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

Tropical Cyclone Forecast Programme
Report Dated 06th November 2024

Time of Issue: 1230 UTC

Synoptic features (based on 0300 UTC analysis):

- Yesterday's cyclonic circulation over central parts of south Bay of Bengal extending upto 3.1 km above mean sea level persisted at 0300 UTC of today, the 06th November, 2024.
- Yesterday's cyclonic circulation over south Arabian sea has become less marked at 0300 UTC of today, the 06th of November, 2024.
- Yesterday's cyclonic circulation over Gulf of Mannar & adjoining Sri Lanka coast has become less marked at 0300 UTC of today, the 06th of November, 2024.

Environmental Features:

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) ºC	30°C over entire BoB	➢ 26-28ºC over parts of southwest Arabian Sea off Somalia coast. ➢ 28-30°C over rest of AS.
Tropical Cyclone Heat Potential (TCHP) kJ/cm^2	➢ 110-160 over Andaman Sea. ➢ 100-130 KJcm^{-2} over northeast, eastcentral & adjoining northwest BoB and over extreme south Bob & adjoining EIO. ➢ 60-90 KJcm^{-2} over rest of BoB.	➢ 90-110 KJcm^{-2} over southeast AS and adjoining southwest AS & EIO. ➢ <40 KJcm^{-2} over westcentral & southwest AS off Oman & Somalia coasts. ➢ 60-70 KJcm^{-2} over rest of Arabian Sea.
Cyclonic Relative vorticity (X10^{-6}s^{-1})	20-30 over southwest BoB off Sri Lanka coast and over southeast BoB & adjoining south Andaman islands.	20-30 over central parts of mytsouth AS.
Low Level convergence (X10^{-5} s^{-1})	5-15 over eastcentral, southeast and adjoining Andaman islands area.	5 over Lakshadweep islands area & southwest AS.
Upper-Level divergence (X10^{-5} s^{-1})	5-10 over northeast, southwest BoB and Andaman Sea & adjoining southeast BoB.	–
Vertical Wind Shear (VWS knots) **Low: 05-10 knots** **Moderate: 10-20 knots**	High over north, central BoB and extreme north Andaman sea. Low to Moderate over rest	Low to Moderate over entire AS.

High: >20 knots	of BoB.	
Wind Shear Tendency (knots)	Increasing over north, eastcentral BoB & adjoining westcentral BoB and north Andaman sea.	Increasing over north & westcentral BoB off oman-yemen coasts and southwest BoB off Somalia coast. Decreasing over southeast AS adjoining EIO.
Upper tropospheric Ridge	-	-

Satellite observations based on INSAT imagery (0300 UTC):

Over the BoB & Andaman Sea: -

a) Scattered low and medium clouds with embedded moderate to intense convection lay over Bay of Bengal, Andaman sea & Arakan coast.

b) Over the Arabian Sea:

Scattered low and medium clouds with embedded moderate to intense convection lay over south parts of central Arabian sea, south Arabian sea, Maldives & Comorin area and isolated weak to moderate convection lay over Lakshadweep island area.

c) Outside India:

Scattered low & medium clouds with embedded moderate to intense convection over Maldives, Nepal, Bhutan, Tibet China, east China sea, Myanmar, Thailand, Gulf of Thailand, Cambodia, Laos, Vietnam, gulf of Tonkin, Sumatra, Strait of Malacca, Malaysia, Borneo, south China sea, Java islands & sea, Celebes islands & sea, Philippines, Sulu sea, Madagascar, Mozambique channel and over Indian ocean between latitude 5.0^0 N to 20.0^0 S longitude 45.0^0 E to 110.0^0 E and between latitude 20.0^0 S to 30.0^0 S longitude 65.0^0 E to 85.0^0 E.

M.J.O. Index:
Madden Julian Oscillation (MJO) index is currently in Phase 8 with an amplitude greater than 1. It will be in the same phase till 8TH Nov with an amplitude more than 1. It will then enter into phase 1 on 9th Nov with amplitude equal to 1, later it will be in the same phase till 12th Nov with amplitude less than 1.

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

NWP Guidance for FDP Cyclone based on 0000 UTC for the next 7 days

MODEL GUIDANCE	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	IMD-GFS model indicates Cyclonic Circulation over southwest adjoining southeast BoB as on today 06th	Extended Cyclonic Circulation over southwest & adjoining southeast AS as on today 06th November, No

	November, it will have westward movement towards Sri Lanka-Tamil Nadu coast till 11th November without intensification.	further movement afterwards.
IMD-GEFS	IMD-GEFS model indicates Cyclonic Circulation over southwest adjoining southeast BoB as on today 06th November, it will have westward movement towards Sri Lanka-Tamil Nadu coast till 11th November without intensification.	IMD-GEFS model indicates no Significant circulation over AS.
IMD-WRF	IMD-WRF model indicates Cyclonic Circulation over southwest adjoining southeast BoB as on today 06th November, having west northwestward movement.	IMD-WRF model indicates no Significant circulation over AS.
NCMRWF-NCUM(G)	NCMRWF model indicates Cyclonic Circulation over southwest & adjoining southeast BoB as on today 06th November, it will have westward movement towards Tamil Nadu coast till 12th November without intensification. It will then move along the Tamil Nadu-Andhra Pradesh coast.	Extended Cyclonic Circulation over southwest & adjoining southeast AS as on today 06th November, No further movement afterwards.
NCMRWF-NCUM(R)	NCMRWF-regional model indicates Cyclonic Circulation over southwest adjoining southeast BoB as on today 06th November, having west northwestward movement.	NCMRWF model indicates no Significant circulation over AS.
NCMRWF-NEPS	NCMRWF-NEPS model indicates Cyclonic Circulation over southwest & adjoining southeast BoB as on today 06th November, it will have westward movement towards Tamil Nadu coast till 11th November without intensification. It will then move along the Tamil Nadu-Andhra Pradesh coast till 13th.	NCMRWF-NEPS model indicates no Significant circulation over AS.
ECMWF	ECMWF model indicates Cyclonic Circulation over southeast & adjoining southwest BoB as on today 06th November, it will have westward movement towards Tamil Nadu coast till 12th November without intensification.	ECMWF model indicates no Significant circulation over AS.
NCEP-GFS	NCEP-GFS indicates Cyclonic Circulation over southwest & adjoining southeast BoB as on today 06th November, it will have westward movement towards Sri Lanka-Tamil Nadu coast till 13th November without intensification.	NCEP-GFS model indicates no Significant circulation over AS.

Summary:

(a) Bay of Bengal:

Most of the models like IMD-GFS, IMD-GEFS, NCUM-Global, NCMRWF-NEPS, ECMWF and NCEP-GFS are indicating a cyclonic circulation over southwest and adjoining Southeast Bay of Bengal as on today the 6th November, having its westwards movement towards Tamil Nadu coast till 12th November without further intensification.

(b) Arabian Sea

Most of the models are indicating no significant cyclonic circulation over Arabian Sea for the next seven days.

Inference:

Considering various environmental conditions and model guidance, it is inferred that:

No fresh cyclogenesis is likely over the Bay of Bengal & Arabian Sea for the next seven days.

Probability of cyclogenesis (formation of depression and above intensity systems) over the Bay of Bengal 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

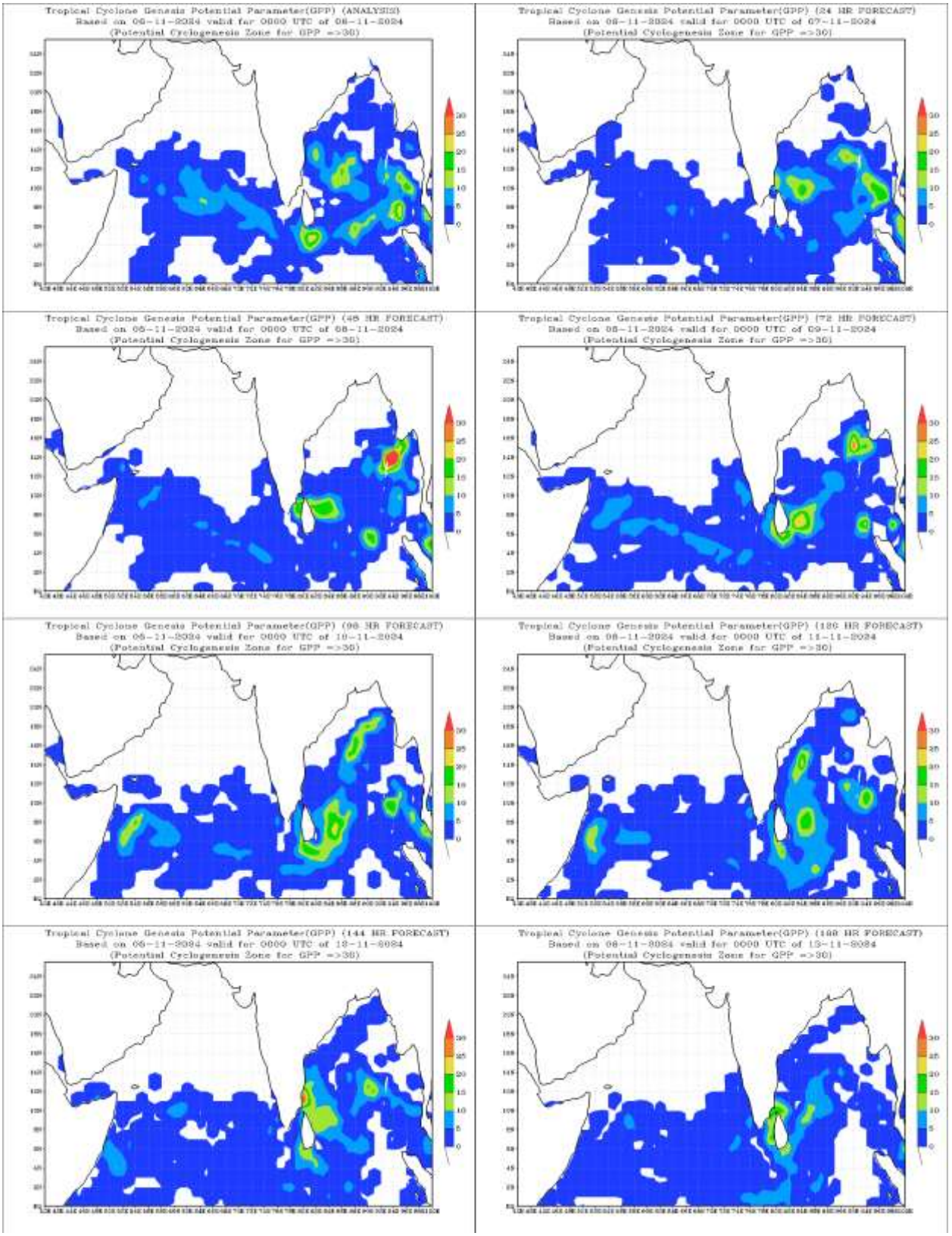
Probability of cyclogenesis (formation of depression and above intensity systems) over the Arabian Sea during next 168 hours:

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

"-" indicate genesis has already occurred.
Probability is indicated as NIL for 0%, LOW for 1-33%, MOD for 34-67% and High for 68-100%.

Intense Observation Period (IOP): NIL

ANNEXURE


Tropical Cyclone Genesis Potential Parameter(GPP) (ANALYSIS)
Based on 08-11-2024 valid for 0000 UTC of 08-11-2024
(Potential Cyclogenesis Zone for GPP =>30)
Tropical Cyclone Genesis Potential Parameter(GPP) (24 HR FORECAST)
Based on 08-11-2024 valid for 0000 UTC of 09-11-2024
(Potential Cyclogenesis Zone for GPP =>30)
Tropical Cyclone Genesis Potential Parameter(GPP) (48 HR FORECAST)
Based on 08-11-2024 valid for 0000 UTC of 10-11-2024
(Potential Cyclogenesis Zone for GPP =>30)
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(Potential Cyclogenesis Zone for GPP =>30)
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Based on 08-11-2024 valid for 0000 UTC of 12-11-2024
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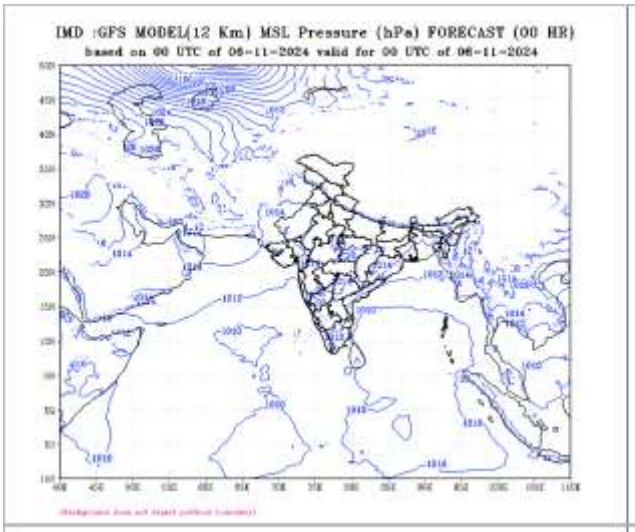
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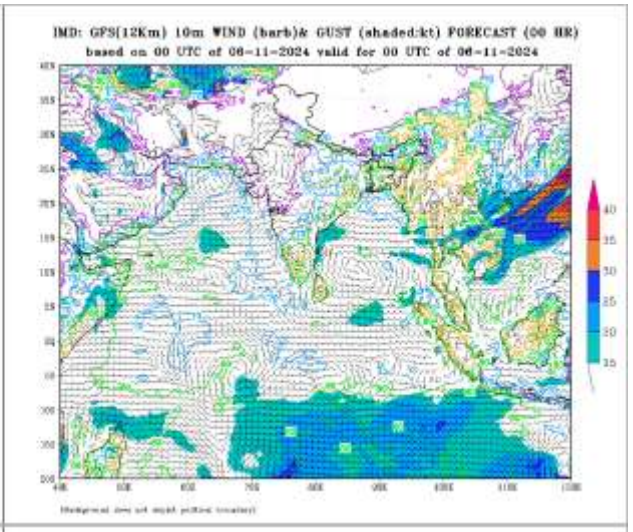
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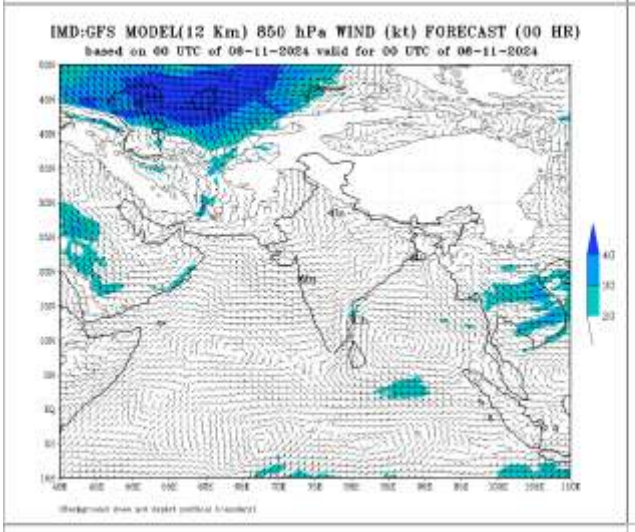
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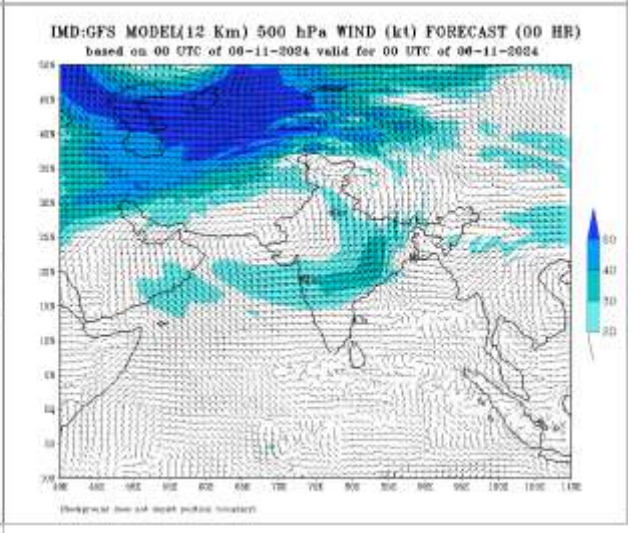
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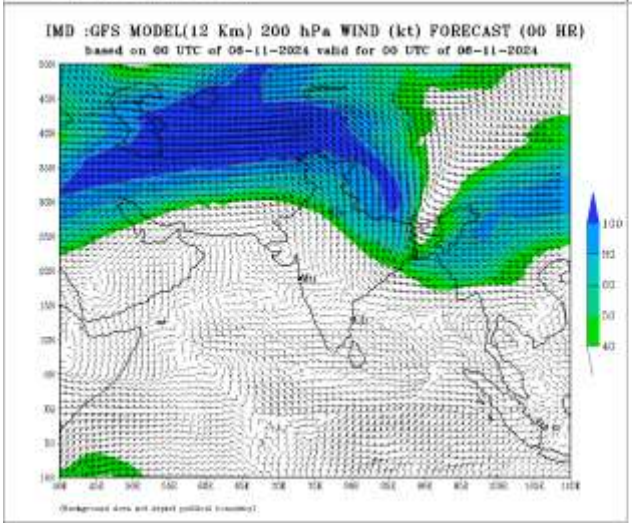
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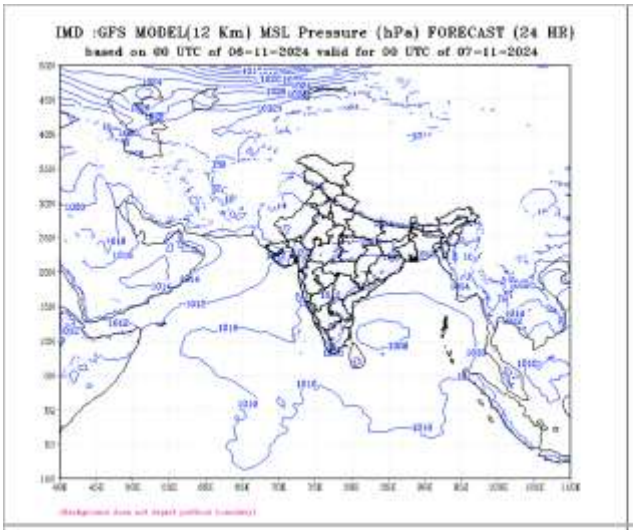
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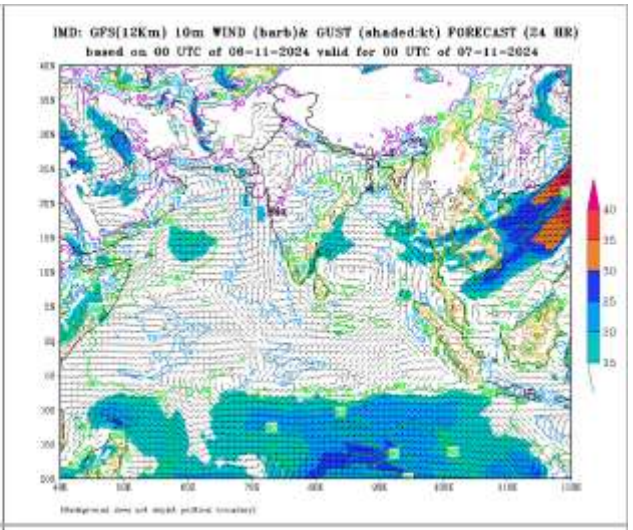
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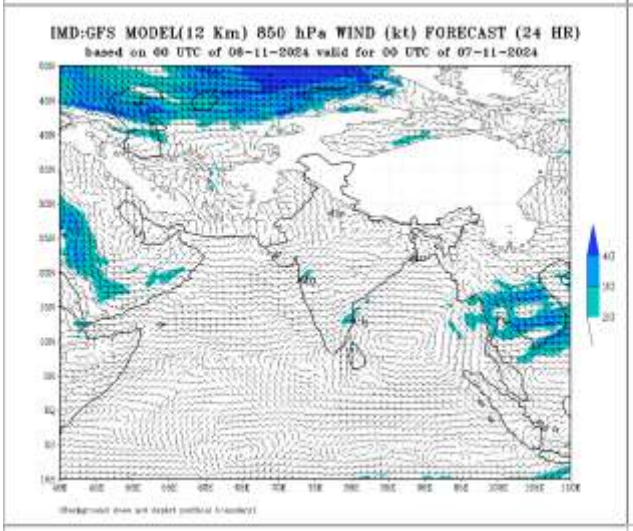
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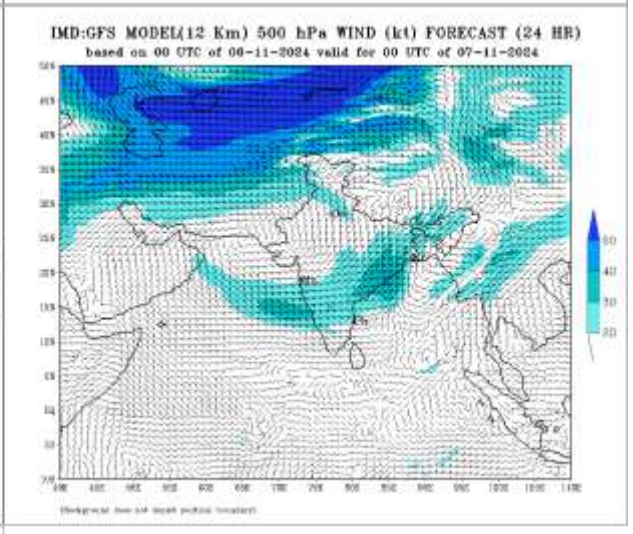
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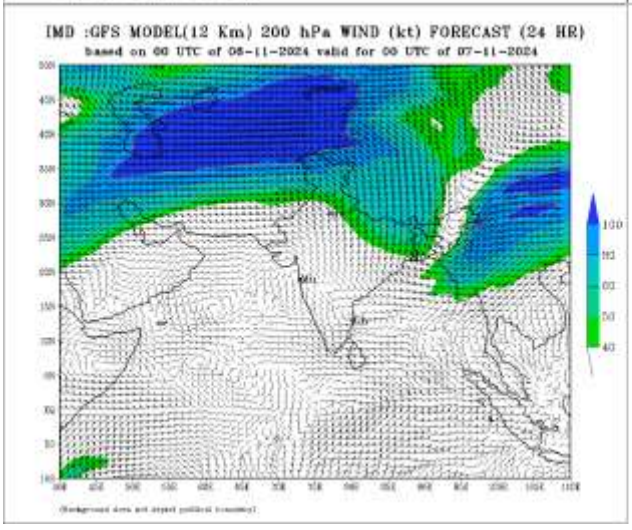
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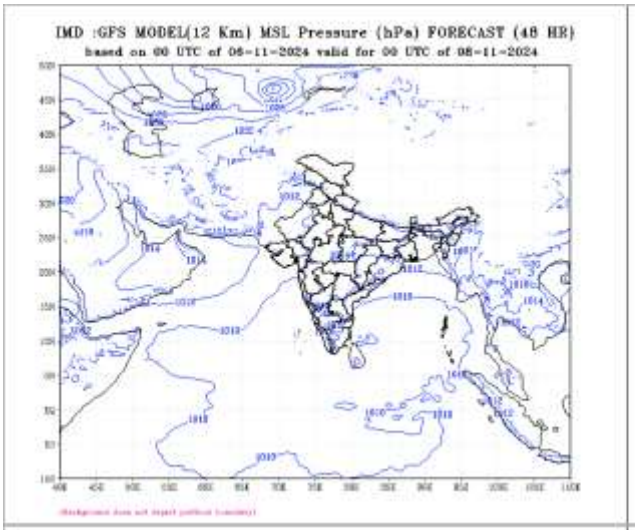
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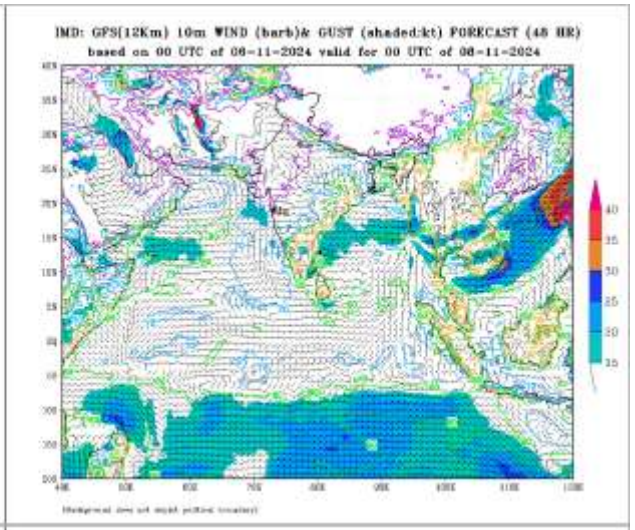
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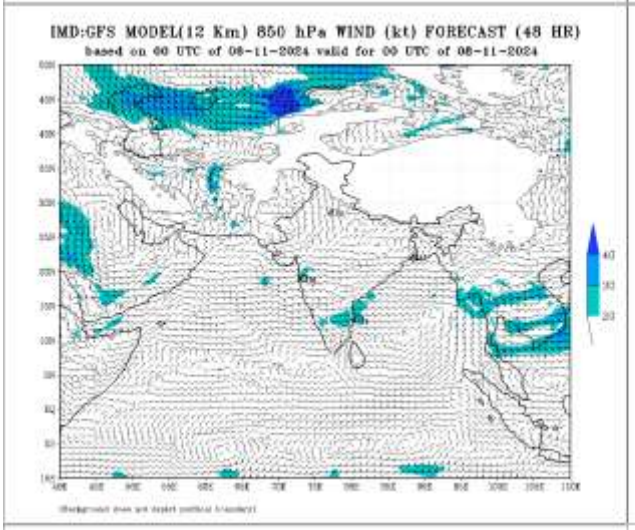
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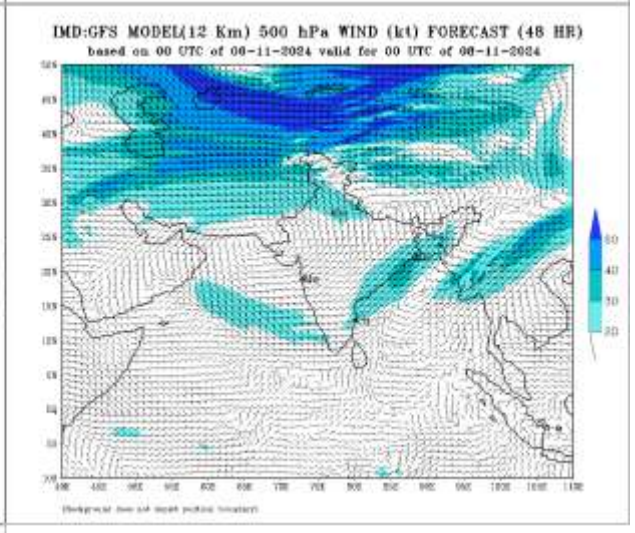
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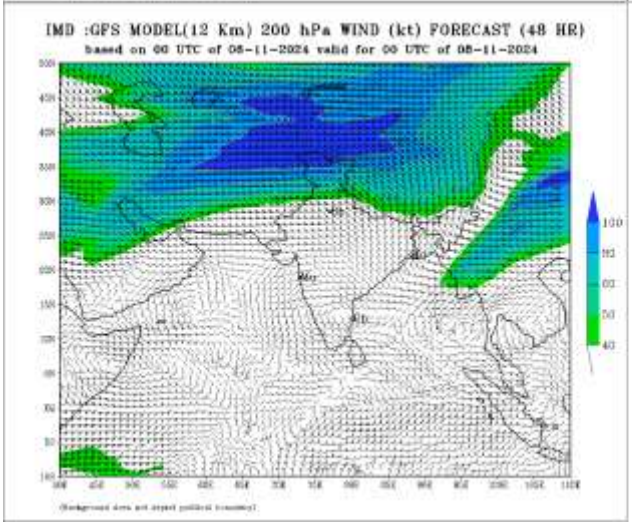
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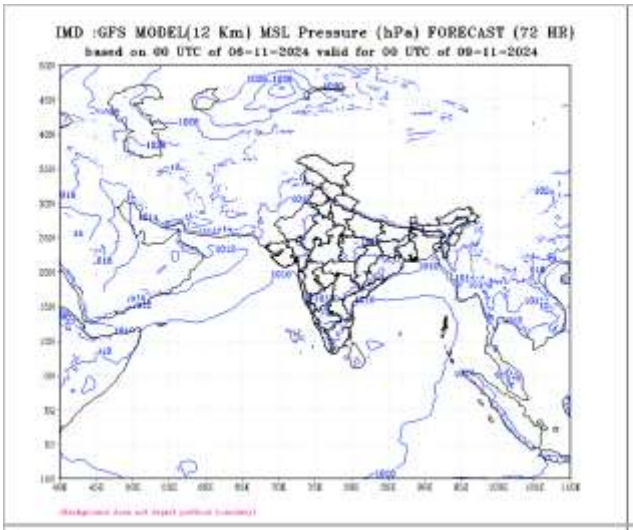
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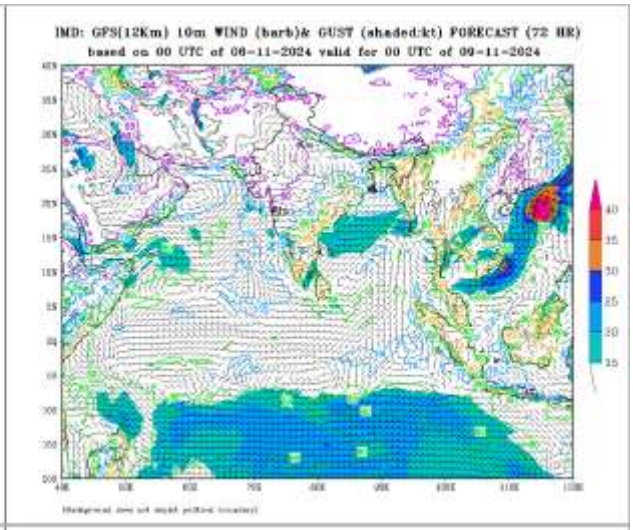
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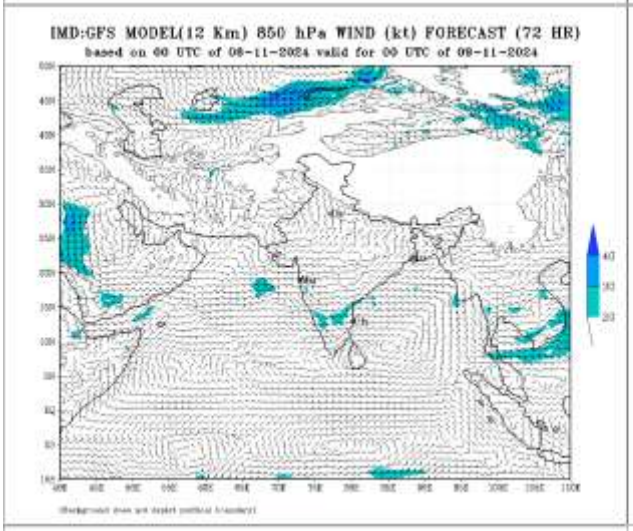
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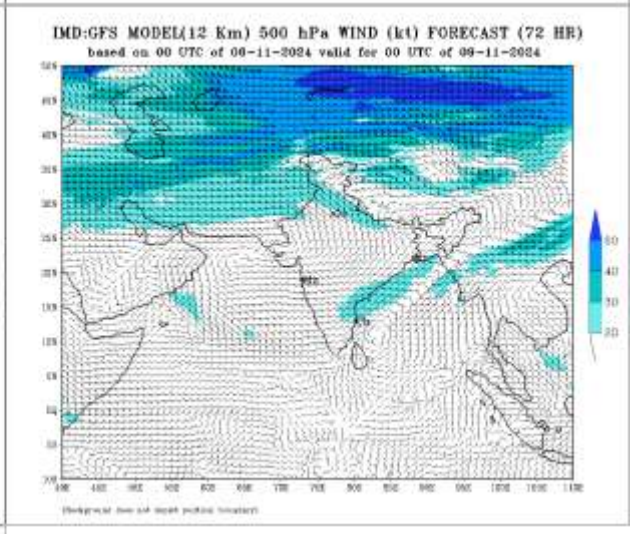
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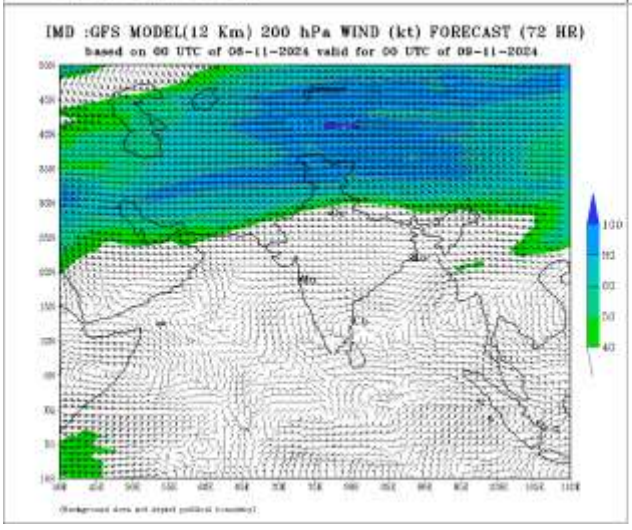
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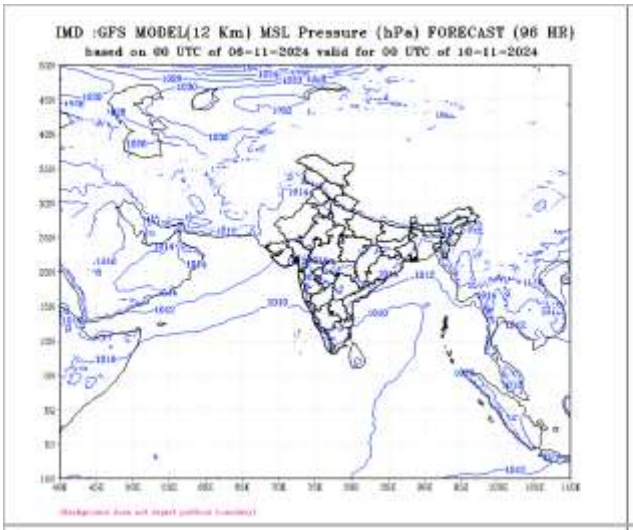
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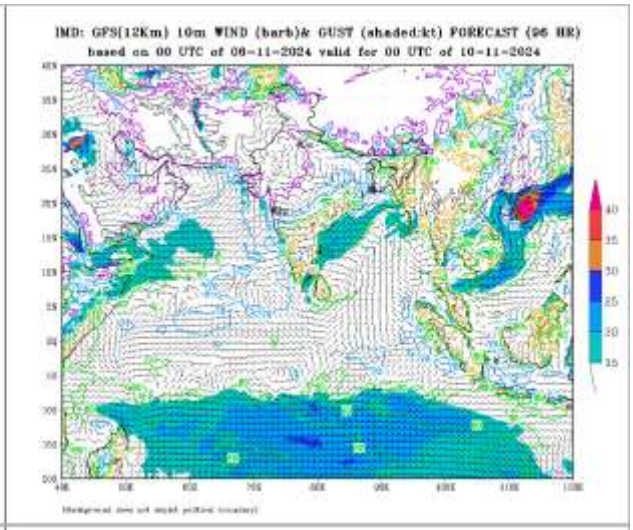
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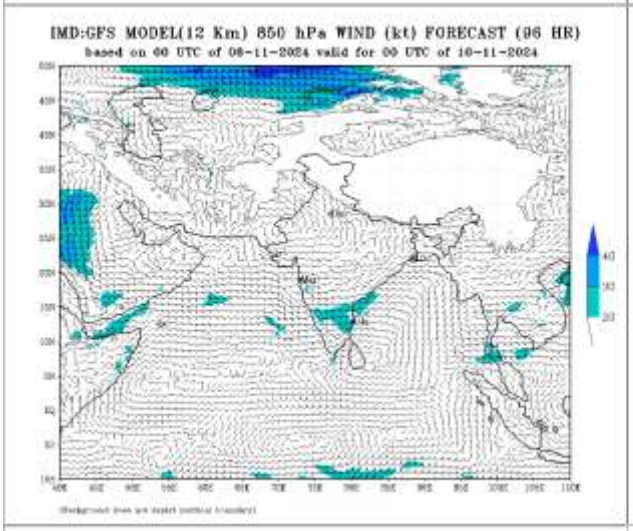
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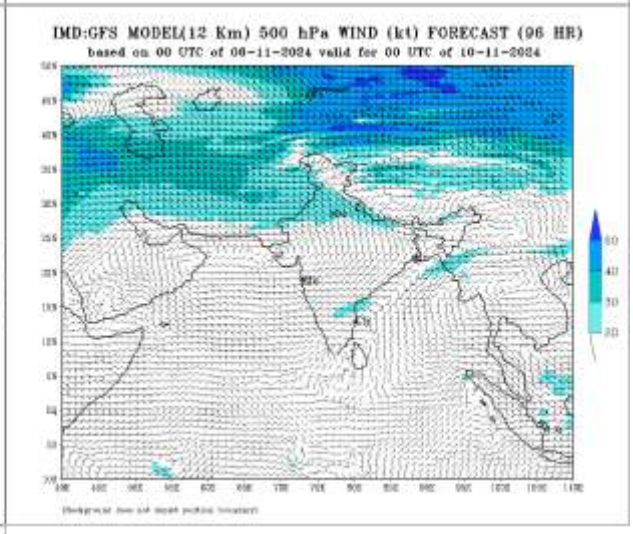
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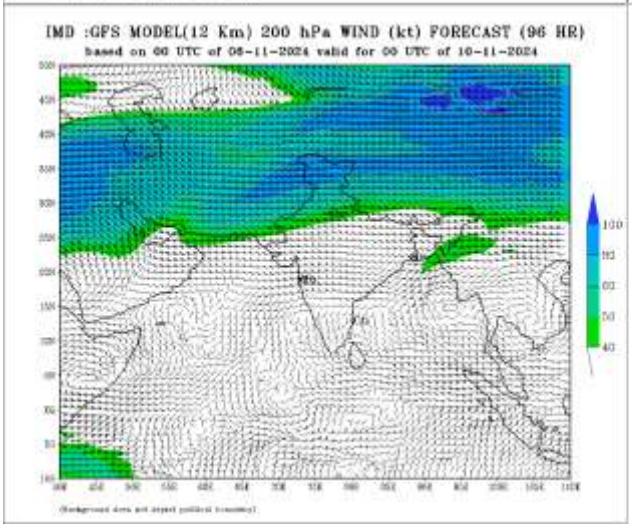
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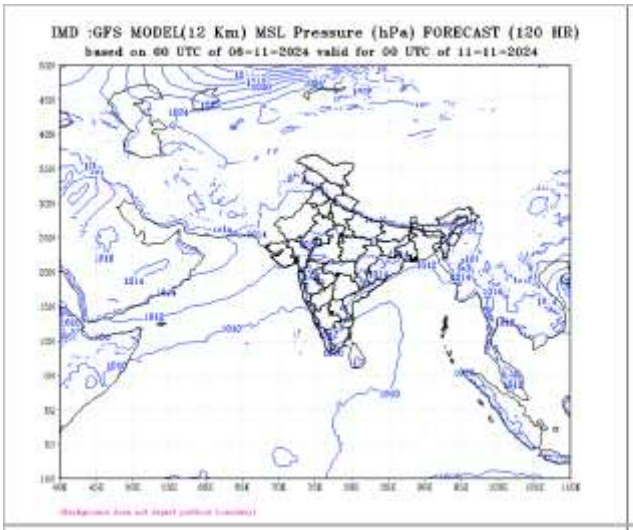
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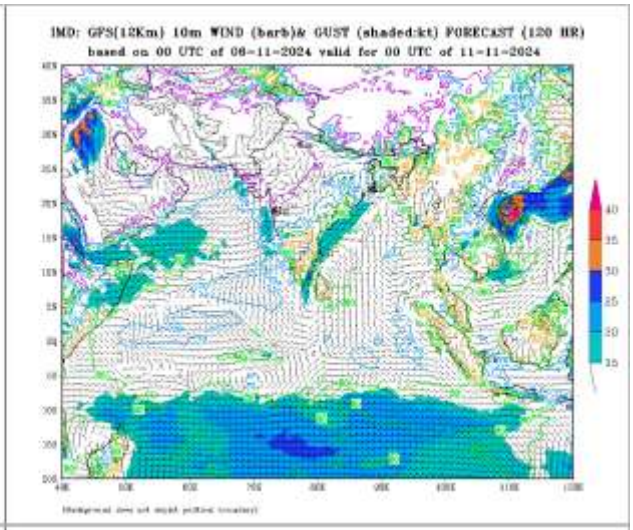
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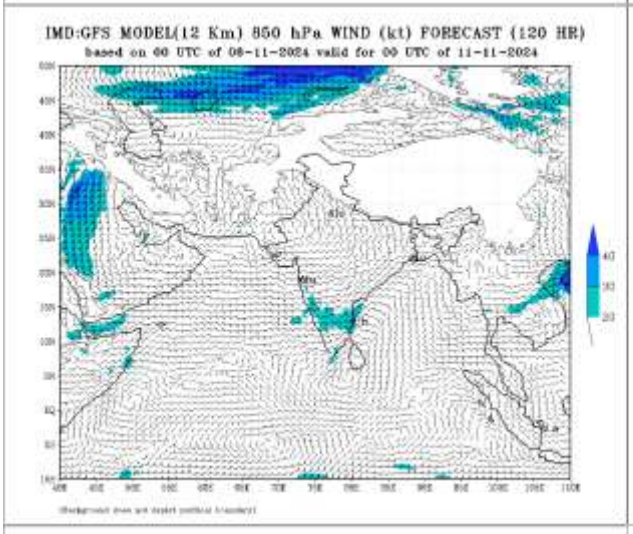
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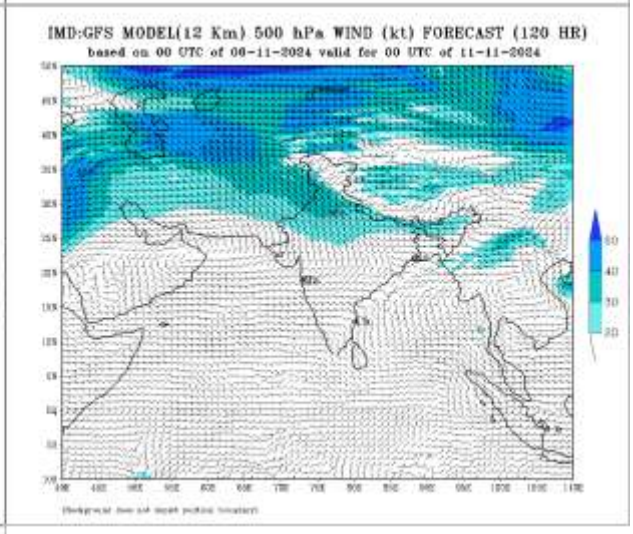
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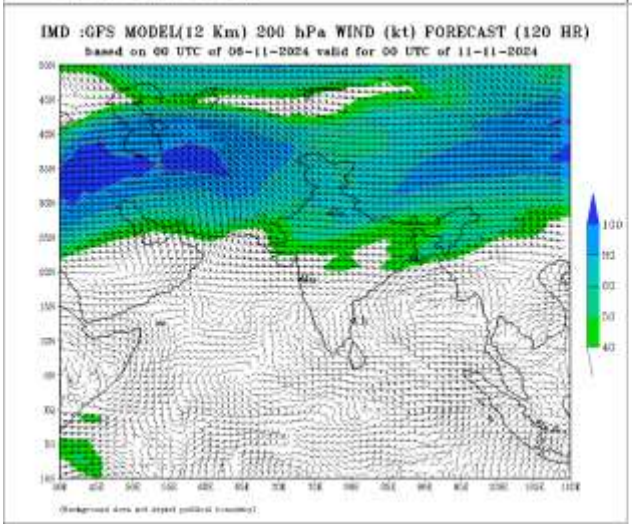
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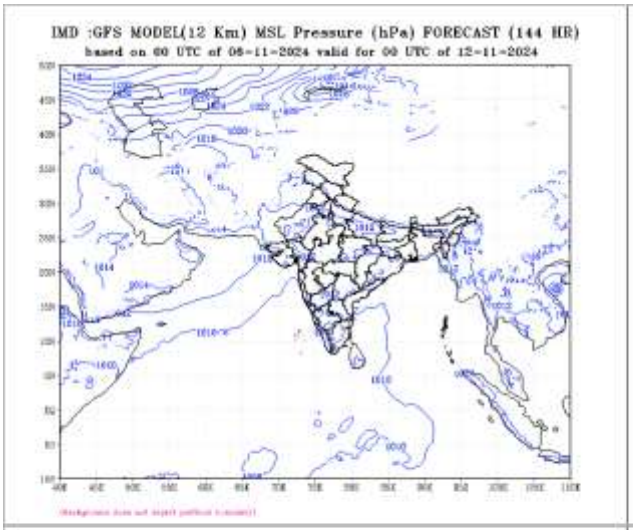
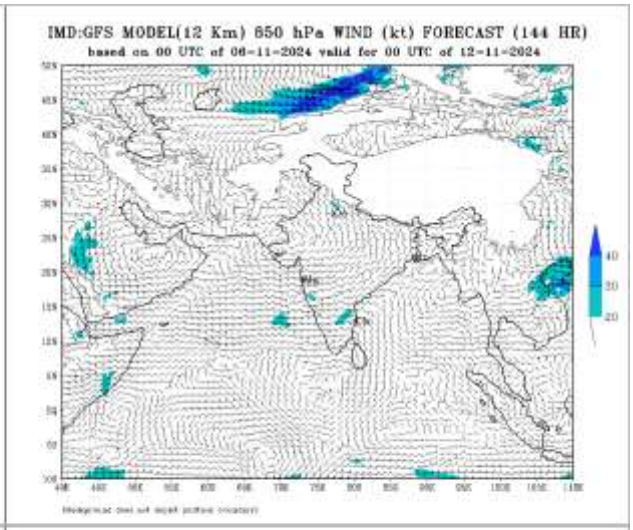
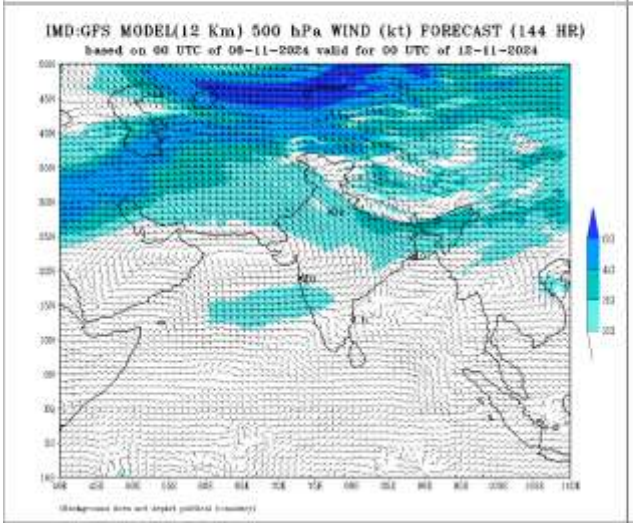
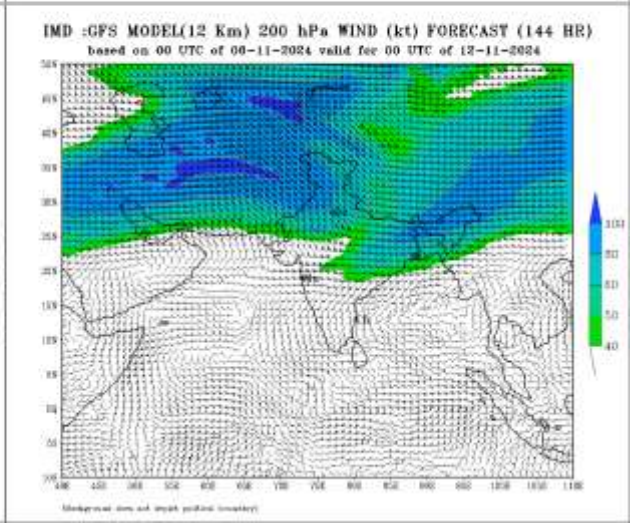
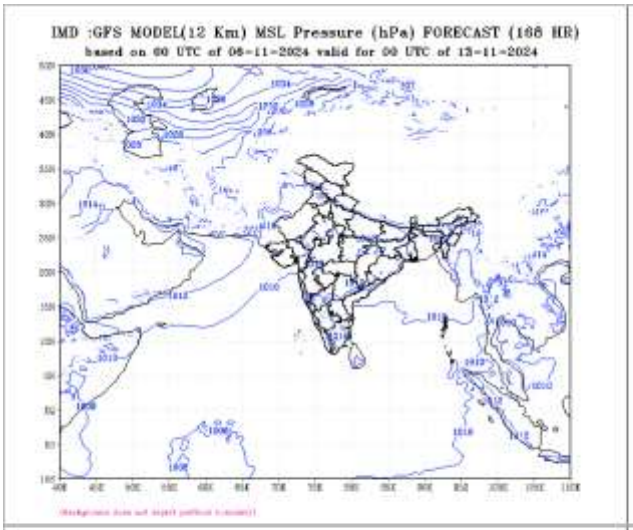
based on 00 UTC of 08-11-2024 valid for 00 UTC of 11-11-2024

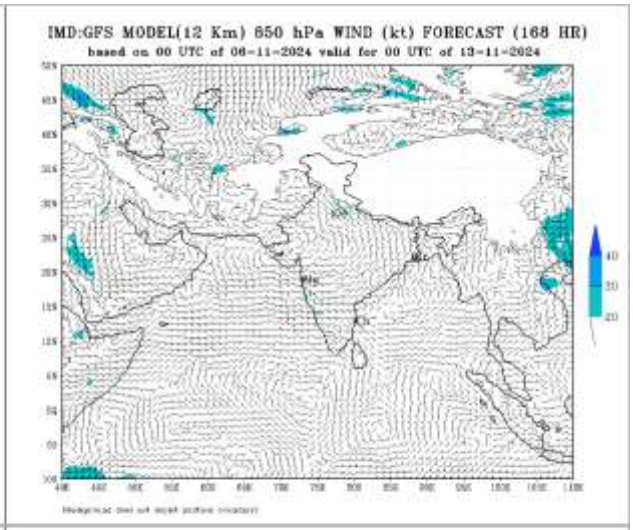

IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (144 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 12-11-2024

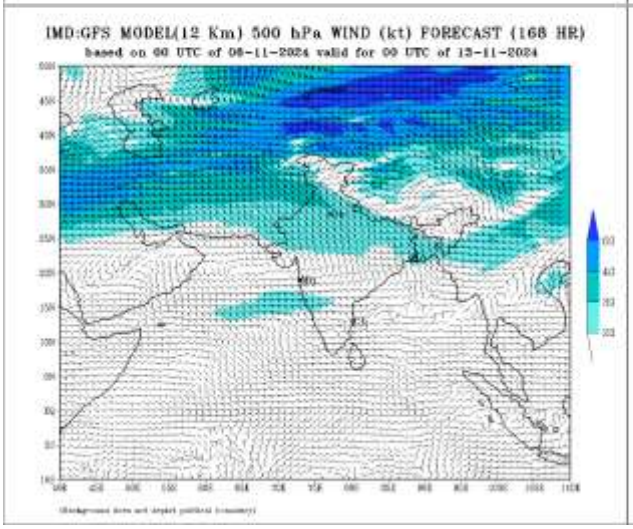

IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 12-11-2024

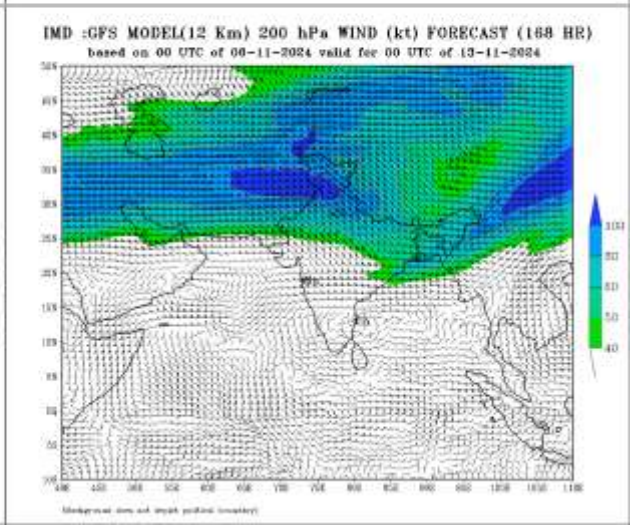

IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 12-11-2024


IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (144 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 12-11-2024


IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (168 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 13-11-2024


IMD:GFS MODEL(12 Km) 850 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 13-11-2024


IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 13-11-2024


IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (168 HR)
based on 00 UTC of 06-11-2024 valid for 00 UTC of 13-11-2024