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

Tropical Cyclone Forecast Programme
Report Dated 26th October, 2022

Time of Issue: 0900 UTC

Synoptic features (based on 0600 UTC analysis):

- A trough runs from South Interior Karnataka to Southwest Bay of Bengal across Tamil Nadu in lower tropospheric levels.
- The cyclonic circulation over Westcentral Bay of Bengal & neighbourhood now lies over Westcentral & adjoining Southwest Bay of Bengal between 1.5 km & 4.5 km above mean sea level.

Dynamical and thermo-dynamical features

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) ºC	About 29-31°C over entire BoB	29-30°C over north AS, alond and off south Gujarat, Maharashtra coasts, southeast AS. 27-29°C over eastcentral and adjoining westcentral and southwest AS. Less than 24°C off Oman & Somalia coast and adjoining parts of southwest and westcentral AS.
Tropical Cyclone Heat Potential (TCHP) kJ/cm^2	70-80 KJ/cm^2 over north BoB, lesst than 40 KJ/cm^2 over westcenttral BoB and southwest BoB, 90-100 KJ/cm^2 over eastcentral BoB.	(a) 60-80 over southeast AS & adjoining eastcentral AS. (b) Less than 30 KJ/cm^2 over remaining AS and also off west coast of India.
Cyclonic Relative vorticity (X10^{-6}s^{-1})	Positive vorticity of 20-30 over southwest & adjoining westcentral BoB.	Positive vorticity of 40-50 over westcentral AS.

Low Level convergence ($X10^{-5}$ s^{-1})	05-10 over Gulf of Thailand, 05 over southwest BoB off south Sri lanka coast.	
Upper Level divergence ($X10^{-5}$ s^{-1})	05 over Gulf of Thailand, 05 over Myanmar coast, 05-10 over westcentral and adjoining eastcentral BoB.	05 over southcentral AS.
Vertical Wind Shear (VWS knots)	Moderate 20 knots over north & adjoining central BoB. High to the south of 12°N.	5-10 over major parts of AS.
Wind Shear Tendency (knots)	Decreasing tendency over south BoB	Decreasing over major parts of AS.
Upper tropospheric Ridge	Along 20.0°N over the BoB.	Along 18.0°N over the AS.
Trough in westerlies	Near 88°E upto 22°N	

Satellite observations based on INSAT imagery (0600 UTC):

(a) Over the BoB & Andaman Sea:-
Scattered to broken low/medium clouds with moderate to intense convection over south Bay, Andaman Sea.

(b) Over the Arabian Sea:-
Scattered low/medium clouds with moderate to intense convection lay over south Arabian Sea. moderate to intense convection southeast Arabian Sea, over Comorin area.

M.J.O. Index:
MJO index is currently in Phase 6 with amplitude greater than 1. It will continue in same phase for next 7 days with amplitude remaining greater than 1.

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

NIL

Input for FDP Cyclone based on 0000 UTC for the next 7 days

MODEL GUIDANCE	BoB	AS
IMD-GFS	A cyclonic circulation over south Andaman Sea on 27th moving westwards and dissipating over southwest BoB on 30th.	An anti-Cyclonic circulation (cycir) over westcentral and adjoining north AS persists till 28th.
IMD-GEFS	Circulation over westcentral BoB to persist till 28th October. A fresh cyclonic circulation over south Andaman Sea on 28th, moving westwards and dissipating over southwest BoB on 30th.	Cyclonic circulation (cycir) over southeast AS on 28th, becoming less marked thereafter.
GEFS Probablistic guidance	Not available	Not available

IMD WRF	Circulation over South Andaman Sea on 27th, moving westwards on 28th over southeast BoB	Circulation over Comorin on 26th, becoming less marked thereafter.
NCMRWF-NCUM	A fresh cyclonic circulation is likely to develop over south Andaman sea on 27th. It is likely to move westwards without any significant intensification till 31st.	An anti-cycir over southeast persists till 27th, less marked thereafter.
NCMRWF-NEPS	No significant system over BoB	No significant system over AS
NCMRWF-UM (Regional)	A fresh cyclonic circulation is likely to develop over south Andaman sea on 27th. It is likely to move westwards without any significant intensification till 31st.	An anti-cycir over southeast persists till 27th, less marked thereafter.
ECMWF	Cycir over southeast BoB on 29th, moving westwards with no significant intensification till 31st. .	No significant system over AS.
NCEP-GFS	Circulation over westcentral BoB to persist till 28th October. A fresh cyclonic circulation over south Andaman Sea on 28th, moving westwards and dissipating over southwest BoB on 30th.	Cyclonic circulation (cycir) over southeast AS on 28th, becoming less marked thereafter.
IMD MME	No system over BoB	No system over AS.
IMD HWRF	Available during cyclonic disturbance period only	Available during cyclonic disturbance period only
IMD-Genesis Potential Parameter	A feeble potential zone over central BoB on 30th & 31st.	No significant potential zone over during the forecast period

Summary and conclusion:

1. **For the Bay of Bengal**:

The existing cyclonic circulation over westcentral Bay of Bengal is not likely to intensify further. Models are also indicating development of a cycir over South Andaman Sea/southeast BoB around 27th/28th, with westwards movement & no significant intensification.

In view of all the above, it is inferred that the likely emergence of a fresh cyclonic circulation over south Andaman Sea on 27th/28th need to be monitored. However, no cyclogenesis is predicted during next 7 days.

2. **For the Arabian Sea**:

No cyclogenesis is predicted 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	NIL

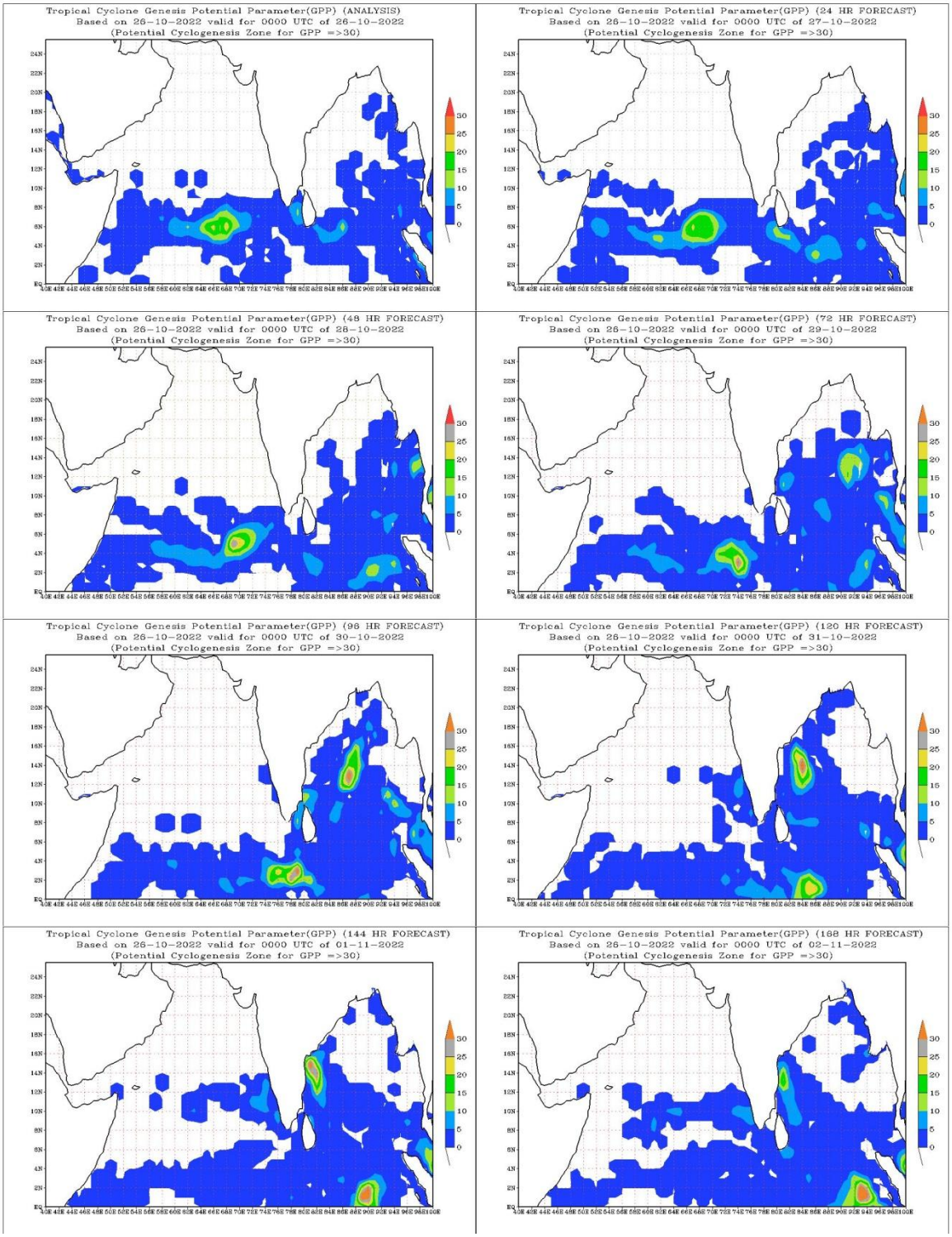
Probability of cyclogenesis (formation of depression and above intensity systems) over the Arabian Sea during next 168 hours:

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:
Nil.

IOP: Nil

Annexure


Tropical Cyclone Genesis Potential Parameter(GPP) (ANALYSIS)
Based on 26-10-2022 valid for 0000 UTC of 26-10-2022
(Potential Cyclogenesis Zone for GPP =>30)
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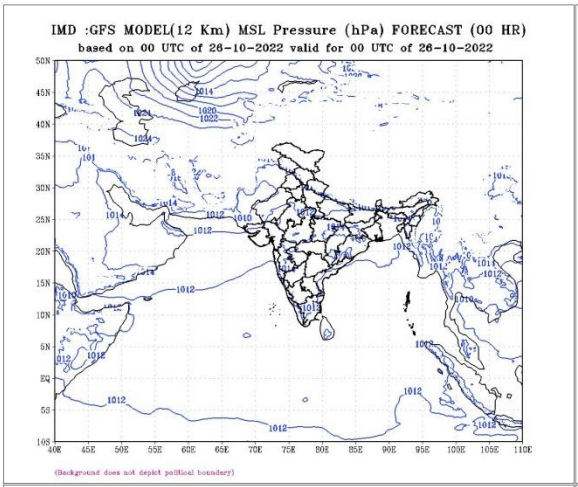
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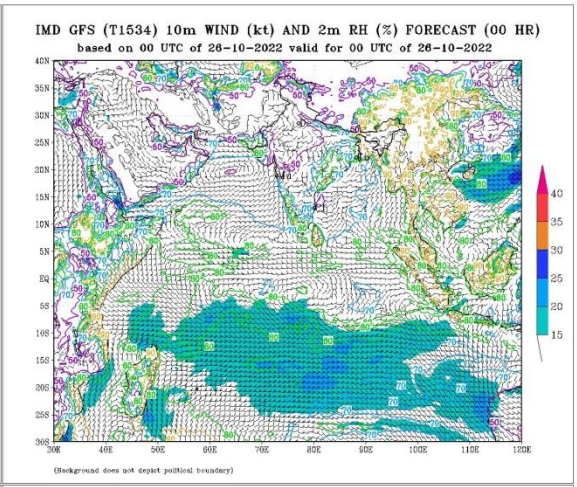
IMD GFS (T1534) 10m WIND (kt) AND 2m RH (%) FORECAST (00 HR)
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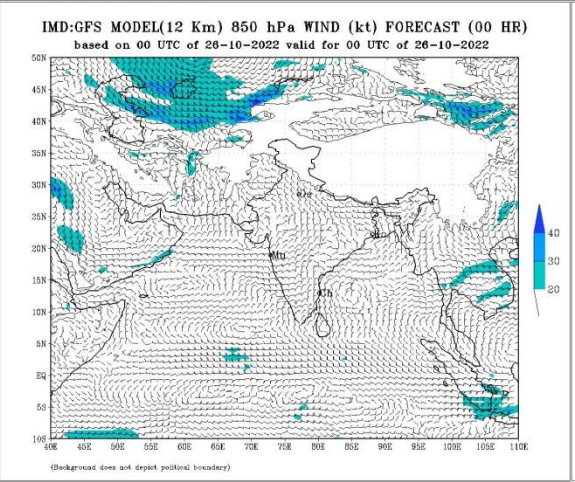
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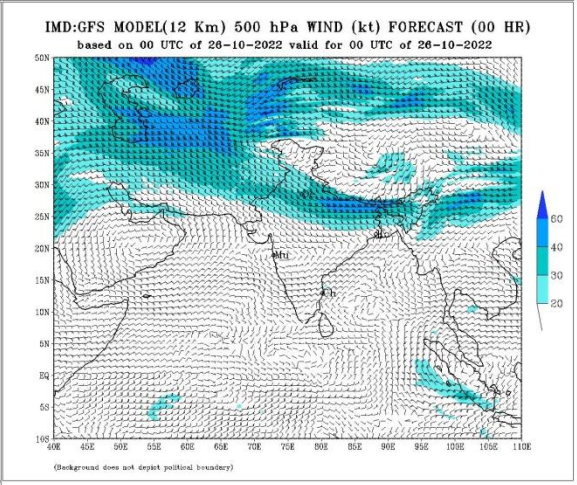
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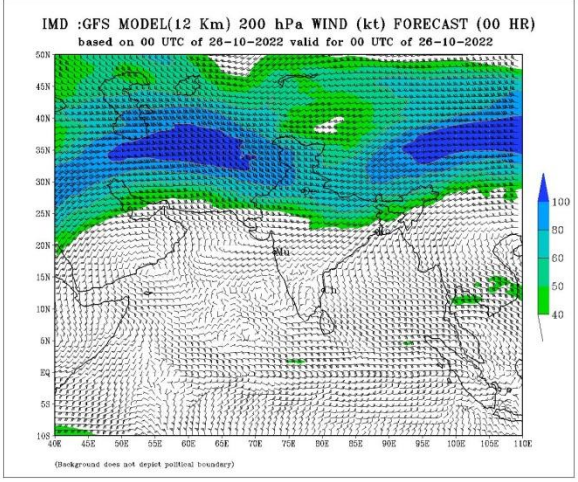
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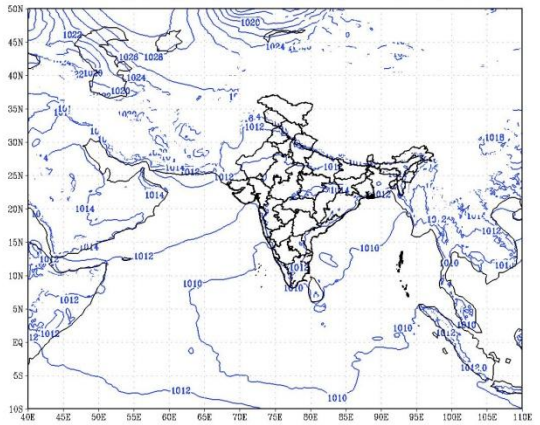

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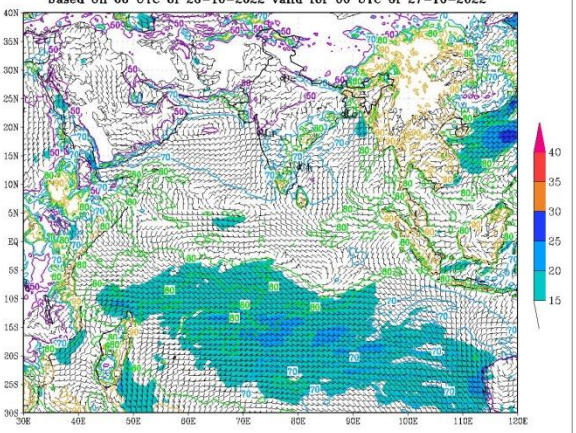

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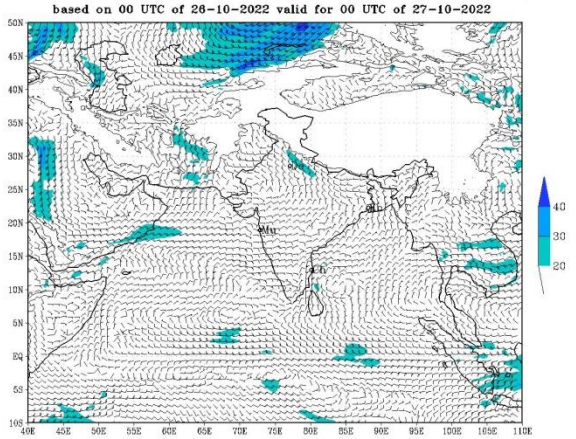

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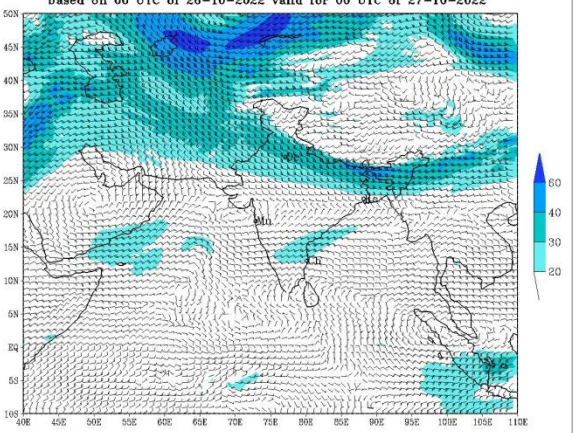

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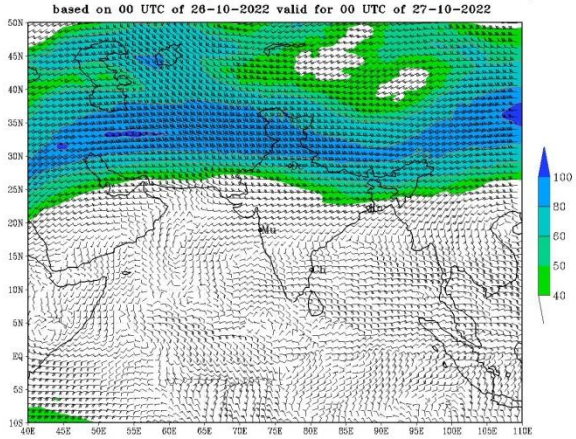

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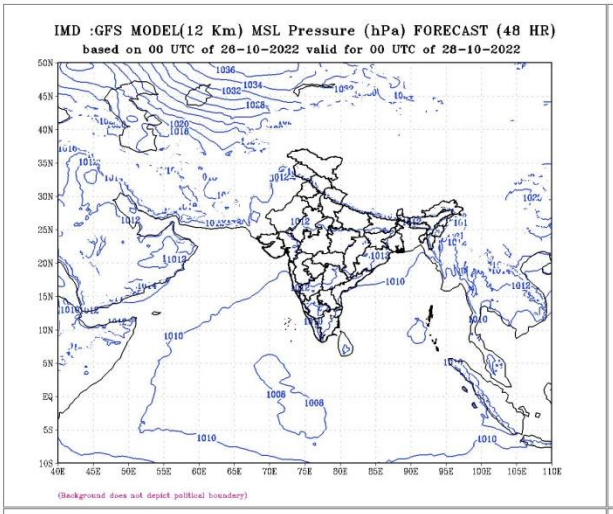
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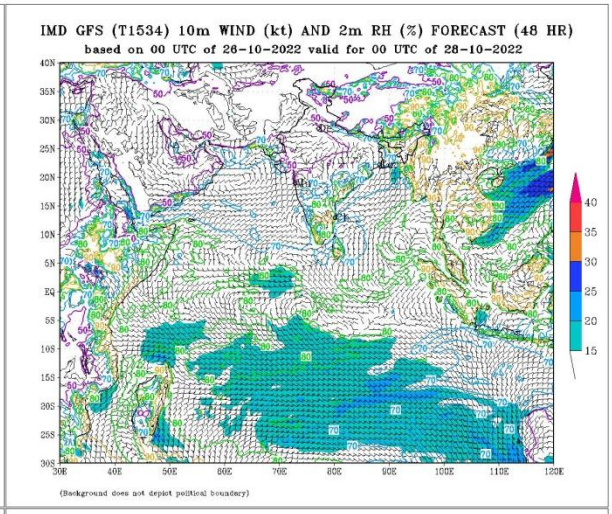
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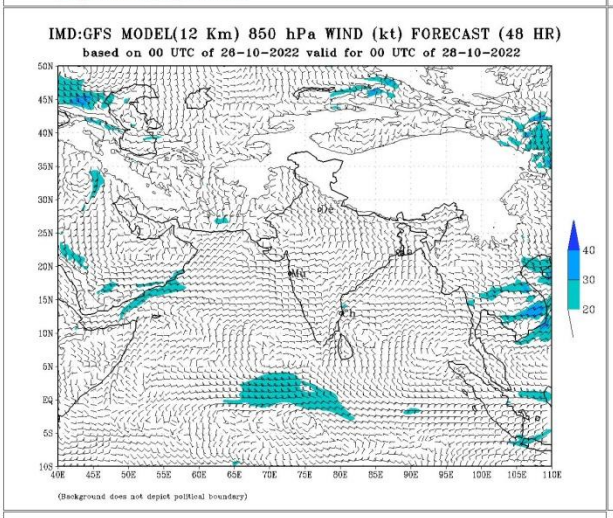
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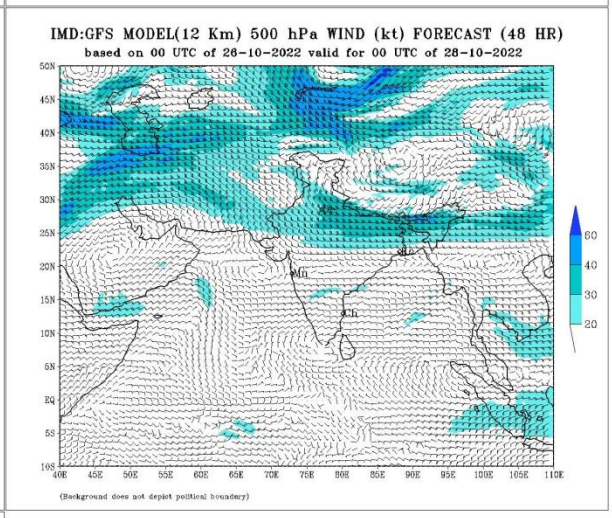
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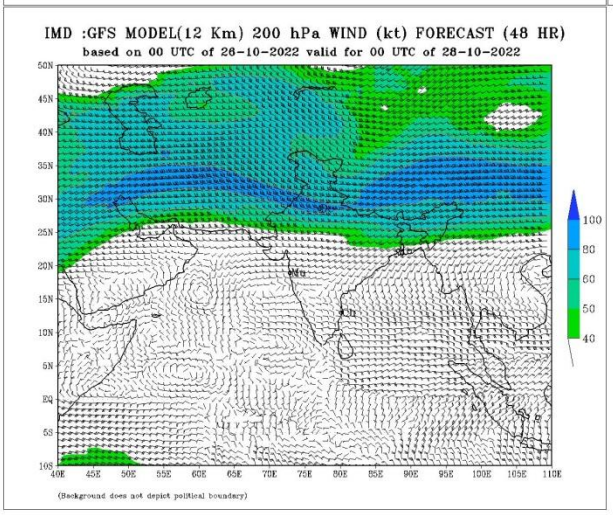
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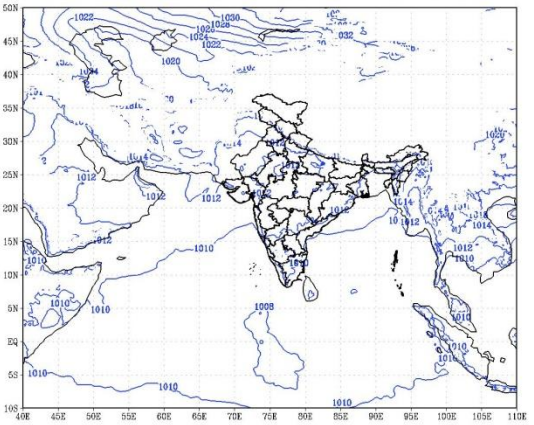

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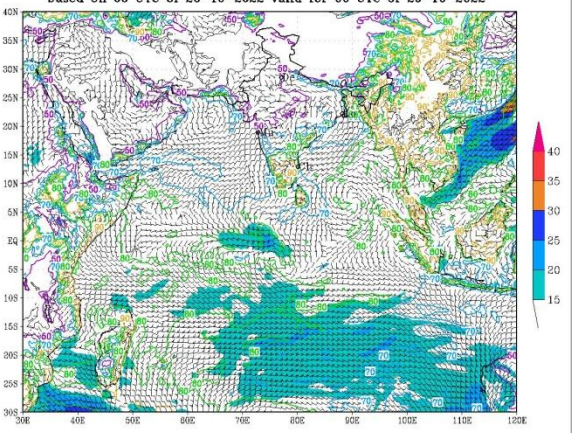

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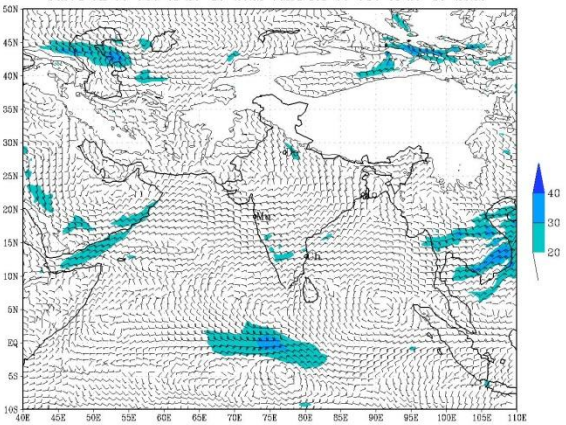

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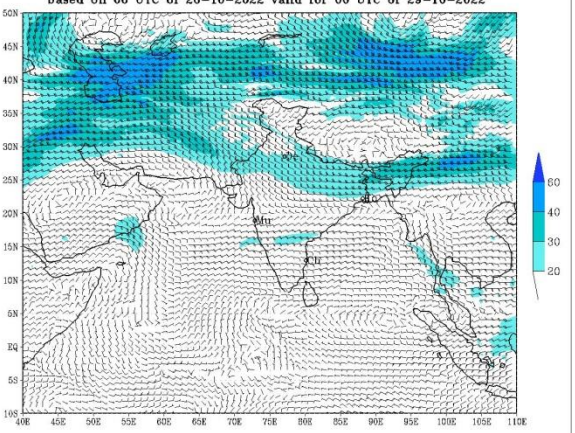

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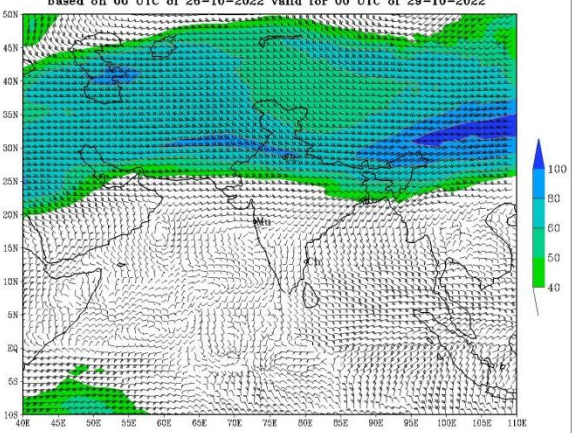

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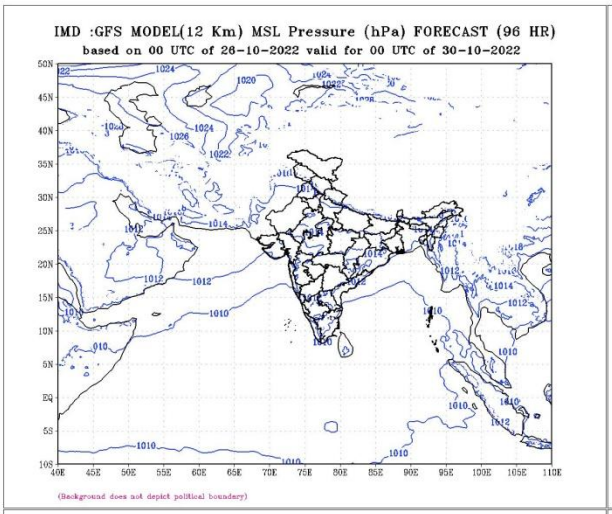
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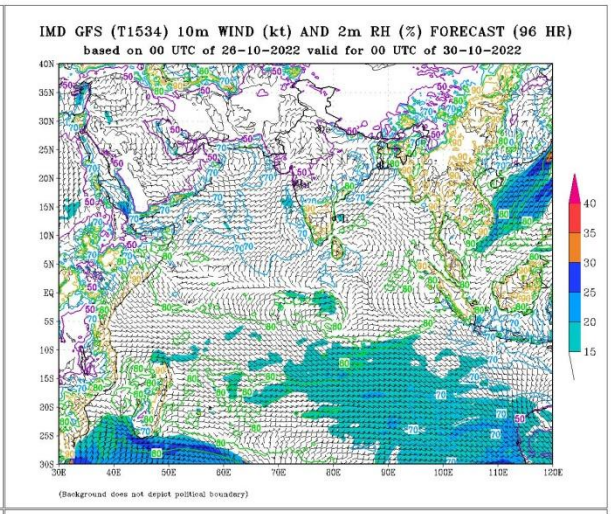
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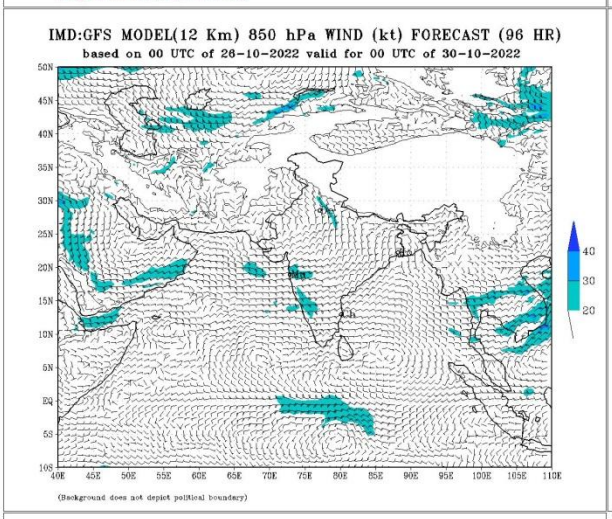
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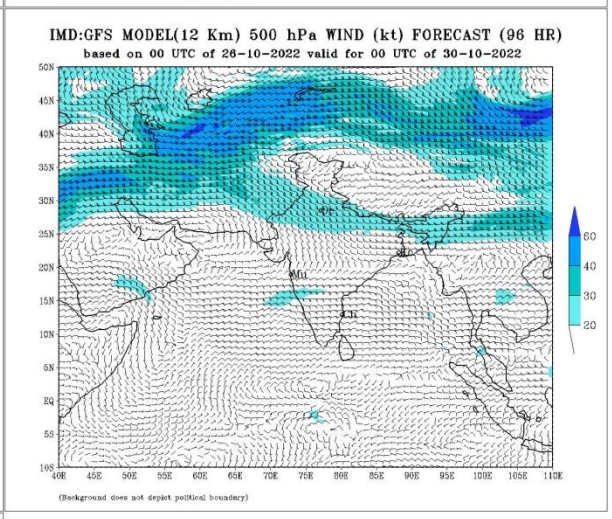
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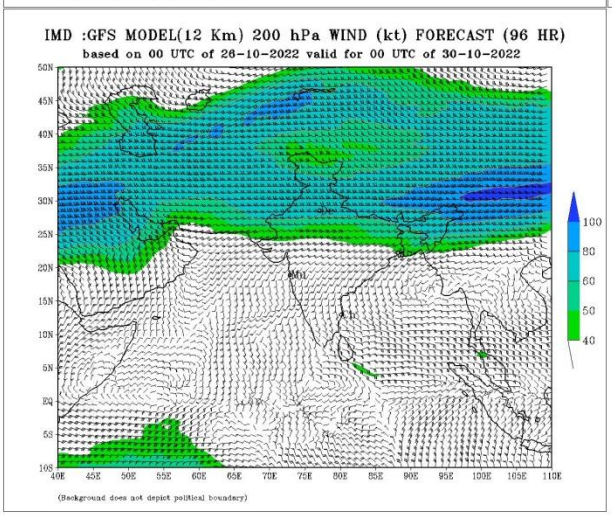
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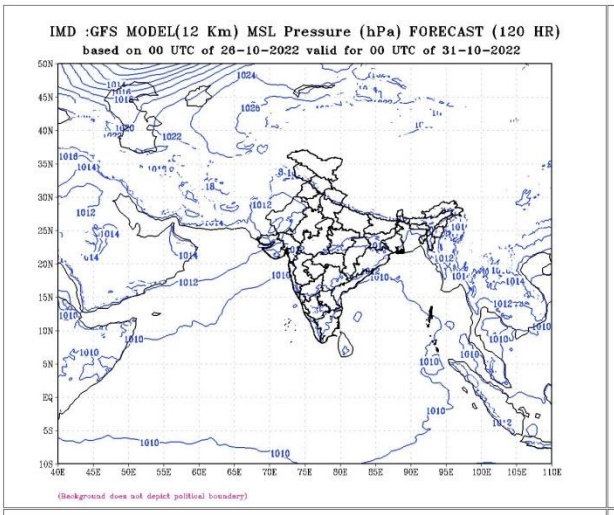
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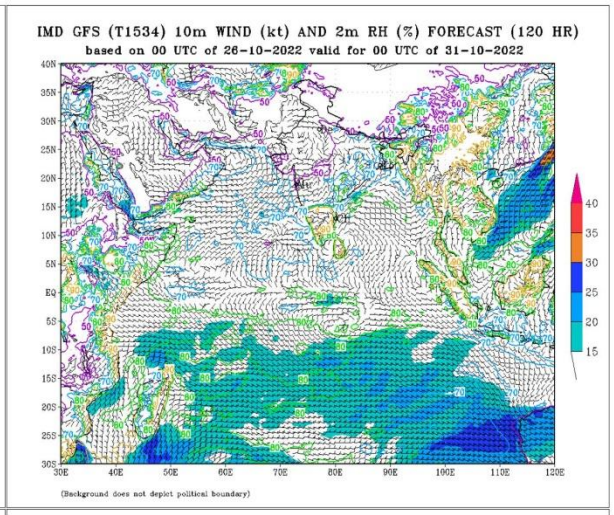
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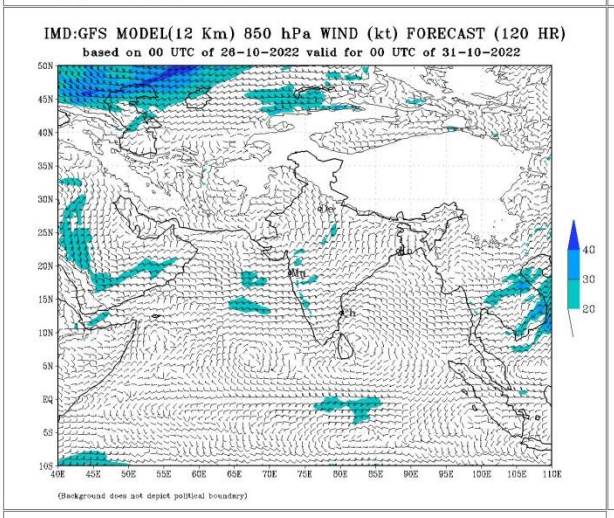
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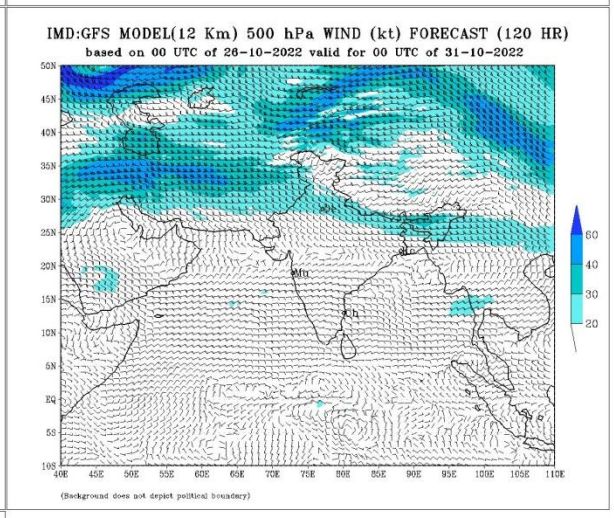
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based on 00 UTC of 26-10-2022 valid for 00 UTC of 31-10-2022
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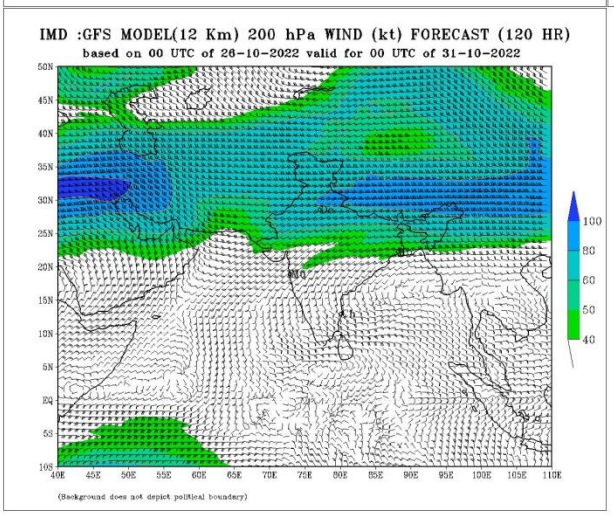
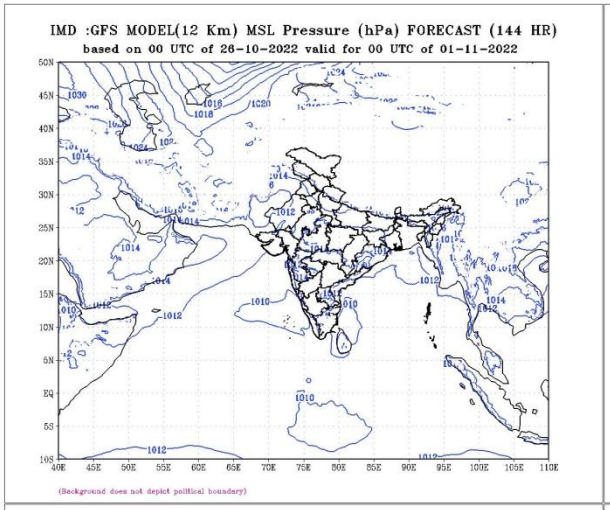
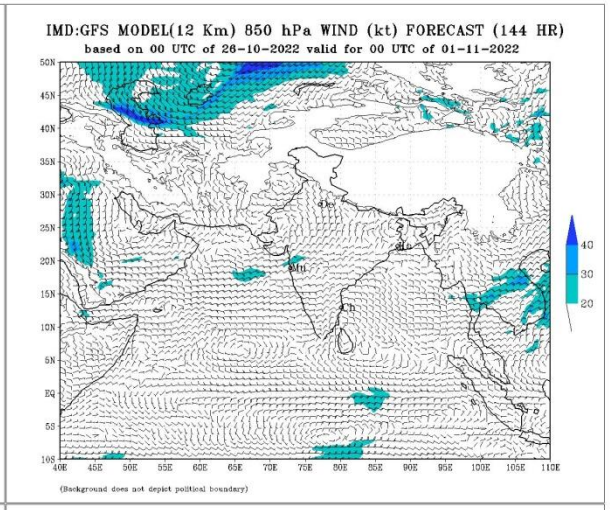
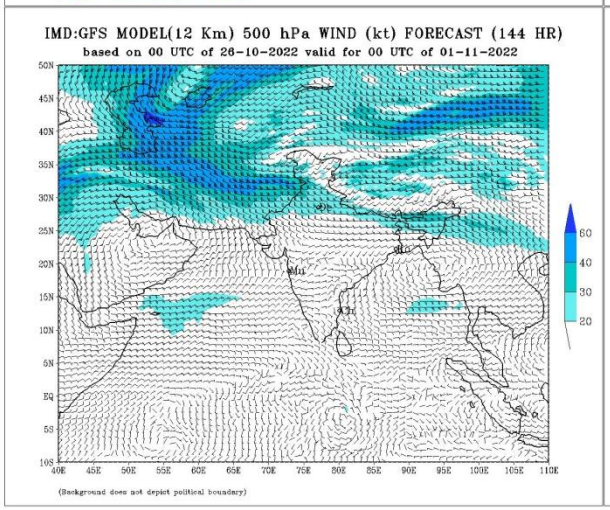

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (120 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 31-10-2022
(Background does not depict political boundary)


IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (144 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 01-11-2022
(Background does not depict political boundary)


IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 01-11-2022
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 26-10-2022 valid for 00 UTC of 01-11-2022
60
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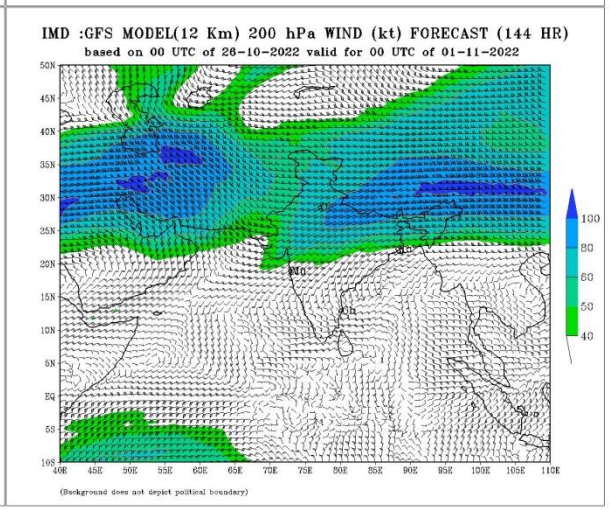
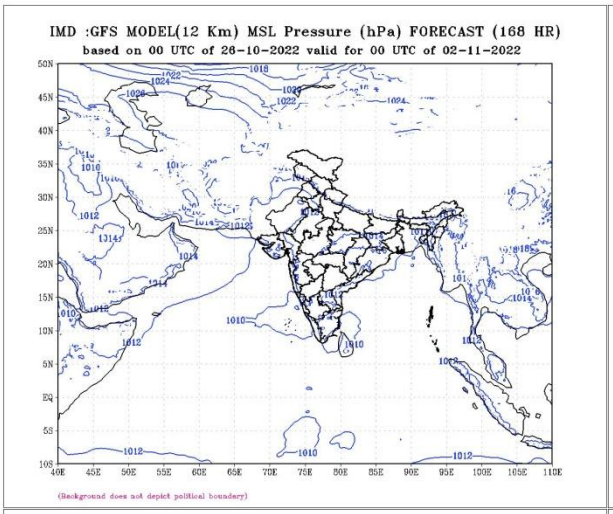
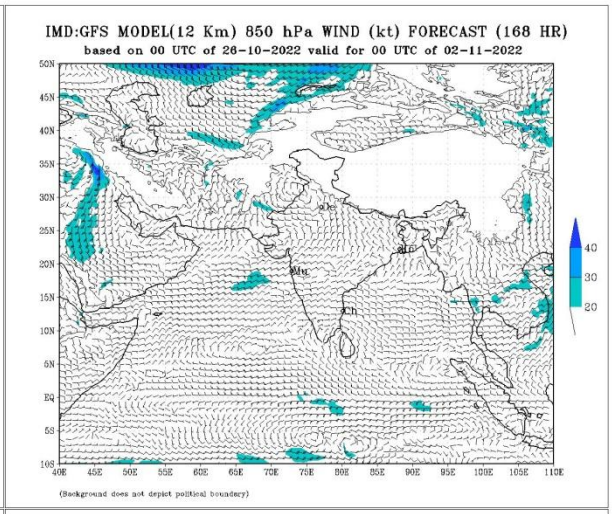
20
(Background does not depict political boundary)


IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 01-11-2022
100
80
60
50
40
(Background does not depict political boundary)


IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (168 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 02-11-2022
(Background does not depict political boundary)


IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 02-11-2022
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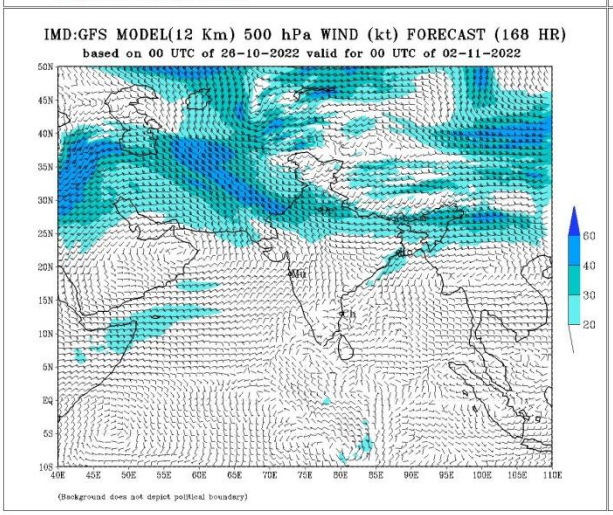
(Background does not depict political boundary)


IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 02-11-2022
60
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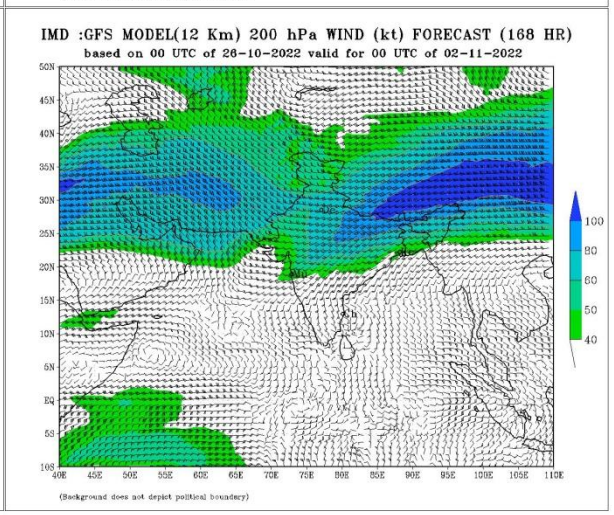
(Background does not depict political boundary)


IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 26-10-2022 valid for 00 UTC of 02-11-2022
100
80
60
50
40
(Background does not depict political boundary)