



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

**Tropical Cyclone Forecast Programme
Report Dated 25th October, 2022**

Time of Issue: 1200 UTC

Synoptic features (based on 0600 UTC analysis):

- ❖ The cyclonic storm "SITRANG" moved north-northeastwards and crossed Bangladesh coast between Tinkona and Sandwip close to Barisal in the same night during 2130 to 2330 hours IST (1600 to 1800 UTC) of 24th October as a cyclonic storm with maximum sustained wind speed of 80-90 kmph gusting to 100 kmph. Continuing to move north-northeastwards, it weakened into a deep depression in the early hours (0230 hours IST of 25th /2100 UTC of 24th), into a depression in the morning (0530 hours IST/0000 UTC) over Bangladesh and into a well marked low pressure area over northeast Bangladesh & adjoining in the forenoon (0830 hours IST/0300 UTC) of today, the 25th October, 2022 over northeast Bangladesh and adjoining Meghalaya. It is very likely to continue to move north-northeastwards and weaken further during next 06 hours.
- ❖ A cyclonic circulation lies over westcentral bay of bengal & neighbourhood extending upto 1.5 km above mean sea level.

Dynamical and thermo-dynamical features

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) °C	About 29-31°C over entire BoB	30-31°C over eastcentral AS and off Maharashtra-South Gujarat coasts. 27-29°C over eastcentral, westcentral and southwest BoB. Less than 26°C off Oman & Somalia coast.
Tropical Cyclone Heat Potential (TCHP) kJ/cm²	80-90 KJ/cm ² over north & central BoB.	(a) 60-80 over south AS & adjoining eastcentral AS. (b) 30-40 over remaining AS and also off west coast of India.

Cyclonic Relative vorticity ($\times 10^{-6} \text{s}^{-1}$)	Positive vorticity of 20-30 over southwest & adjoining westcentral BoB.	Positive vorticity of 40-50 over south AS.
Low Level convergence ($\times 10^{-5} \text{s}^{-1}$)	05-10 over Gulf of Thailand, 05 over southwest BoB off south Sri Lanka coast.	
Upper Level divergence ($\times 10^{-5} \text{s}^{-1}$)	05 over Gulf of Thailand, 05-10 over Myanmar coast, 05-10 over southeast BoB and 05-10 over southwest BoB & adjoining Comorin Area.	05-10 over southeast AS.
Vertical Wind Shear (VWS knots)	Moderate 20 knots over north & adjoining central BoB. High to the south of 12°N .	10-20 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 19.0°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 embedded intense to very intense convection over north Bay adjoining eastcentral & south Bay and Andaman Sea. Scattered low/medium clouds with embedded weak to moderate convection lay over westcentral Bay.

(b) Over the Arabian Sea:-

At 0600UTC, scattered low/medium clouds with embedded intense to very intense convection lay over south Arabian Sea. Scattered low/medium clouds with embedded moderate to intense convection lay over Comorin area. Scattered low/medium clouds with embedded weak to moderate convection lay over Lakshadweep Islands 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	Circulation over westcentral BoB to persist till 28 th October. A fresh cyclonic circulation over south Andaman Sea on 28 th , moving westwards and dissipating over southwest BoB on 30 th .	Cyclonic circulation (cycir) over southeast AS on 28 th , becoming less marked thereafter.
IMD-GEFS	Circulation over westcentral BoB to persist till 28 th October. A fresh cyclonic circulation over south Andaman Sea on 28 th , moving westwards and dissipating over southwest BoB on 30 th .	Cyclonic circulation (cycir) over southeast AS on 28 th , becoming less marked thereafter.
GEFS Probabilistic guidance	Not available	Not available
IMD WRF	Circulation over South Andaman Sea on 27 th , moving westwards on 28 th over southeast BoB	Circulation over Comorin on 26 th , becoming less marked thereafter.
NCMRWF-NCUM	A fresh cyclonic circulation is likely to develop over south Andaman sea on 27 th . It is likely to move westwards without any significant intensification till 31 st .	A cycir over southeast As till 27 th , less marked thereafter.
NCMRWF-NEPS	No significant system over AS	No significant system over AS
NCMRWF-UM (Regional)	A fresh cyclonic circulation is likely to develop over south Andaman sea on 27 th . It is likely to move westwards without any significant intensification till 31 st .	A cycir over southeast As till 27 th , less marked thereafter.
ECMWF	Cycir over southeast BoB on 28 th , moving westwards with no significant intensification till 31 st .	No significant system over AS.
NCEP-GFS	Circulation over westcentral BoB to persist till 28 th October. A fresh cyclonic circulation over south Andaman Sea on 28 th , moving westwards and dissipating over southwest BoB on 30 th .	Cyclonic circulation (cycir) over southeast AS on 28 th , 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 westcentral BoB on 30 th & 31 st .	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

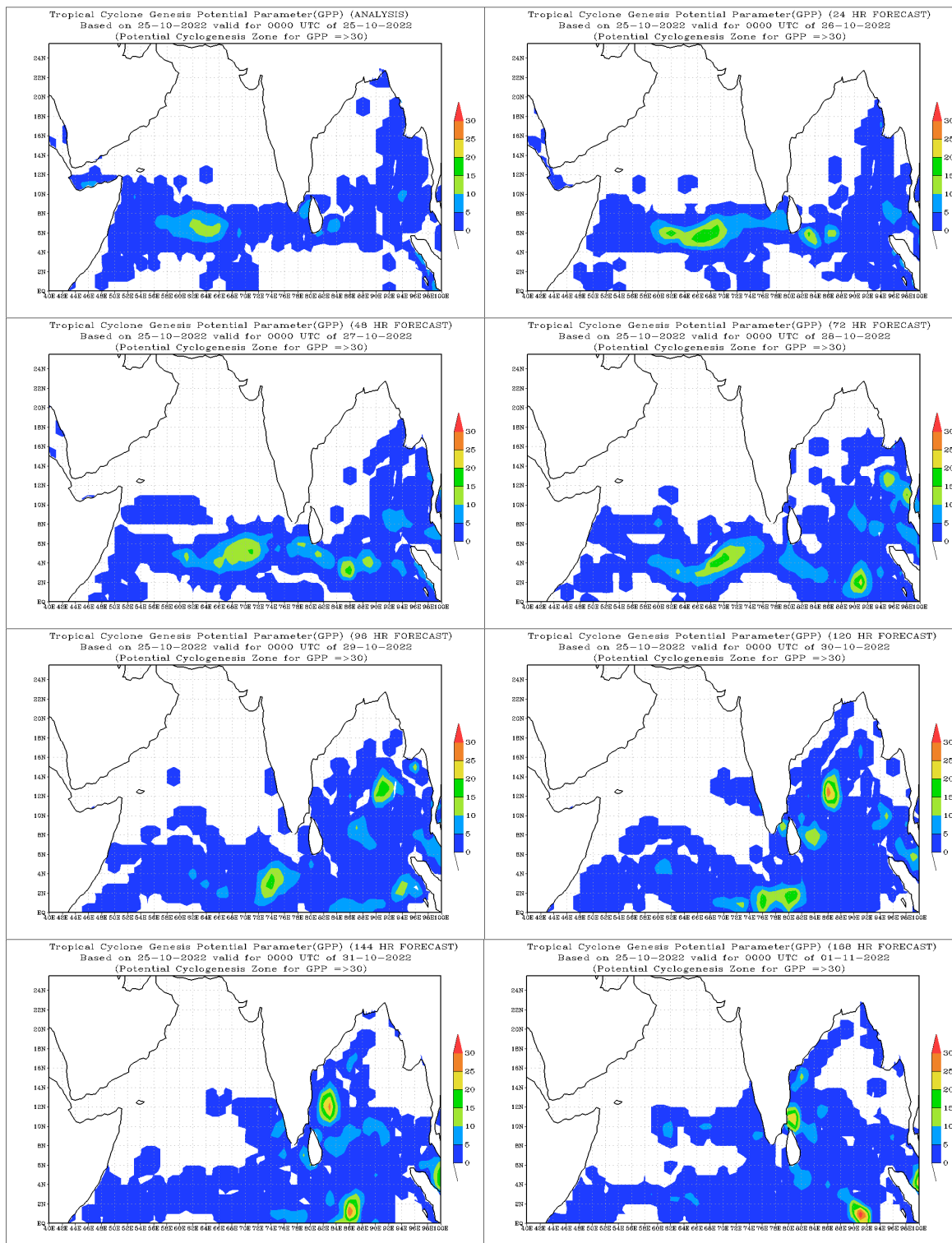
Probability of cyclogenesis (formation of depression and above intensity systems) over the Arabian Sea during next 168 hours:

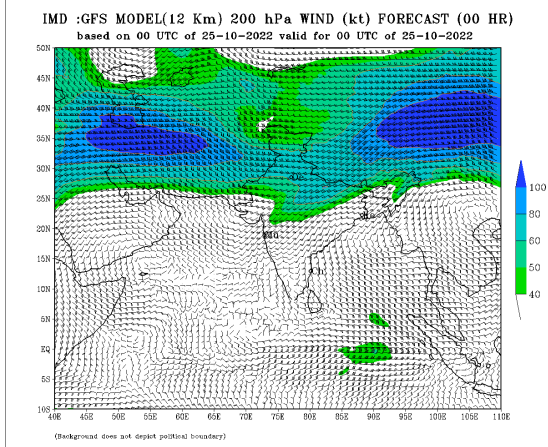
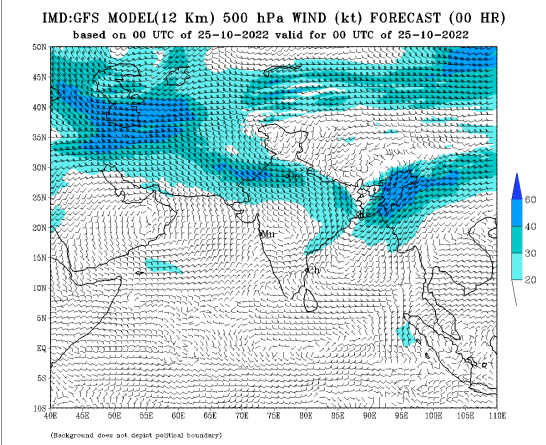
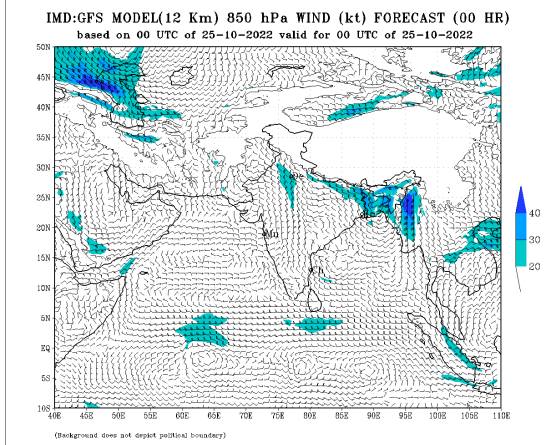
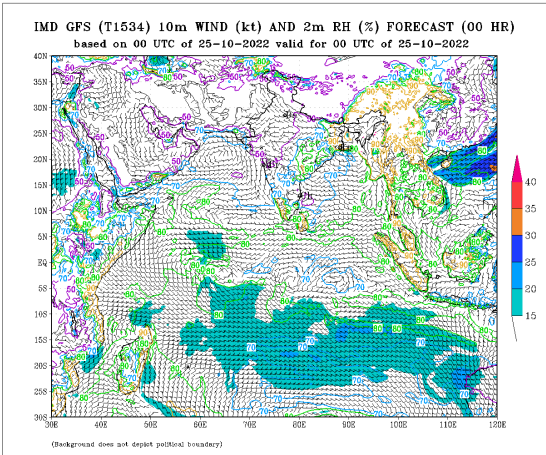
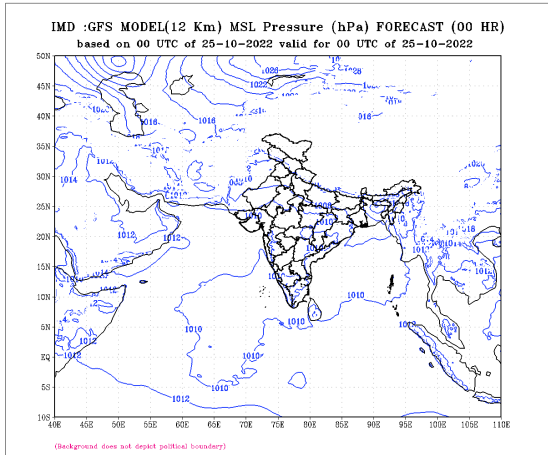
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

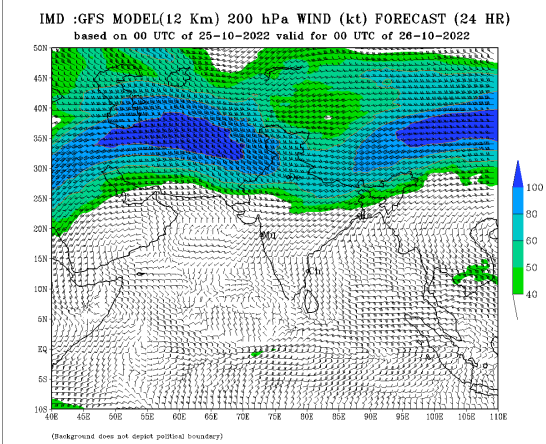
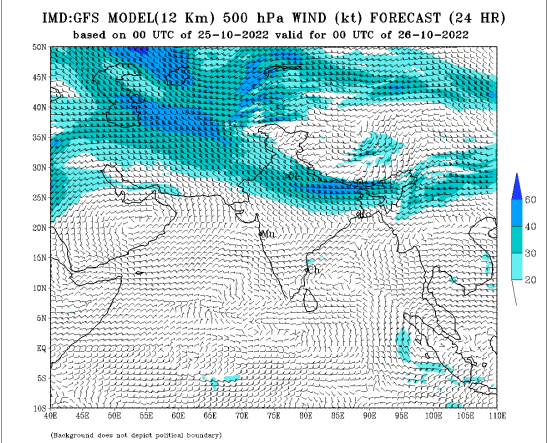
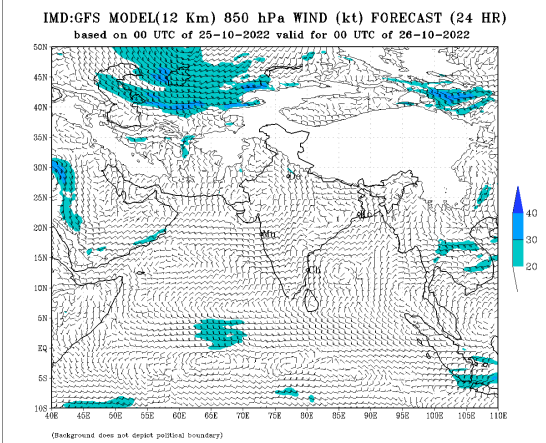
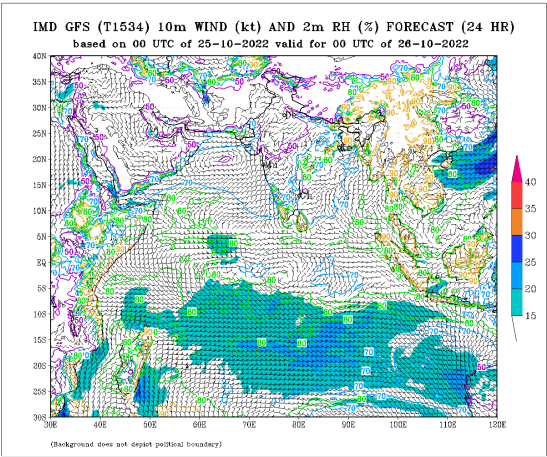
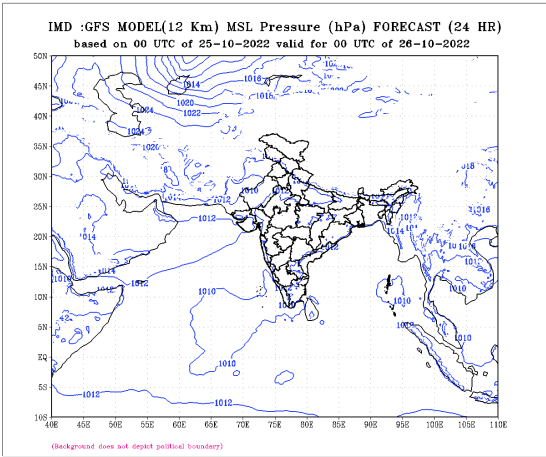
Advisory:

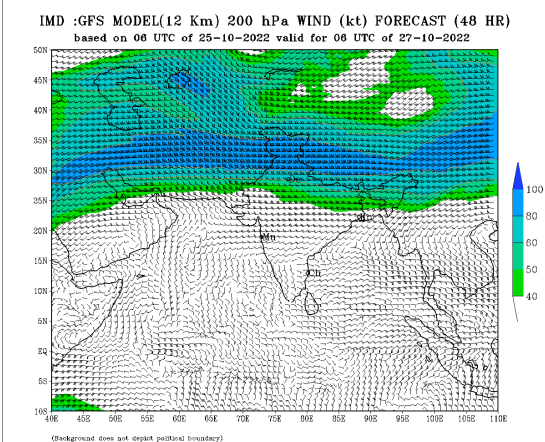
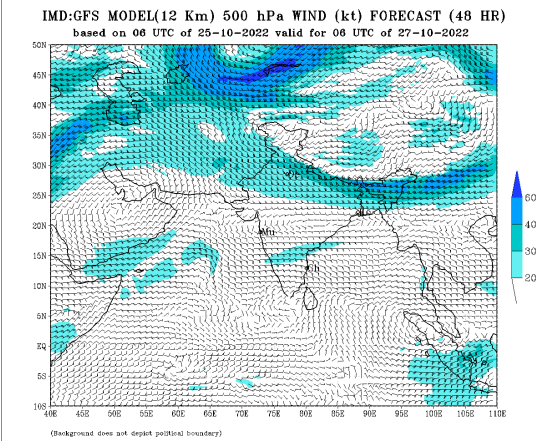
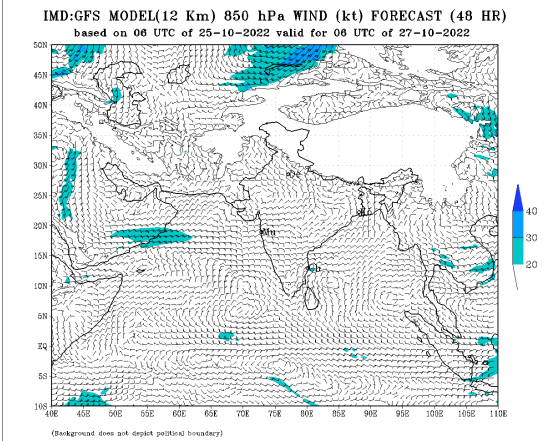
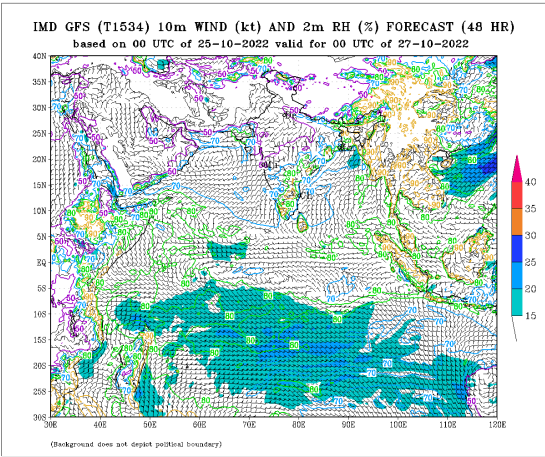
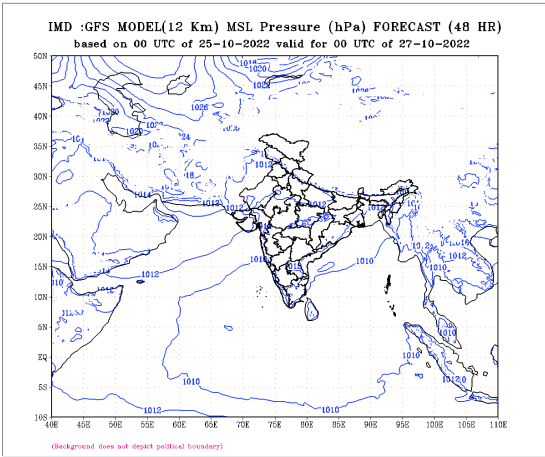
Nil.

IOP: Nil

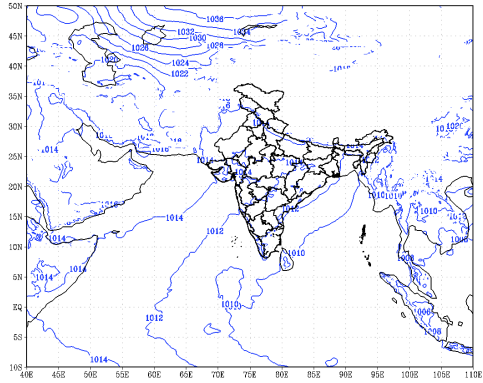




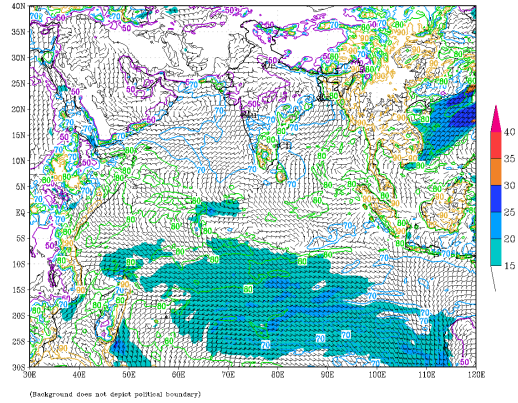




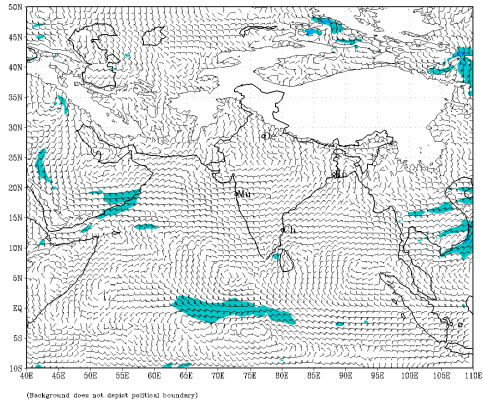
IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (72 HR)
based on 06 UTC of 25-10-2022 valid for 06 UTC of 28-10-2022



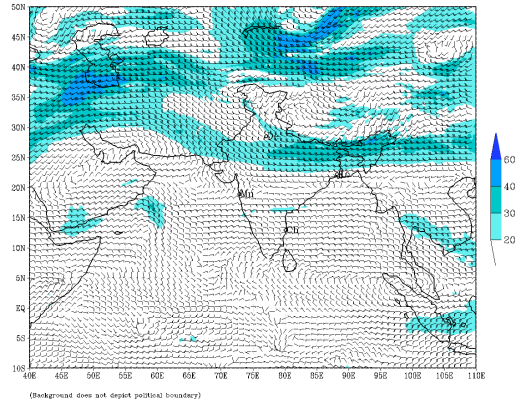
IMD GFS (T1534) 10m WIND (kt) AND 2m RH (%) FORECAST (72 HR)
based on 00 UTC of 25-10-2022 valid for 00 UTC of 28-10-2022



IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (72 HR)
based on 06 UTC of 25-10-2022 valid for 06 UTC of 28-10-2022



IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (72 HR)
based on 06 UTC of 25-10-2022 valid for 06 UTC of 28-10-2022



IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (72 HR)
based on 06 UTC of 25-10-2022 valid for 06 UTC of 28-10-2022

