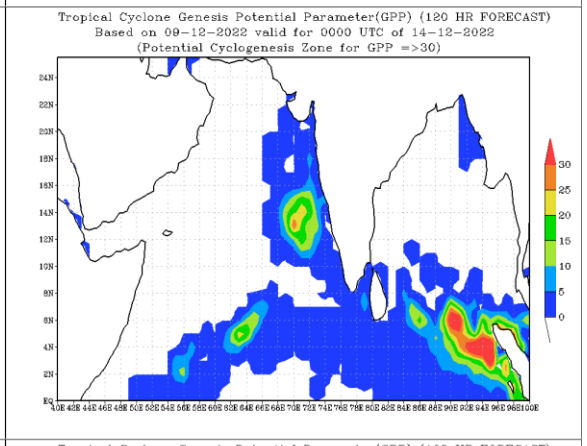

Tropical Cyclone Genesis Potential Parameter(GPP) (ANALYSIS)
Based on 09-12-2022 valid for 0000 UTC of 09-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

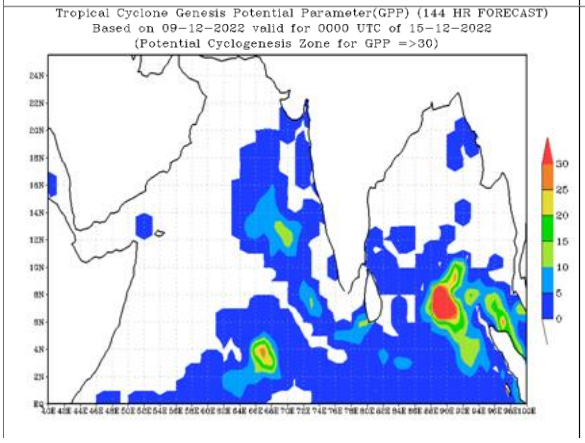

Tropical Cyclone Genesis Potential Parameter(GPP) (24 HR FORECAST)
Based on 09-12-2022 valid for 0000 UTC of 10-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

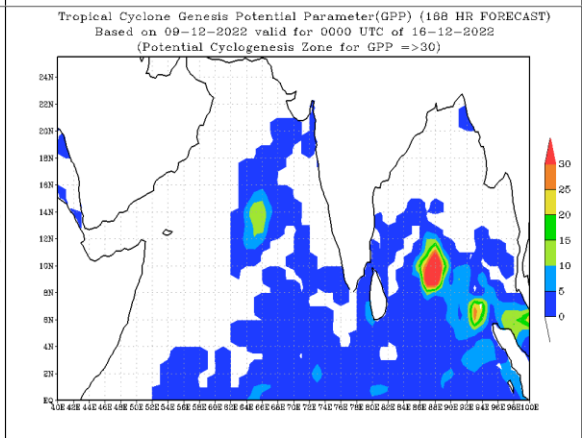

Tropical Cyclone Genesis Potential Parameter(GPP) (48 HR FORECAST)
Based on 09-12-2022 valid for 0000 UTC of 11-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

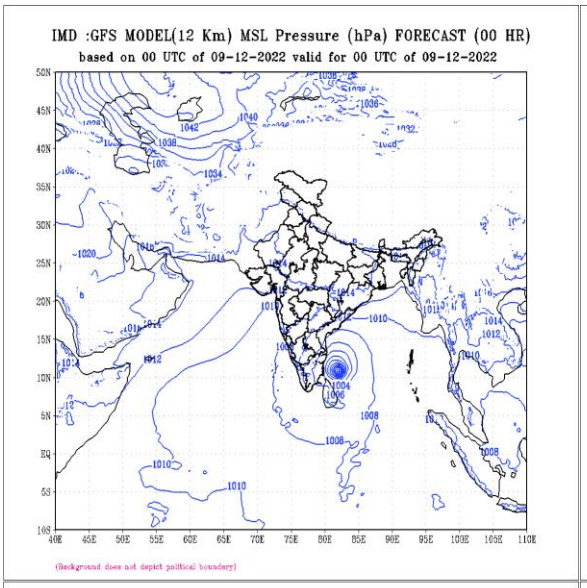

Tropical Cyclone Genesis Potential Parameter(GPP) (72 HR FORECAST)
Based on 09-12-2022 valid for 0000 UTC of 12-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

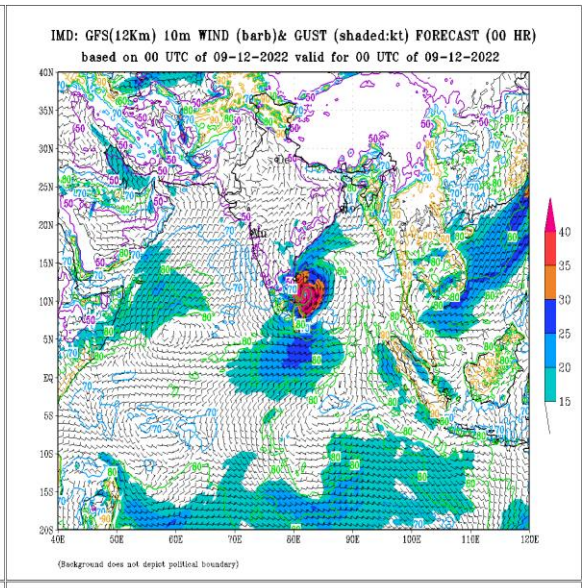

Tropical Cyclone Genesis Potential Parameter(GPP) (96 HR FORECAST)
Based on 09-12-2022 valid for 0000 UTC of 13-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

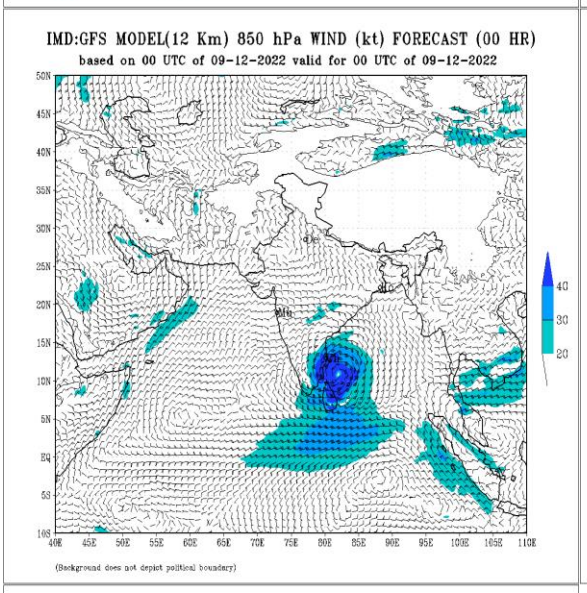

Tropical Cyclone Genesis Potential Parameter(GPP) (120 HR FORECAST)
Based on 09-12-2022 valid for 0000 UTC of 14-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

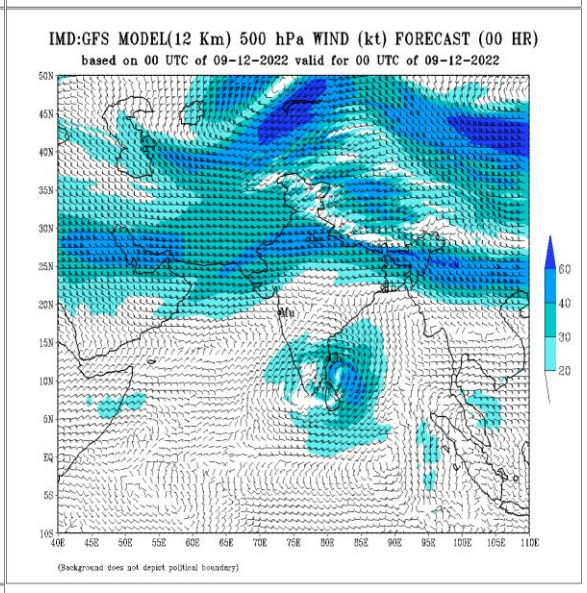

Tropical Cyclone Genesis Potential Parameter(GPP) (144 HR FORECAST)
Based on 09-12-2022 valid for 0000 UTC of 15-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

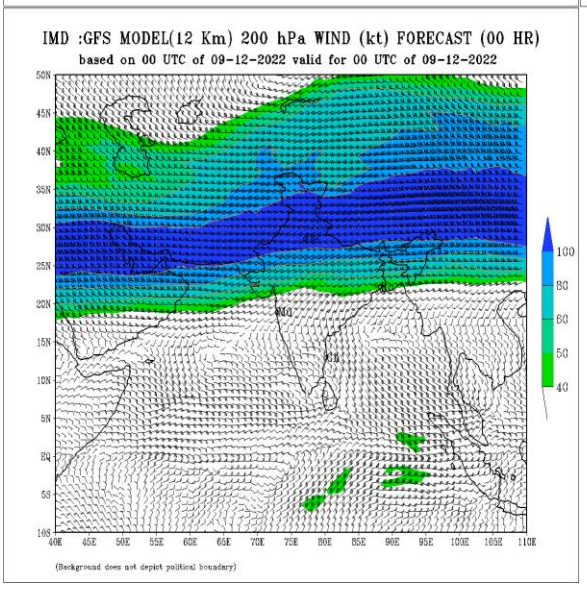

Tropical Cyclone Genesis Potential Parameter(GPP) (168 HR FORECAST)
Based on 09-12-2022 valid for 0000 UTC of 16-12-2022
(Potential Cyclogenesis Zone for GPP =>30)

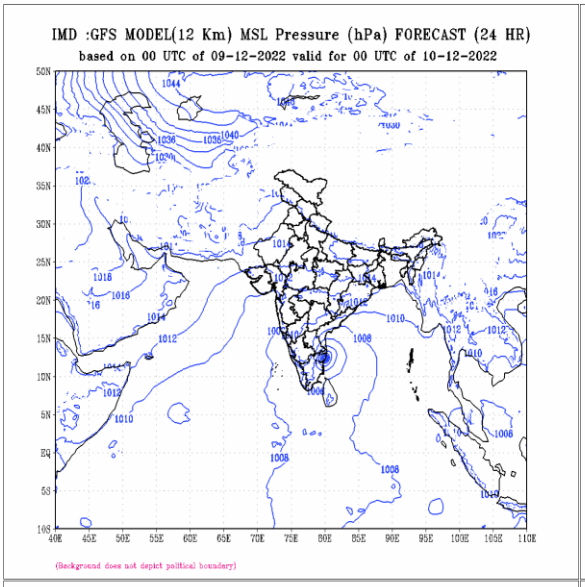

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (00 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 09-12-2022
(Background does not depict political boundary)

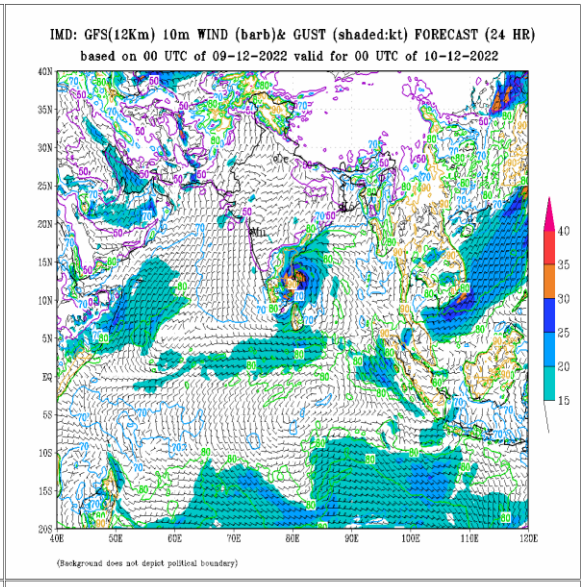

IMD: GFS(12Km) 10m WIND (barb)& GUST (shaded:kt) FORECAST (00 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 09-12-2022
(Background does not depict political boundary)

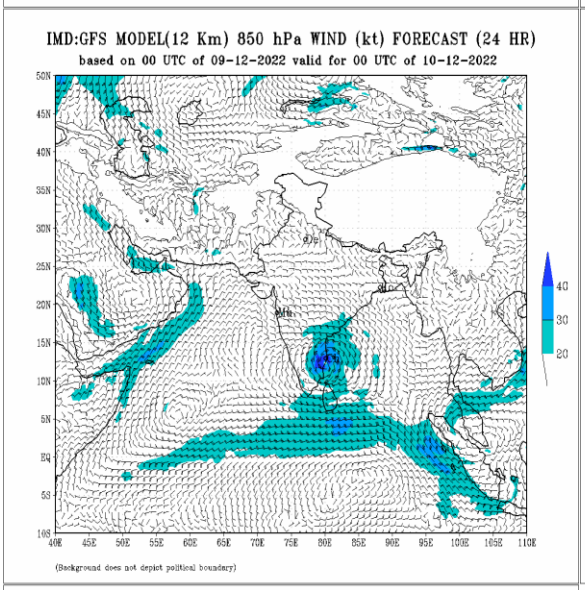

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (00 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 09-12-2022
(Background does not depict political boundary)

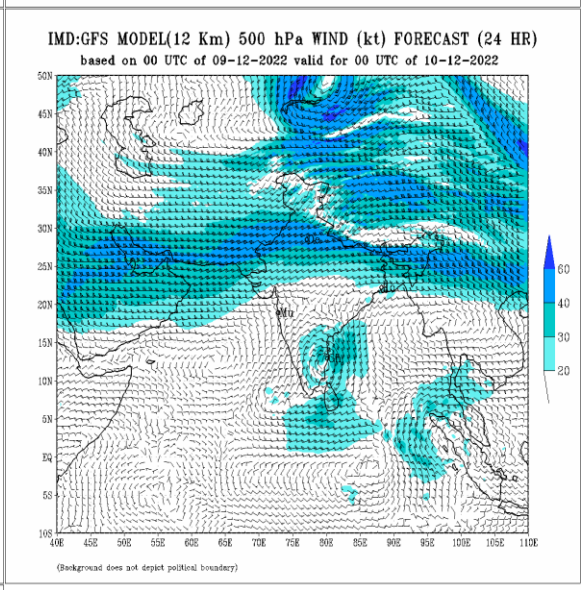

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (00 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 09-12-2022
(Background does not depict political boundary)

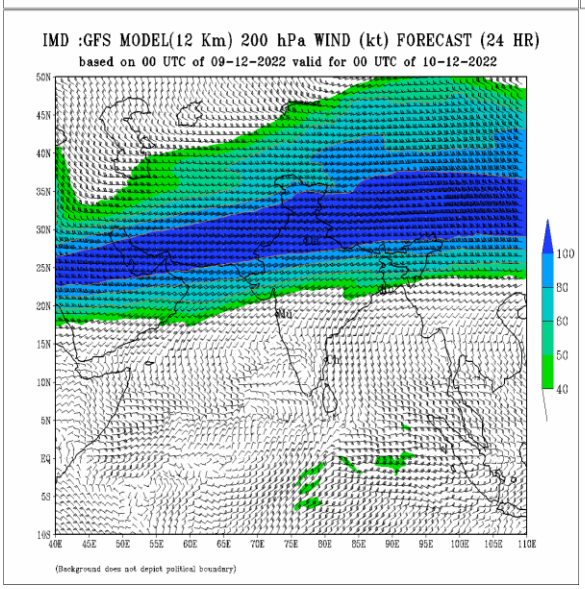

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (00 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 09-12-2022
(Background does not depict political boundary)

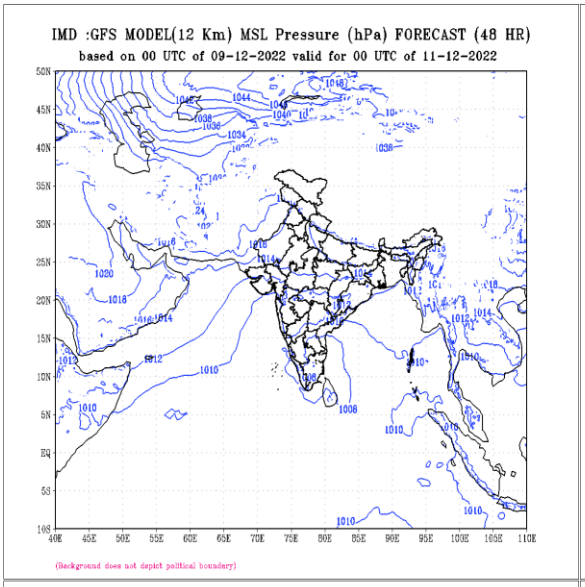

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (24 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 10-12-2022
(Background does not depict political boundary)

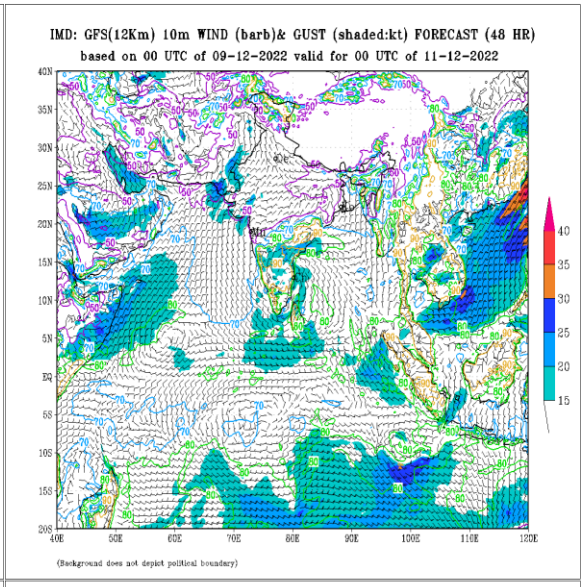

IMD: GFS(12Km) 10m WIND (barb)& GUST (shaded:kt) FORECAST (24 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 10-12-2022
(Background does not depict political boundary)

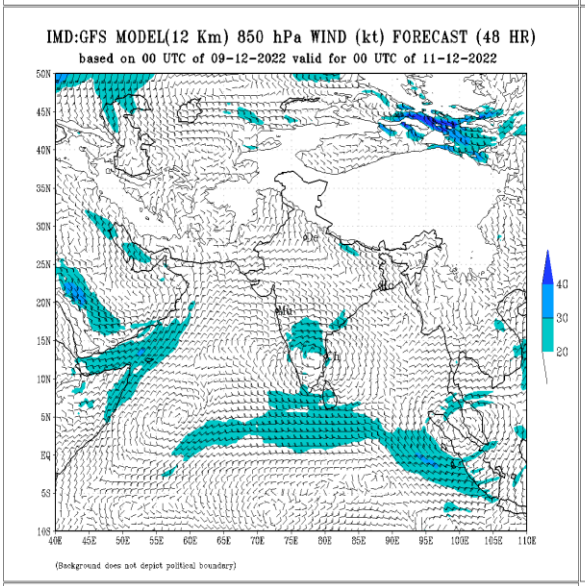

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (24 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 10-12-2022
(Background does not depict political boundary)

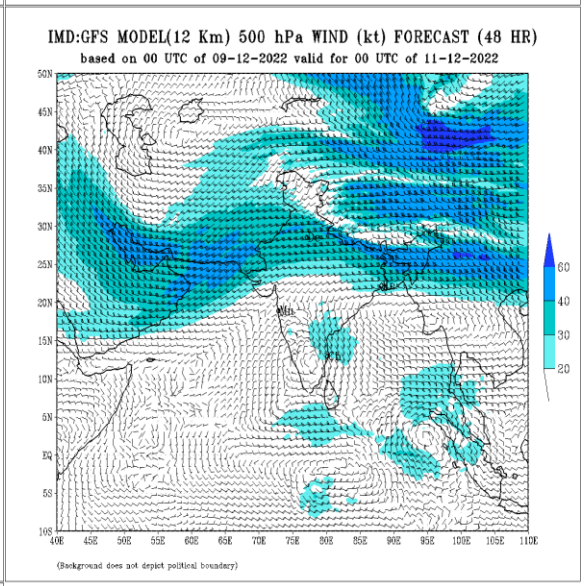

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (24 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 10-12-2022
(Background does not depict political boundary)

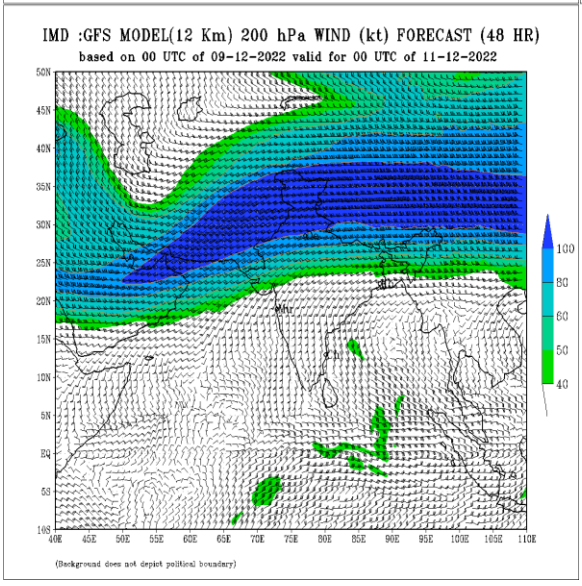

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (24 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 10-12-2022
(Background does not depict political boundary)

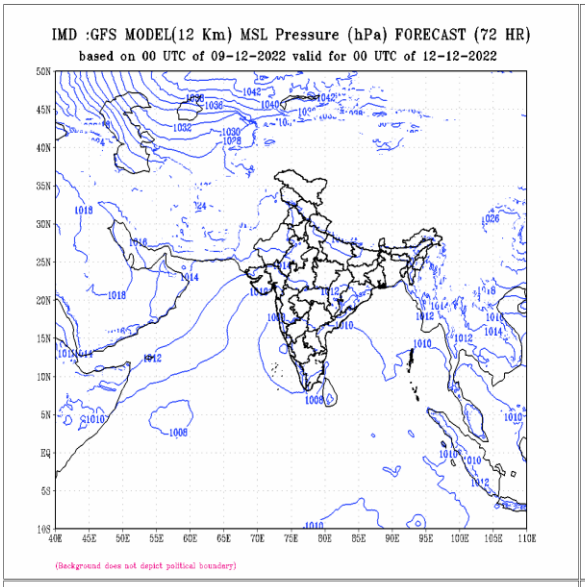

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (48 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 11-12-2022
(Background does not depict political boundary)

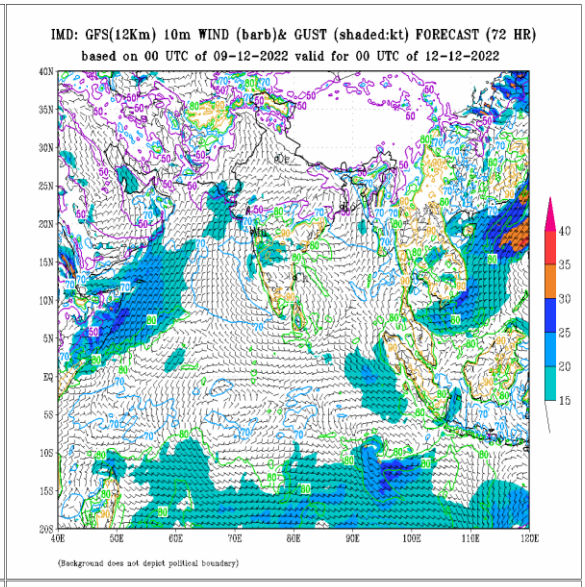

IMD: GFS(12Km) 10m WIND (barb)& GUST (shaded:kt) FORECAST (48 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 11-12-2022
(Background does not depict political boundary)

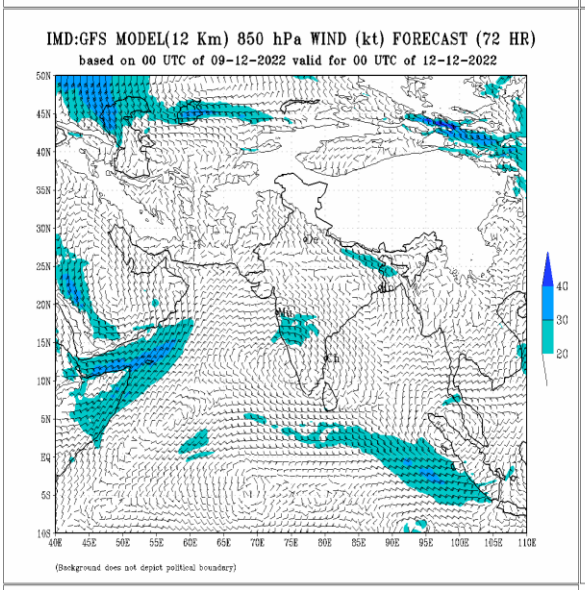

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (48 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 11-12-2022
(Background does not depict political boundary)

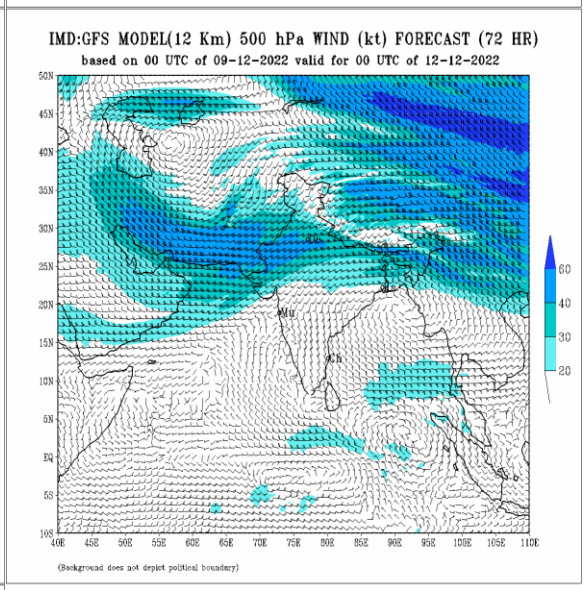

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (48 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 11-12-2022
(Background does not depict political boundary)

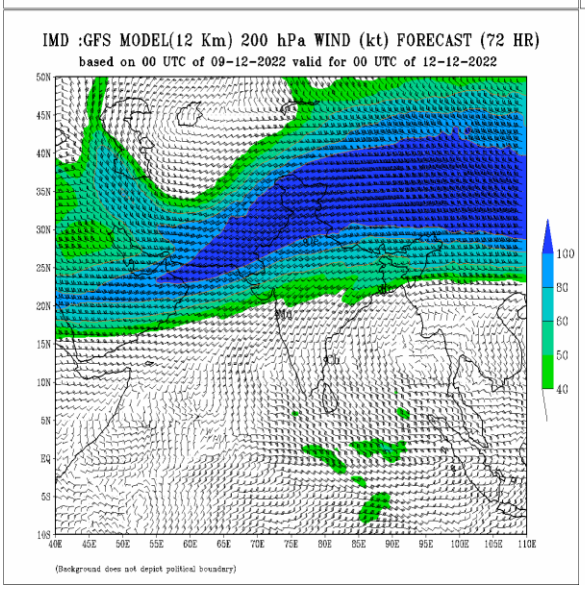

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (48 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 11-12-2022
(Background does not depict political boundary)


IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (72 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 12-12-2022
(Background does not depict political boundary)

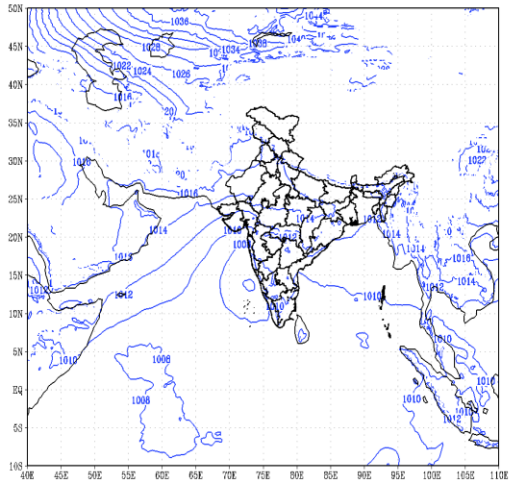

IMD: GFS(12Km) 10m WIND (barb)& GUST (shaded:kt) FORECAST (72 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 12-12-2022
(Background does not depict political boundary)


IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (72 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 12-12-2022
(Background does not depict political boundary)


IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (72 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 12-12-2022
(Background does not depict political boundary)

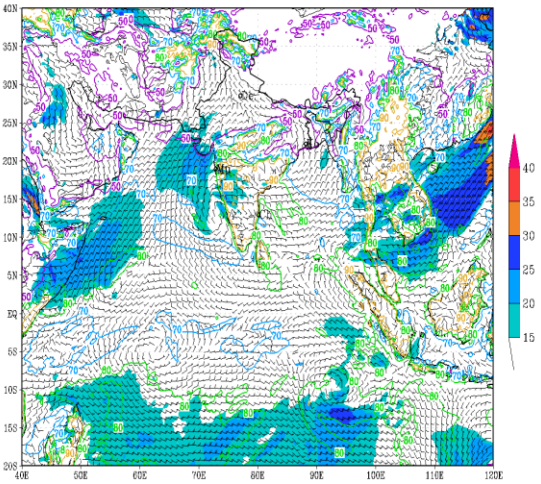

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (72 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 12-12-2022
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (96 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 13-12-2022



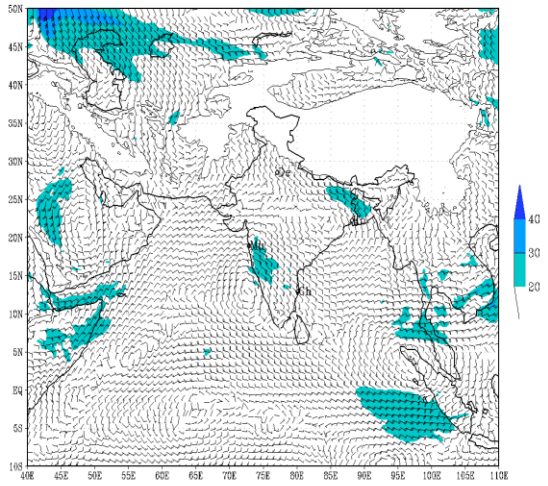
(Background does not depict political boundary)

IMD: GFS(12Km) 10m WIND (barb)& GUST (shaded:kt) FORECAST (96 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 13-12-2022



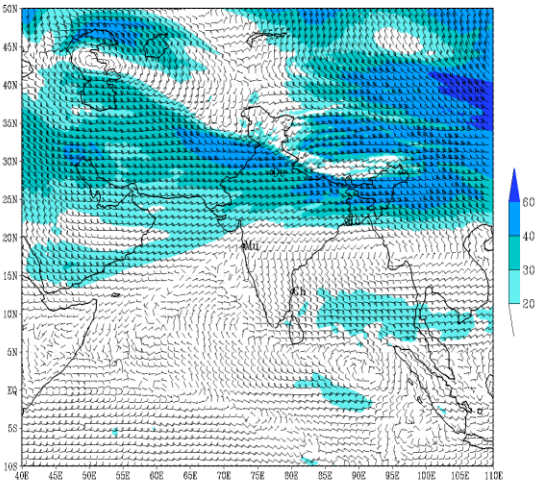
(Background does not depict political boundary)

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (96 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 13-12-2022



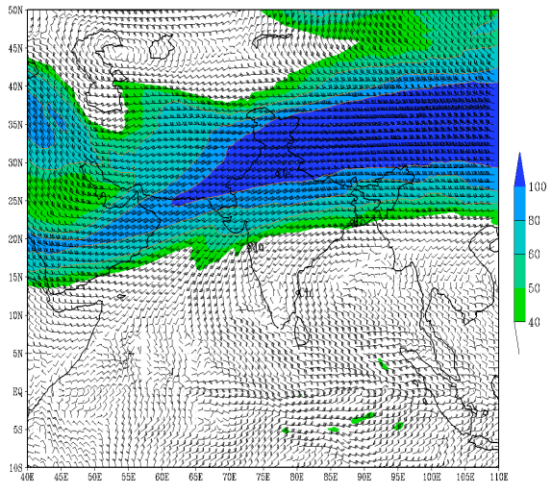
(Background does not depict political boundary)

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (96 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 13-12-2022



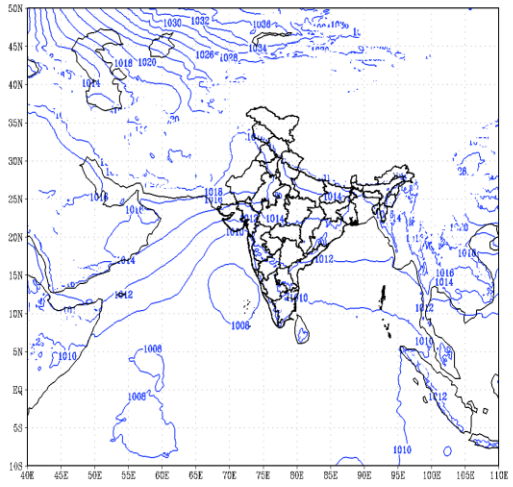
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (96 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 13-12-2022



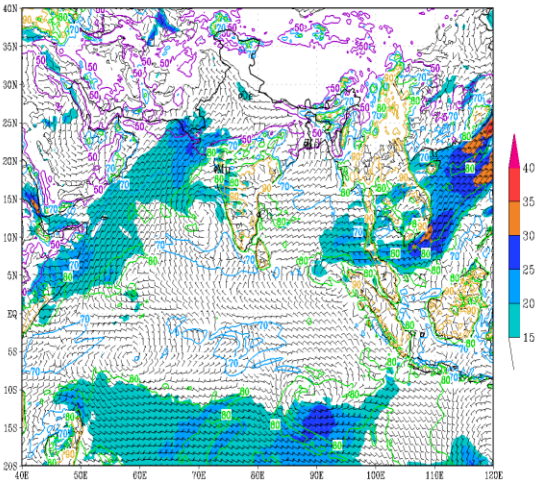
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (120 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 14-12-2022



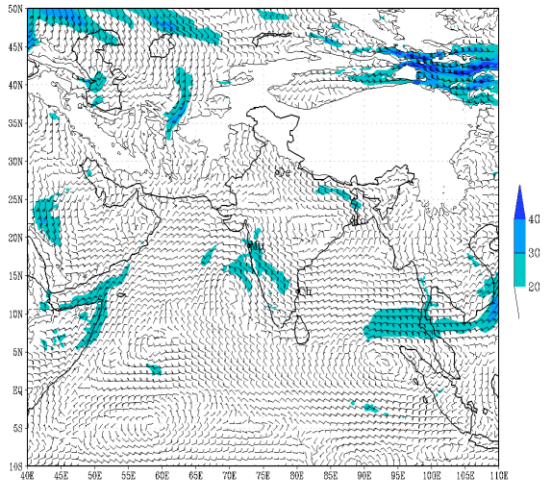
(Background does not depict political boundary)

IMD: GFS(12Km) 10m WIND (barb)& GUST (shaded:kt) FORECAST (120 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 14-12-2022



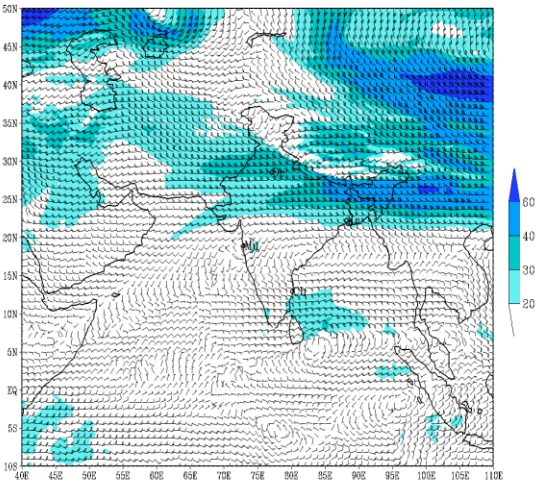
(Background does not depict political boundary)

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (120 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 14-12-2022



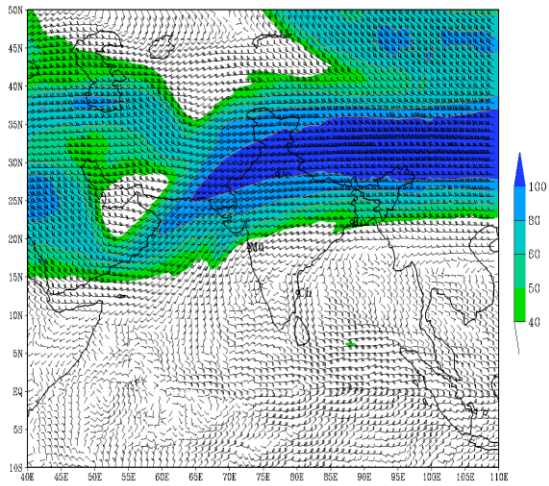
(Background does not depict political boundary)

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 15-12-2022

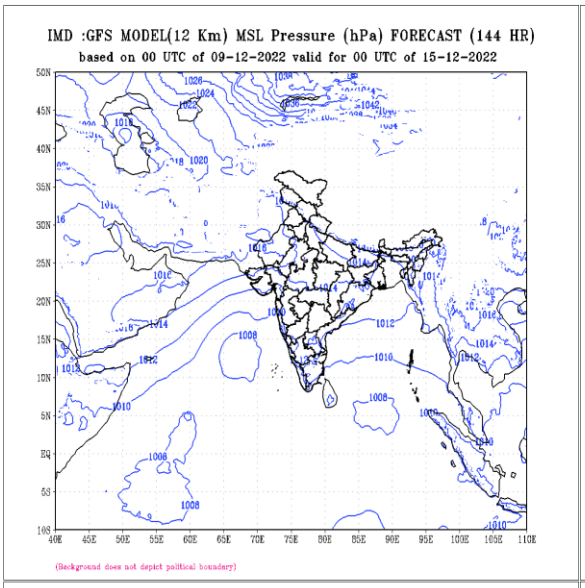


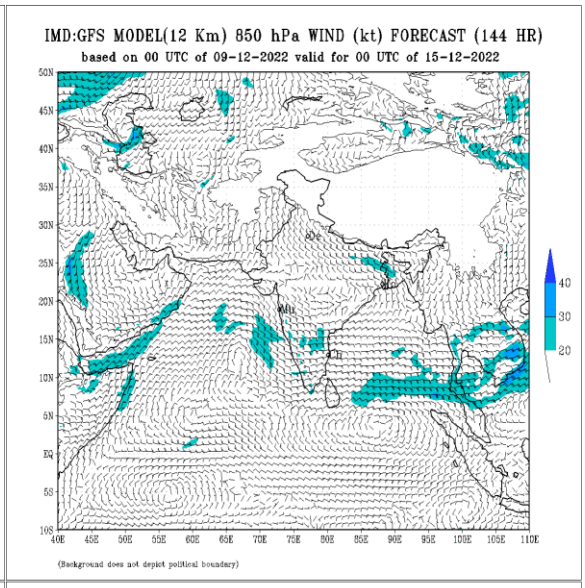
(Background does not depict political boundary)

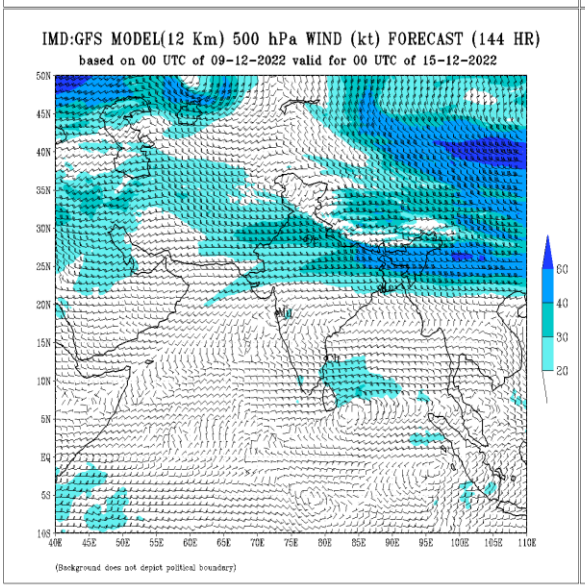
IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (120 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 14-12-2022

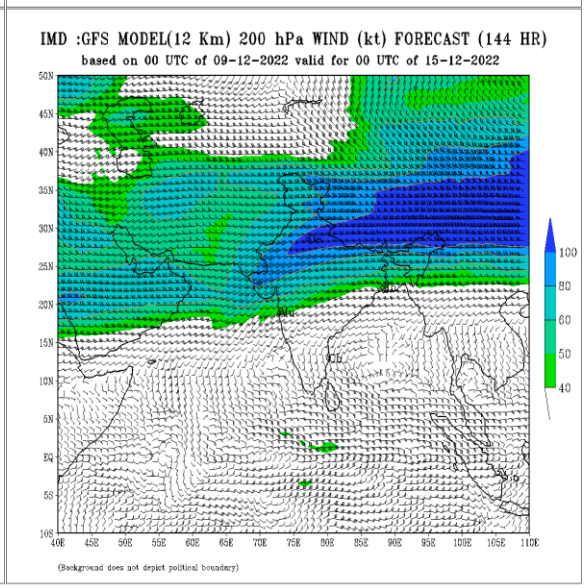


(Background does not depict political boundary)

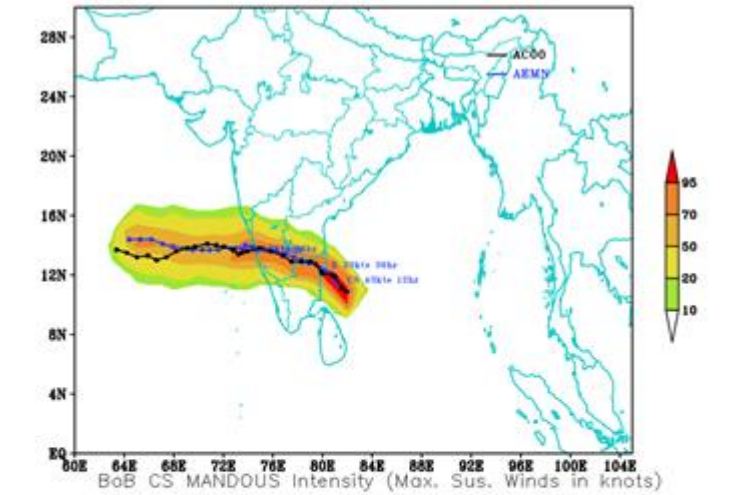

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (144 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 15-12-2022
(Background does not depict political boundary)

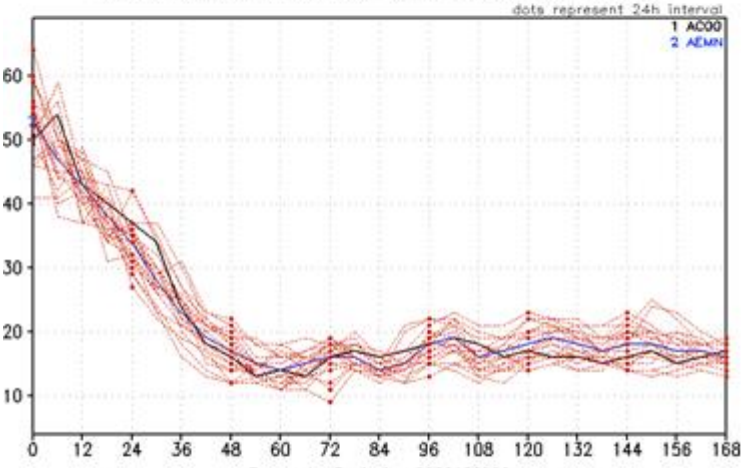

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 15-12-2022
40
30
20
(Background does not depict political boundary)

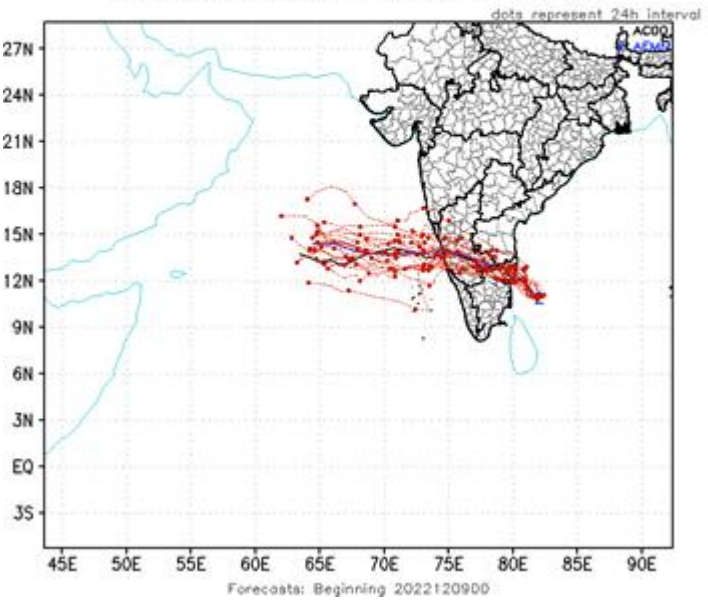

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 15-12-2022
60
40
30
20
(Background does not depict political boundary)


IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 09-12-2022 valid for 00 UTC of 15-12-2022
100
80
60
50
40
(Background does not depict political boundary)

Probability (%) of BoB CS MANDOUS passing within 65nm during next 168hr







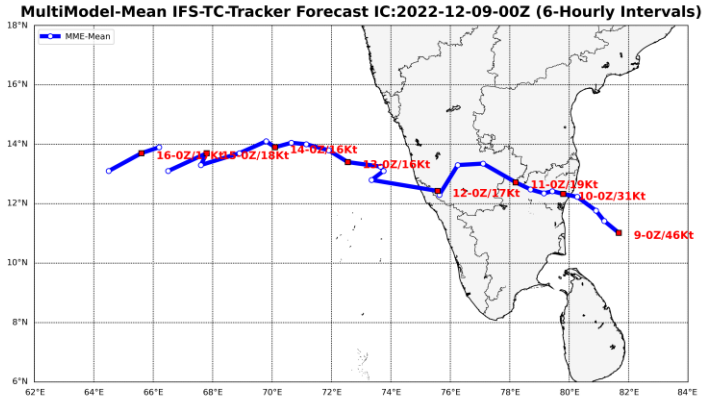


Table 1: Model summery in terms of Landfall timing, location and intensity at the time of crossing coasts based upon 1200 UTC for, MME NEW IMD, MME OLD IMD, ECMWF of 8th Dec, HWRF 06/18 UTC and 0000 UTC of 9th Dec

Model names	Landfall timing	Landfall point in LAT/LONG degree values	Likely MSD(Winds) in kts	Intensity of the system during landfall
IMD GFS	9th Dec/15UTC	12.5/80.1	44	CS
HWRF	after 10th Dec/00UTC	12.5/80	40	CS
ECMWF	9th Dec/18-21UTC	13.0/80.2	34	CS
NCEP GFS	9th Dec/12-18UTC	12.8/80.9	31	DD
NCUM	9th Dec/21UTC	12.2/80.1	42	CS
MME IMD NEW	10th Dec/03UTC	12.5/79.6	30	DD
MME IMD OLD	9th Dec/2100 UTC	13.1/80.6	32	DD
Average	**9th Dec around 2100 UTC**	**12.7/80.2**	**32**	**DD/CS**

Table 2: Analysis based model summary and track latitude and longitude and Internsity

Model Time	IMD-GFS	ECMWF	NCUM	MME-New	MME-old	HWRF	IMD-OPR
Based on	09th-00 Lat/Lon(Int)	08th-00 Lat/Lon(Int)	09th-00 Lat/Lon(Int)	08th -12 Lat/Lon(Int)	08th -12 Lat/Lon(Int)	08th -18 Lat/Lon(Int)	09th-00 Lat/Lon(Int)
09th -00	11.1/81.4 (54)	11.0/82.2 (SCS)	11./81.4 (48)	10.96/81.98(44.2)	11.4/82.5 (44)	10.7/81.6 (45)	11.0/81.7 (SCS)
09th -03		11.3/82.0 (CS)					11.2/81.5
09th -06	11.2/81.5 (54)	11.74/81.8 (CS)	11.3/81.1(48)	11.46/81.52(42.6)			11.5/81.2 (CS)
09th -09		12.02/81.47 (SCS)					11.7/80.9
09th -12	11.7/81.0 (50)	12.3/81.1(SCS)	11.7/80.8(47)	11.8/81.08(39.4)	12.5/81.2 (38)	11.3/82.3 (37)	12.0/80.7(CS)
09th -15		12.58/80.7(CS)					12.2/80.5
09th -18	12.1/80.6 (44)	13.0/80.3(CS)	12.2/80.3(46)	12.44/80.03(39.0)			12.4/80.3(CS)
09th -21		13.14/79.87(CS)					12.5/80.1
10th -00	12.4/80.1 (40)	13.0/79.5(DD)	12.2/79.8(36)	12.52/79.76(29.6)	13.4/80.1	12.5/81.9 (37)	12.7/80.0(DD)
10th -03		12.86/79.2(DD)					12.7/79.8
10th -06	12.4/79.7 (34)	12.5/79.1(D)	12.2/79.5(28)	12.52/79.16(25.4)			12.8/79.7(D)
10th -09							12.9/79.5

10th -12	12.6/79.5 (28)		12.2/79.1(26)	(21.4)	13.6/79.2	13.6/81.3 (39)	13.0/79.4
10th -18	(21)						
11th -00	13.0/78.5 (17)		12.1/78.3(22)	(17.5)	13.8/77.9	14.4/81.0 (37)	