



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

**Tropical Cyclone Forecast Programme
Report Dated 27th October, 2023**

Time of Issue: 1230 UTC

Synoptic features (based on 0300 UTC analysis):

- The cyclonic circulation over Southwest Bay of Bengal off Tamil Nadu coast between 1.5 km & 3.1 km above mean sea level has become less marked.
- The cyclonic circulation over south Tamil Nadu at 0.9 km above mean sea level has become less marked.

Dynamical and thermo-dynamical features

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) °C	29-30°C over major parts of BoB, Andaman Sea, 26-28 over some parts of southwest BoB and Gulf of Mannar,	29-30°C over southeast and adjoining eastcentral AS, north AS, along and off Maharashtra, Goa, coasts, 26-28°C over central and southwest AS, less than 24°C along and off Yemen-Oman coast, Somalia coast.
Tropical Cyclone Heat Potential (TCHP) kJ/cm ²	100-120 over eastcentral BoB adjoining southeast BoB. 50-60 over most parts of BOB and north Andaman Sea, 80-90 over south Andaman Sea. Less than 40 along Andhra Pradesh and Tamil Nadu coasts, adjoining sea areas, less than 20-30 over Gulf of Mannar and adjoining Comorin area, parts of southwest BoB.	60-80 over southeast and adjoining eastcentral and adjoining southwest AS, Less than 30 over eastcentral and adjoining northeast and northwest AS, along and off west coast of India, less than 10 over westcentral and southwest AS.
Cyclonic Relative vorticity (X10 ⁻⁶ s ⁻¹)	10-20 over south BoB, northeast BoB, vorticity of 70 over north Andaman Sea is seen at 500 hPa level.	10-20 over south AS, northwest AS.
Low Level convergence (X10 ⁻⁵ s ⁻¹)	5 over the Comorin region and most part of BoB, 5	-5 over most parts of AS, -10 over eastcentral AS.
Upper Level divergence (X10 ⁻⁵ s ⁻¹)	-5 over major parts of BoB, 10 over eastcentral BoB.	5-10 over north AS, -10 over southeast AS.

Vertical Wind Shear (VWS knots)	10-15 over south and adjoining central BoB and Andaman sea, and 5-10 over north BoB, 20 over Comorin area, north parts of central BoB, 25-30 over north BoB.	5-10 over south AS 20-30 over central AS adjoining northern AS, 30-40 over north AS.
Wind Shear Tendency (knots)	Decreasing tendency over major parts of BoB. Increasing over Comorin area, north BoB.	Decreasing tendency over south and adjoining central AS. Increasing tendency over the northern adjoining central part AS.
Upper tropospheric Ridge	Along 17°N over BoB	-

Satellite observations based on INSAT imagery (0300 UTC):

(a) Over the BoB & Andaman Sea:-

Scattered low & medium clouds with embedded moderate to intense convection lay over south and central Bay of Bengal, Andaman Sea, Gulf of Martaban.

(b) Over the Arabian Sea:-

Scattered Low and Medium Clouds with Embedded Moderate to Intense Convection lay over South Arabian Sea. Scattered Low and Medium Clouds with Embedded weak and moderate convection over Makaran coast and North Arabian Sea.

(c) Convection outside India:

Scattered Low And Medium Clouds With Embedded Moderate To Intense Convection lay Over Gulf Of Mannar, Maldives, South Pakistan, Tibet, China, East China Sea, South Myanmar, Thailand, gulf of Thailand, cambodia, south Laos, Gulf of Tonkin, Hainan Sumatra Adjoining West Coast, Strait of Malacca, Malaysia Borneo, south China Sea, Java sea, Celebes sea, Phillipines. Sulu sea, Madagascar and over Indian ocean Between Latitude 5.0N to 3.0S, Longitude 50.0E to 100.0E and Between Latitude 5.0S to 35.0S, Longitude 40.0E to 70.0E.

M.J.O. Index:

MJO index is in Phase 8 with amplitude greater than 1 for next 4 days & in phase 1 for next three days with amplitude 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	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	No significant system.	No significant system.
IMD-GEFS	No significant system.	No significant system.
IMD-WRF	No significant system.	No significant system.
NCMRWF-NCUM	No significant system.	No significant system.
NCMRWF-NEPS	No significant system.	No significant system.
NCMRWF-UM (Regional)	No significant system.	No significant system.
ECMWF	No significant system.	No significant system.
NCEP-GFS	No significant system.	No significant system.

IMD-Genesis Potential Parameter	No potential zone over Bay of Bengal for next 7 days.	No potential zone over Arabian Sea for next 7 days.
--	---	---

Summary and conclusion:

1. For the Bay of Bengal:

Most of the models are indicating that there will be no significant system over Bay of Bengal for the next seven days.

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

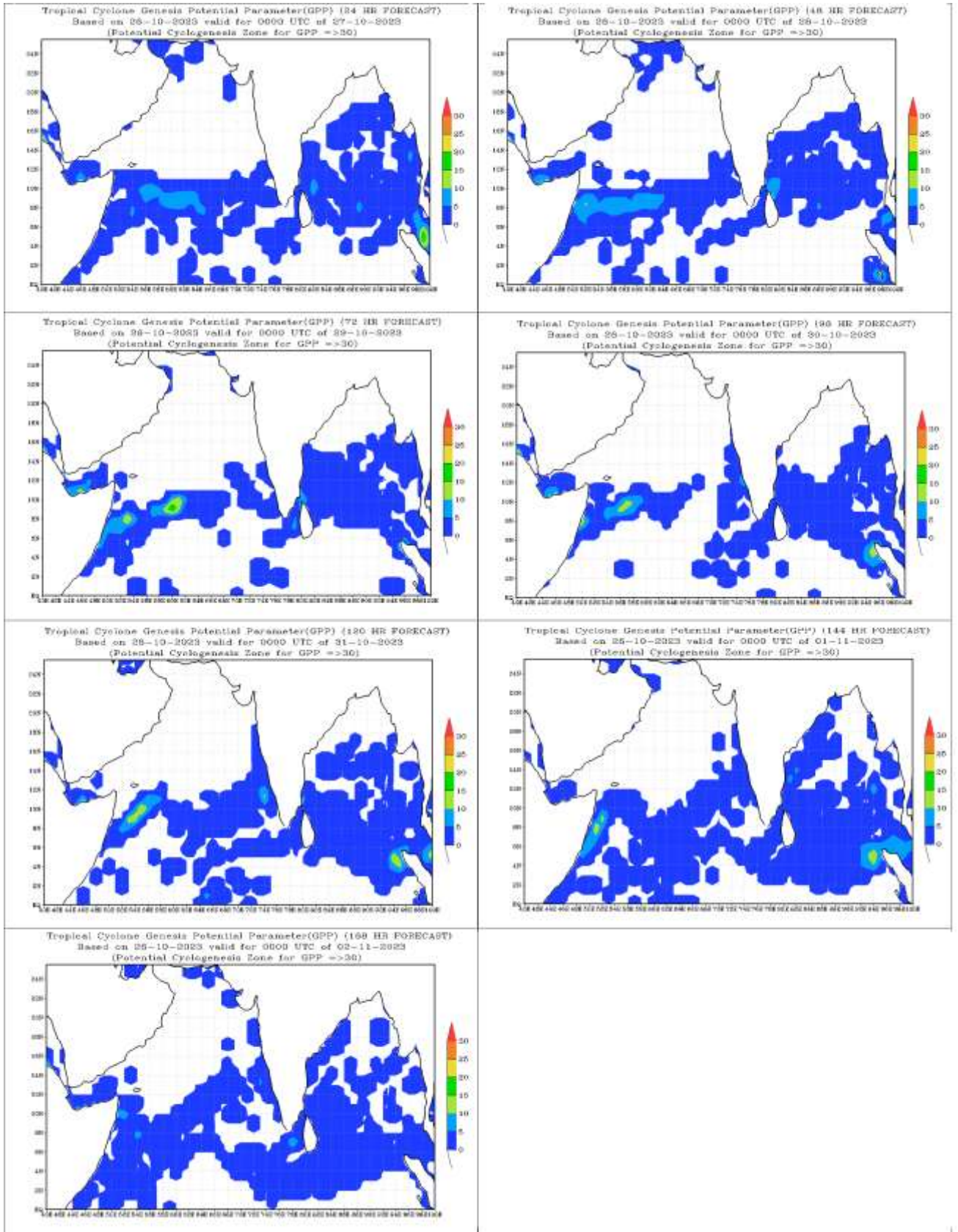
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

2. For the Arabian Sea:

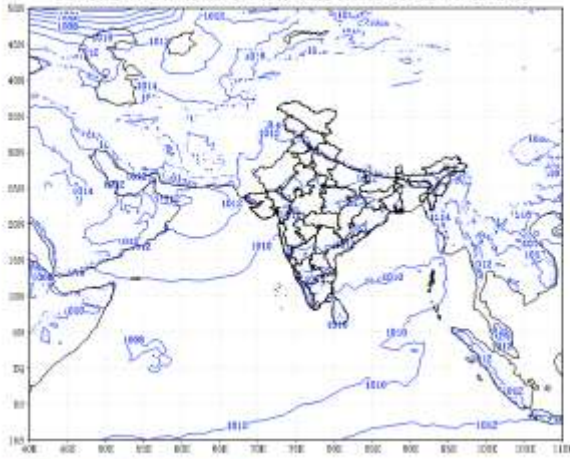
Most of the models are indicating that there will be no significant system over Arabian Sea for the next seven days.

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

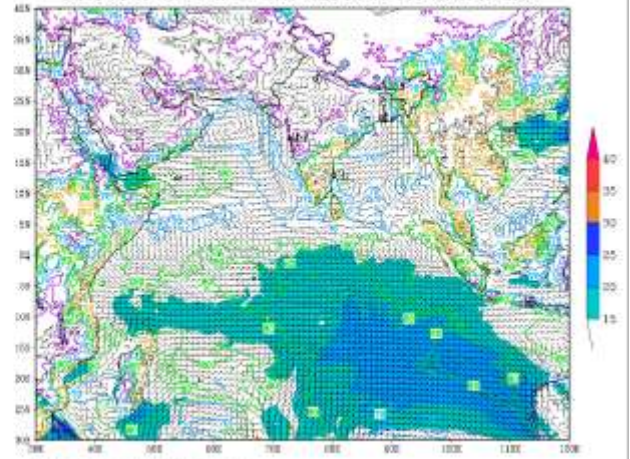


IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (48 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 29-10-2023



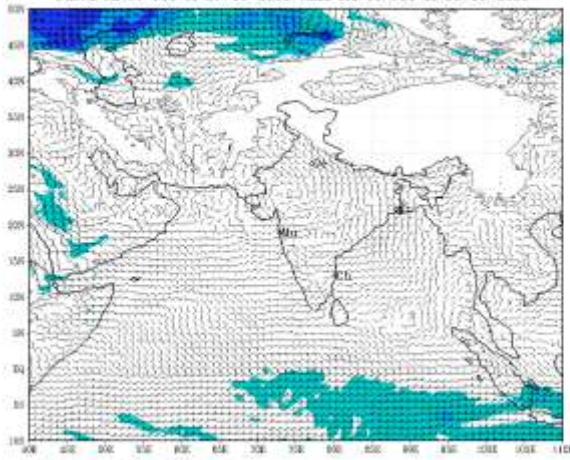
(Background line not depict political boundary)

IMD GFS (T1534) 10m WIND (kt) AND 2m RH (%) FORECAST (48 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 29-10-2023



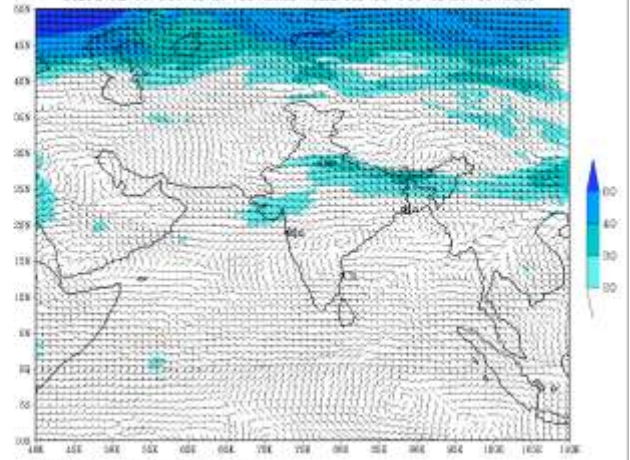
(Background line not depict political boundary)

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (48 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 29-10-2023



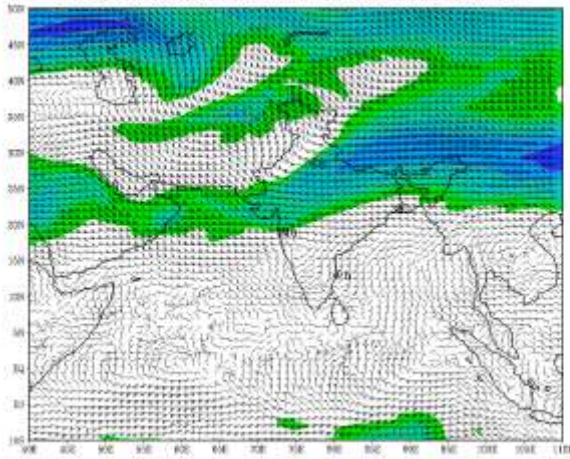
(Background line not depict political boundary)

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (48 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 29-10-2023



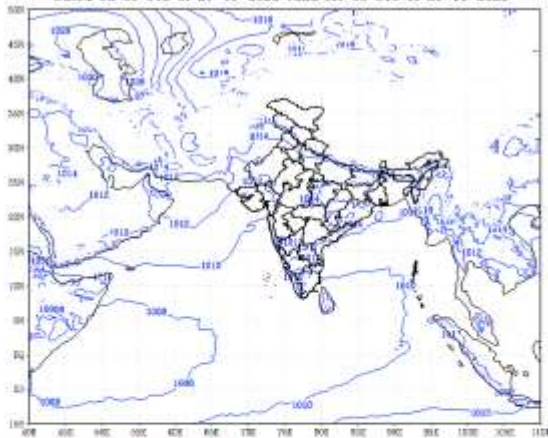
(Background line not depict political boundary)

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (48 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 29-10-2023



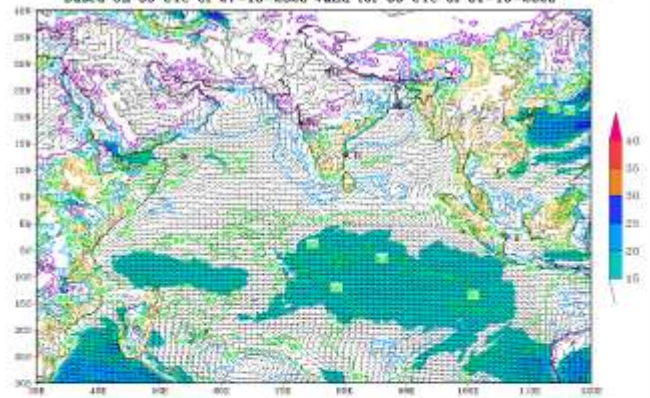
(Background line not depict political boundary)

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (96 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 31-10-2023



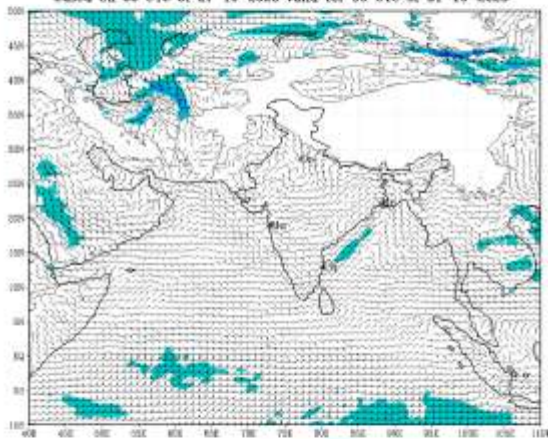
(Background over sea level political boundary)

IMD GFS (T1534) 10m WIND (kt) AND 2m RH (%) FORECAST (96 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 31-10-2023



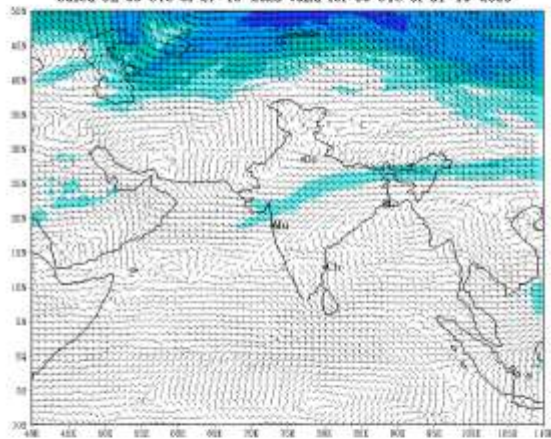
(Background over sea level political boundary)

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (96 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 31-10-2023



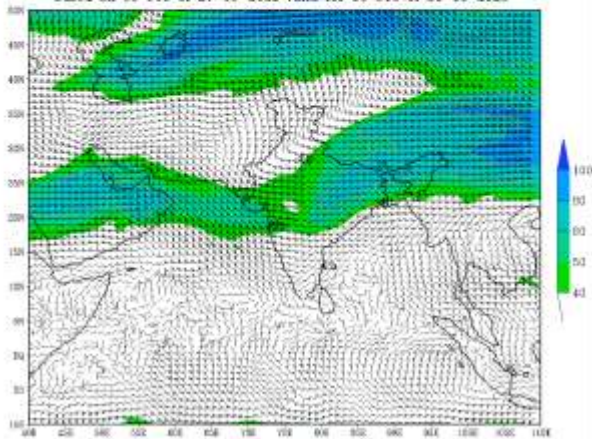
(Background over sea level political boundary)

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (96 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 31-10-2023



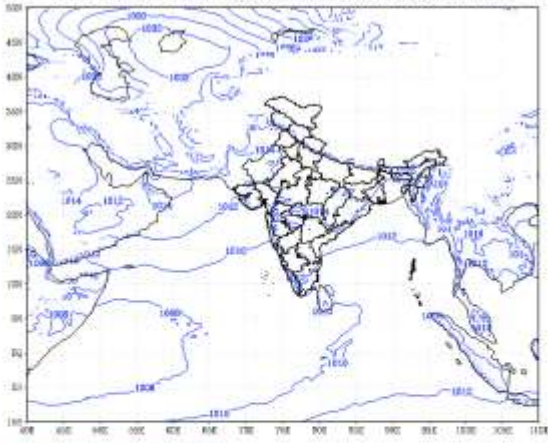
(Background over sea level political boundary)

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (96 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 31-10-2023



(Background over sea level political boundary)

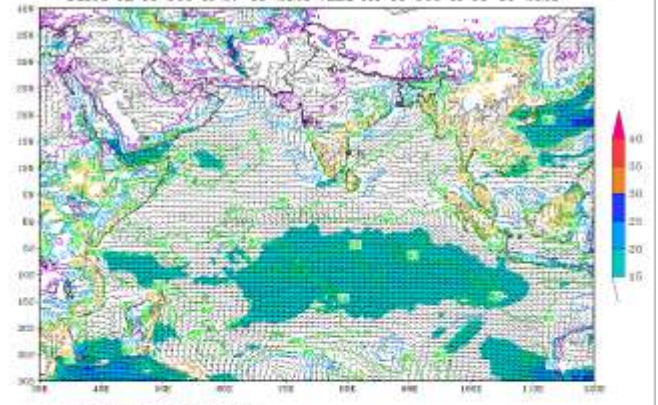
IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (120 HR)
 based on 00 UTC of 27-10-2023 valid for 00 UTC of 01-11-2023



(Background over sea depicts political boundary)

IMD GFS (T1534) 10m WIND (kt) AND 2m RH (%) FORECAST (120 HR)

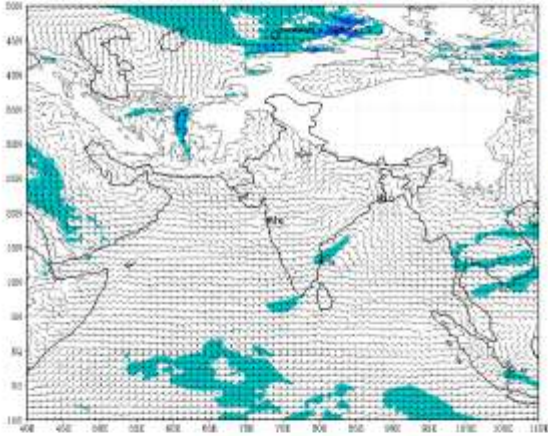
based on 00 UTC of 27-10-2023 valid for 00 UTC of 01-11-2023



(Background over sea depicts political boundary)

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (120 HR)

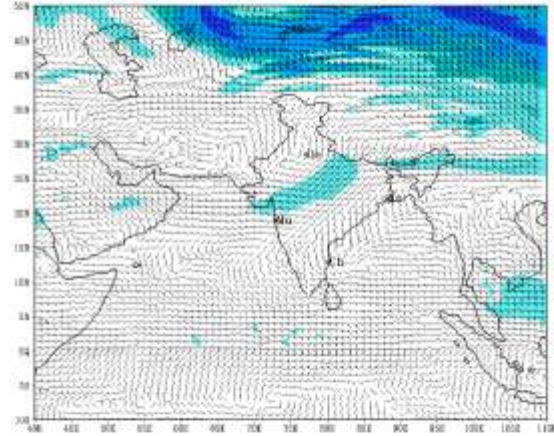
based on 00 UTC of 27-10-2023 valid for 00 UTC of 01-11-2023



(Background over sea depicts political boundary)

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (120 HR)

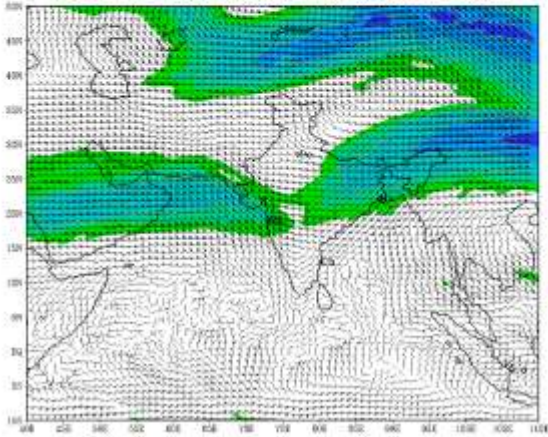
based on 00 UTC of 27-10-2023 valid for 00 UTC of 01-11-2023



(Background over sea depicts political boundary)

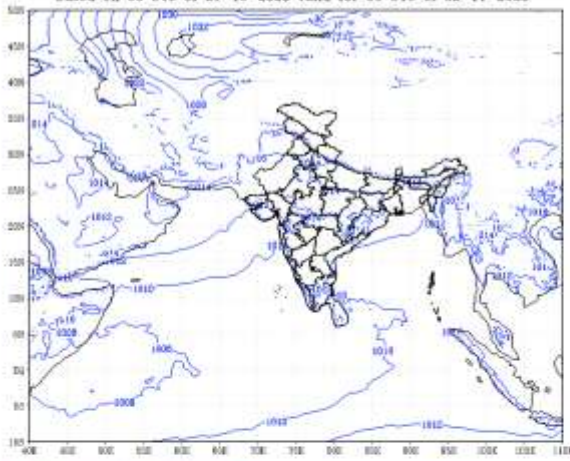
IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (120 HR)

based on 00 UTC of 27-10-2023 valid for 00 UTC of 01-11-2023



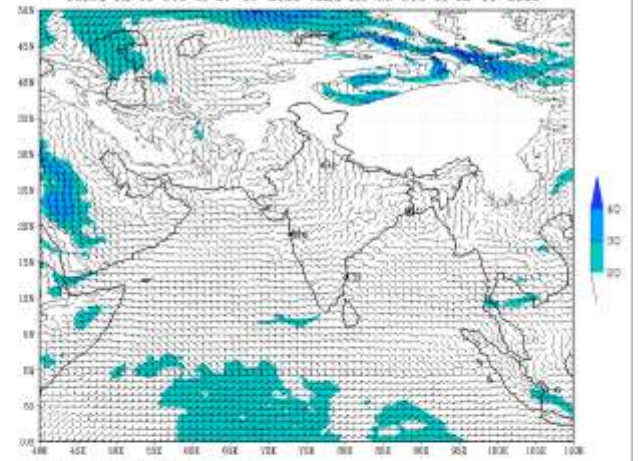
(Background over sea depicts political boundary)

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (144 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 02-11-2023



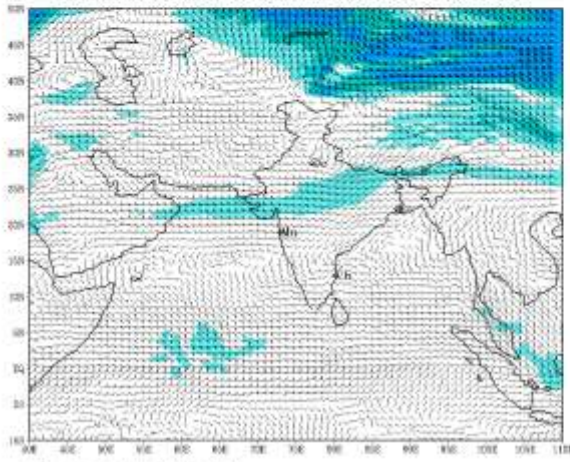
(Background line with light purple/red boundary)

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 02-11-2023



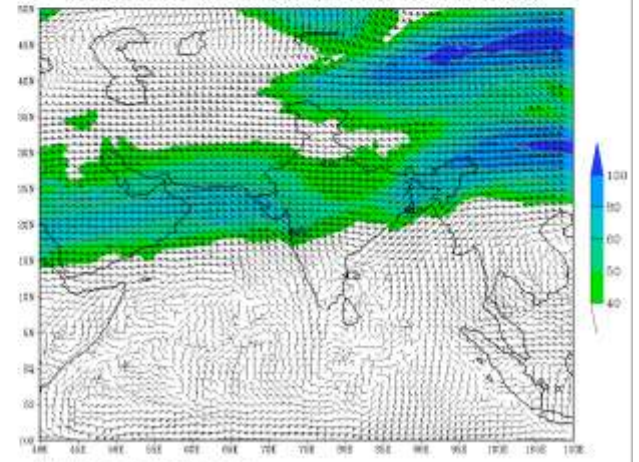
(Background line with light purple/red boundary)

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 02-11-2023



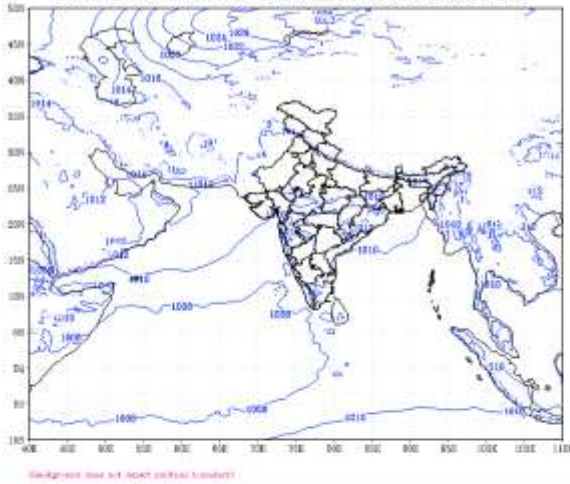
(Background line with light purple/red boundary)

IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 02-11-2023

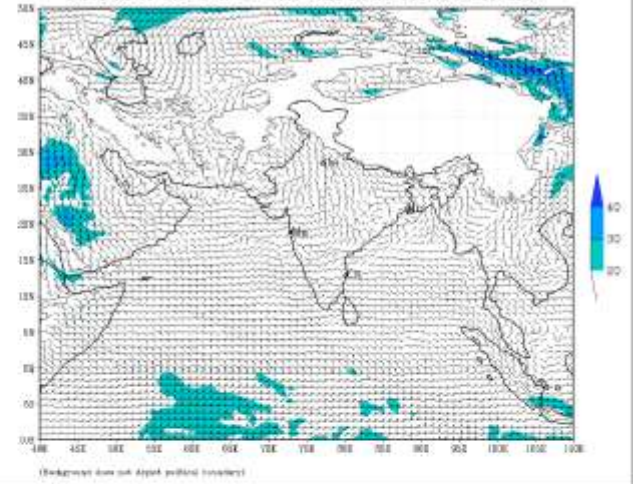


(Background line with light purple/red boundary)

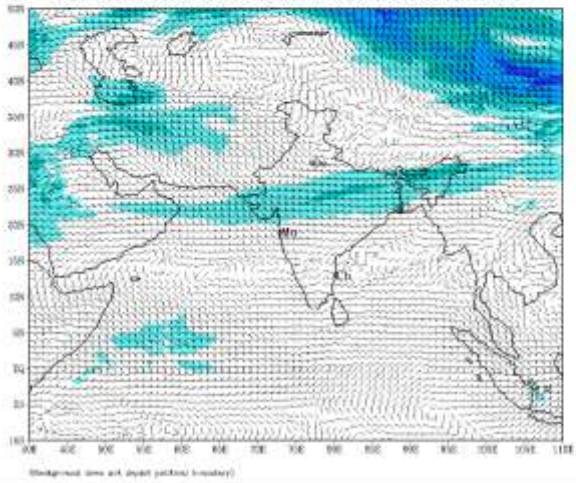
IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (168 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 03-11-2023



IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 03-11-2023



IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 03-11-2023



IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 27-10-2023 valid for 00 UTC of 03-11-2023

