



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
SPECIAL TROPICAL WEATHER OUTLOOK**

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DA TED 30.05.2020**

**TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 30.05.2020 BASED ON 0600 UTC OF 30.05.2020.**

**SUB: (1) DEPRESSION OVER SOUTH COASTAL OMAN & ADJOINING YEMEN  
(2) LIKELY FORMATION OF A LOW PRESSURE AREA OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA DURING NEXT 48 HOURS.**

1. THE DEPRESSION OVER SOUTH COASTAL OMAN AND ADJOINING YEMEN MOVED SLIGHTLY SOUTHWESTWARDS DURING PAST 06 HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 30<sup>TH</sup> MAY, 2020 NEAR LATITUDE 17.2°N AND LONGITUDE 54.1°E, ABOUT 20 KM NORTH OF SALALAH (42316) AND 230 KM EAST-NORTHEAST OF AL GHAYDAH (41398). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 12 HOURS. IT IS VERY LIKELY TO MOVE SLOWLY WEST-SOUTHWESTWARDS ALONG SOUTH OMAN AND YEMEN COASTS. FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30.05.20/0600	17.2/54.1	40-50 GUSTING TO 60	DEPRESSION
30.05.20/1200	17.0/53.8	50-60 GUSTING TO 70	DEEP DEPRESSION
31.05.20/0000	16.9/53.5	50-60 GUSTING TO 70	DEEP DEPRESSION
31.05.20/1200	16.8/53.2	50-60 GUSTING TO 70	DEEP DEPRESSION
01.06.20/0000	16.7/52.8	40-50 GUSTING TO 60	DEPRESSION

AS PER SATELLITE IMAGERY BASED ON 0600 UTC OF 30<sup>TH</sup> MAY, ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER WESTCENTRAL ARABIAN SEA BETWEEN LATITUDE 13.0°N TO 17.0°N AND LONGITUDE 52.0°E TO 57.0°E AND SOUTH OMAN & ADJOINING NORTH YEMEN. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93° C.

THE MAXIMUM SUSTAINED WIND SPEED AROUND THE SYSTEM CENTRE AND OVER WESTCENTRAL ARABIAN SEA ALONG & OFF SOUTH OMAN-EAST YEMEN COASTS IS ABOUT 25 KTS GUSTING TO 35 KTS. THE WINDS ARE STRONGER IN SOUTHWEST SECTOR. THE ESTIMATED CENTRAL PRESSURE IS 1000 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH OVER WESTCENTRAL ARABIAN SEA ALONG & OFF SOUTH OMAN-EAST YEMEN COASTS.

SALALAH REPORTED MEAN SEA LEVEL PRESSURE OF 1002.4 HPA WITH VARIABLE WINDS OF 1.9 KNOTS AT 0300 UTC OF 30<sup>TH</sup> MAY.

**RAINFALL FORECAST IS AVAILABLE AT [http://nwp.imd.gov.in/gfsproducts00\\_all.php](http://nwp.imd.gov.in/gfsproducts00_all.php)**

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

2. ANOTHER LOW PRESSURE AREA IS VERY LIKELY TO FORM OVER SOUTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA DURING NEXT 48 HOURS. IT IS VERY LIKELY CONCENTRATE INTO A DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA DURING SUBSEQUENT 48 HOURS AND MAY INTENSIFY FURTHER. IT IS LIKELY TO MOVE NORTH-NORTHWESTWARDS TOWARDS GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS DURING NEXT 4-5 DAYS.

**PROBABILITY OF CYCLOGENESIS DURING NEXT 120 HRS (OVER SOUTHEAST ARABIAN SEA)**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	NIL	LOW	MODERATE	HIGH

**REMARKS:**

**MJO CONDITION:** THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 1 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE TO BE IN SAME PHASE DURING NEXT 7 DAYS WITH AMPLITUDE REMAINING MORE THAN 1. THUS MJO WILL SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE WEST AS AND GRADUALLY WILL SUPPORT CONVECTIVE ACTIVITY OVER EASTERN PARTS OF AS FROM 1<sup>ST</sup> JUNE ONWARDS.

**SEA CONDITIONS:** CONSIDERING THE SEA CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 30-32°C OVER THE ENTIRE AS. THE TROPICAL CYCLONE HEAT POTENTIAL IS MORE THAN 100 KJ/CM<sup>2</sup> OVER MAJOR PARTS OF SOUTH & WESTCENTRAL AS. IT IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER CENTRAL AS AND IS BECOMING NEGATIVE OVER EXTREME NORTH AS & OFF OMAN COAST.

**ENVIRONMENTAL CONDITIONS FOR**

**SYSTEM 1 OVER SOUTH COASTAL OMAN AND ADJOINING YEMEN:** LOW LEVEL POSITIVE VORTICITY IS ABOUT 200 X10<sup>-6</sup> SEC<sup>-1</sup> OVER WESTCENTRAL ARBIAN SEA TO THE SOUTH -SOUTHWEST OF THE SYSTEM CENTRE. IT IS EXTENDING UPTO 200 HPA LEVEL. THE LOW LEVEL CONVERGENCE IS CURRENTLY OF THE ORDER OF 20X10<sup>-5</sup> SEC<sup>-1</sup> TO THE SOUTH- SOUTHWEST OF THE SYSTEM CENTRE OVER WESTCENTRAL ARBIAN SEA. HOWEVER, OVER THE SYSTEM CENTRE, IT CONTINUES TO BE NEGATIVE (-10X10<sup>-5</sup> SEC<sup>-1</sup>). THE POSITIVE UPPER LEVEL DIVERGENCE IS OF THE ORDER 40X10<sup>-5</sup> SEC<sup>-1</sup> OVER WESTCENTRAL ARBIAN SEA TO THE SOUTHEAST OF SYSTEM CENTRE. VERTICAL WIND SHEAR (VWS) IS HIGH (25-30 KNOTS) OVER THE SYSTEM CENTRE. HOWEVER, IT IS DECREASING BECOMING MODERATE (15-20 KNOTS) OVER YEMEN TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER TROPOSPHERIC RIDGE LIES NEAR 18.0° N OVER THE ARABIAN SEA. THE SYSTEM IS MOVING WEST-SOUTHWESTWARD UNDER THE STEERING INFLUENCE OF THE EAST-NORTHEASTERLY WINDS AT THE OUTER PART OF THE ANTICYCLONE OVER THE ARABIAN PENINSULA.

**SYSTEM 2 OVER SOUTHEAST ARABIAN SEA:**

POSITIVE LOWER LEVEL POSITIVE VORTICITY HAS INCREASED DURING PAST 24 HOURS (60-70 X10<sup>-6</sup>SEC<sup>-1</sup>) OVER COMORIN-LAKSHADWEEP AREAS. IT IS EXTENDING UPTO 200 HPA LEVEL. THE LOWER LEVEL CONVERGENCE IS AROUND 10X10<sup>-5</sup>SEC<sup>-1</sup> OVER SOUTHEAST AS. THE UPPER LEVEL DIVERGENCE OVER SOUTHESAT AS HAS INCREASED 30X10<sup>-5</sup> SEC<sup>-1</sup> OVER SOUTHEAST ARABIAN SEA. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (5-20 KTS) OVER SOUTHEAST AS AND COMORIN AREA. THE UPPER TROPOSPHERIC RIDGE LIES NEAR 18.0°N OVER THE AS.

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**MODEL GUIDANCE:** MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GFS, NCEP GFS, GEFS, NEPS, NCUM ETC. ARE INDICATING FURTHER INTENSIFICATION OF THE SYSTEM AND NORTH-NORTHWESTWARDS MOVEMENT FOLLOWED BY WEST-SOUTHWEST MOVEMENT. SOME MODELS LIKE ECMWF, NEPS, NCEP GFS, IMD GFS ARE ALSO INDICATING DEVELOPMENT OF LOW PRESSURE AREA OVER SOUTHEAST ARABIAN SEA DURING NEXT 48 HOURS AND IT'S NORTH-NORTHWESTWARDS MOVEMENT WITH FURTHER INTENSIFICATION INTO DEPRESSION DURING SUBSEQUENT 2 DAYS.

**CONCLUSION:** CONSIDERING ALL THE ABOVE THE SYSTEM OVER SOUTH COASTAL OMAN AND ADJOINING YEMEN IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 12 HOURS. IT IS VERY LIKELY TO MOVE SLOWLY WEST-SOUTHWESTWARDS ALONG THE COAST LINE OF SOUTH OMAN AND YEMEN. ANOTHER LOW PRESSURE AREA IS LIKELY TO FORM OVER SOUTHEAST & ADJOINING EASTCENTRAL DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CONCENTRATE INTO A DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA DURING SUBSEQUENT 48 HOURS. IT IS ALSO LIKELY THAT THE SYSTEM MAY INTENSIFY FURTHER AND MOVE TOWARDS GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS DURING THE 4-5 DAY PERIOD AFTER ITS FORMATION. THUS, THE AREA OVER WESTCENTRAL AS AND SOUTHEAST AS IS MAINTAINED UNDER CONTINUOUS WATCH FOR NEXT 7 DAYS.

(SUNITHA DEVI )

SCIENTIST- E, RSMC, NEW DELHI

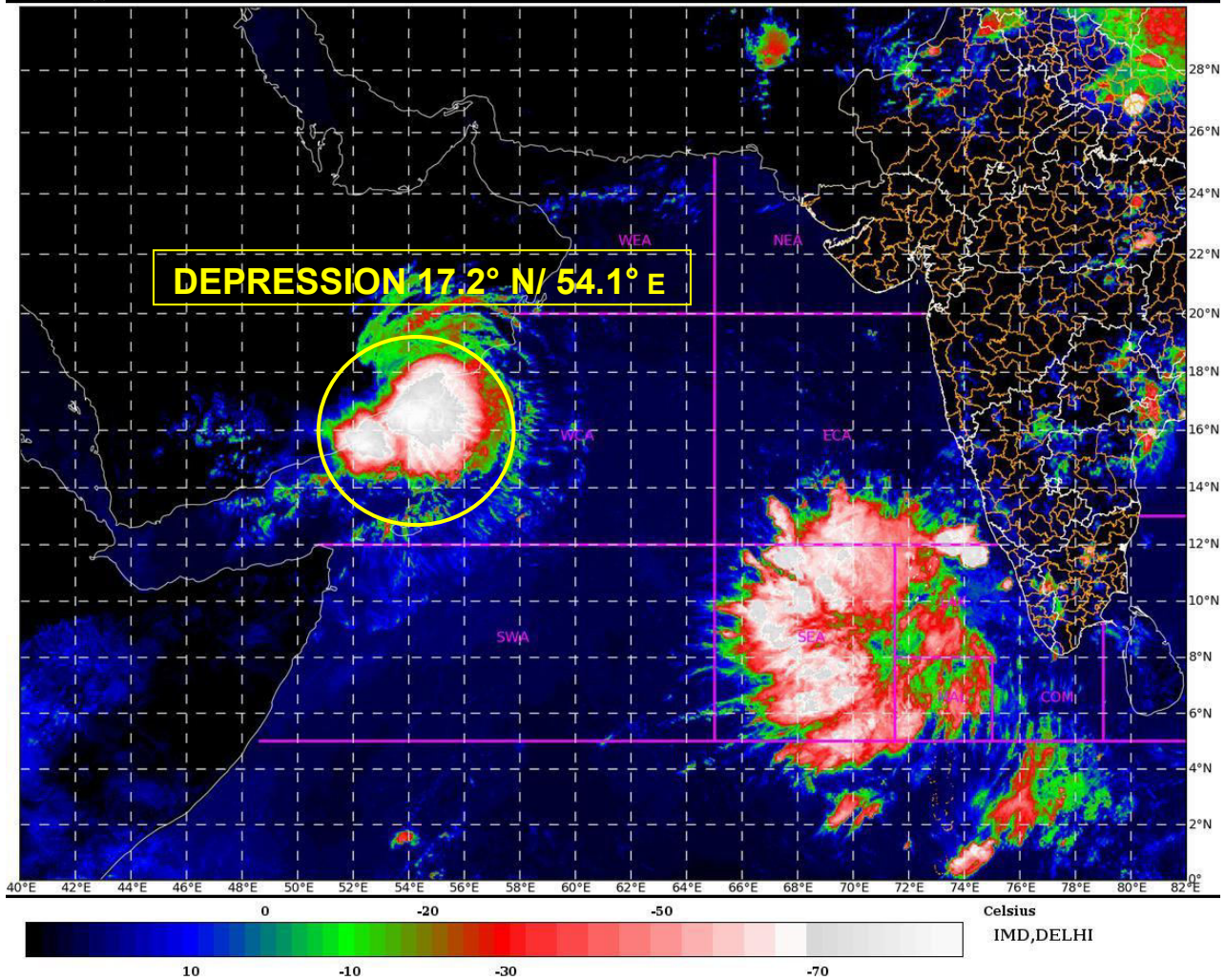
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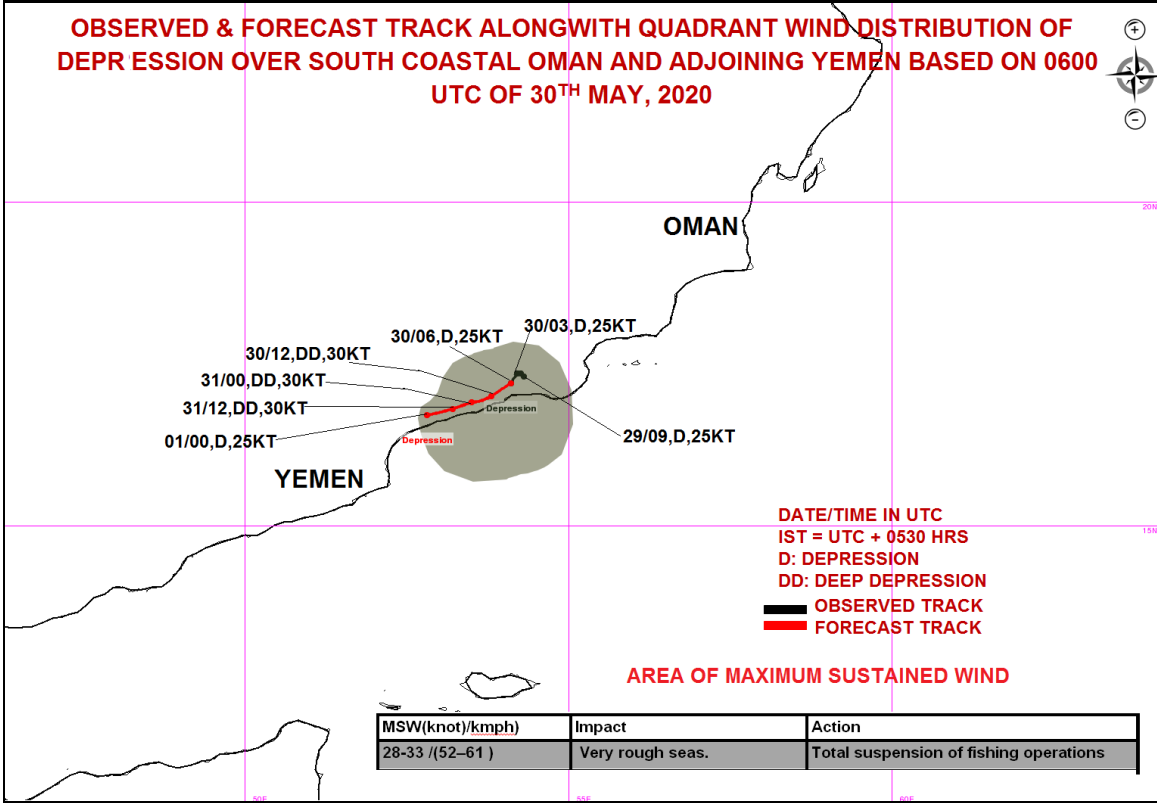
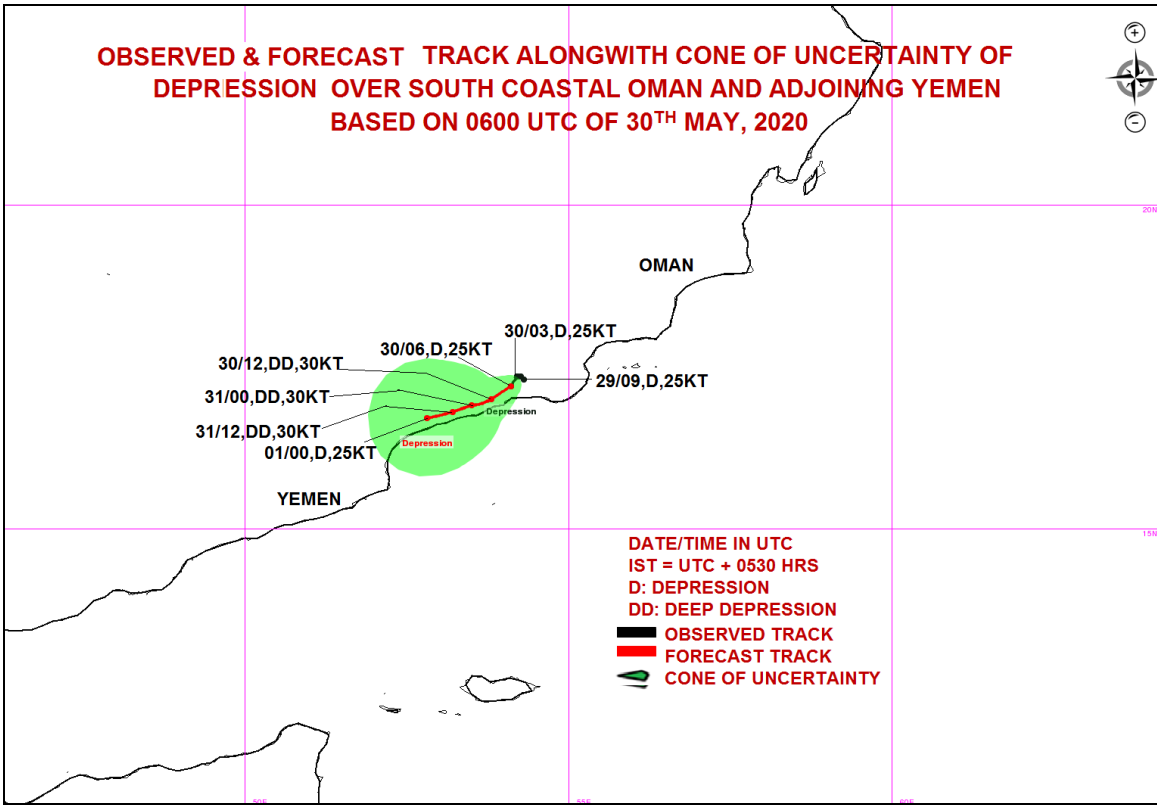
SAT : INSAT-3DR IMG  
IMG\_TIR1\_TEMP 10.8 um  
ARABIAN\_SEA

30-05-2020/(0845 to 0911) GMT  
30-05-2020/(1415 to 1441) IST



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

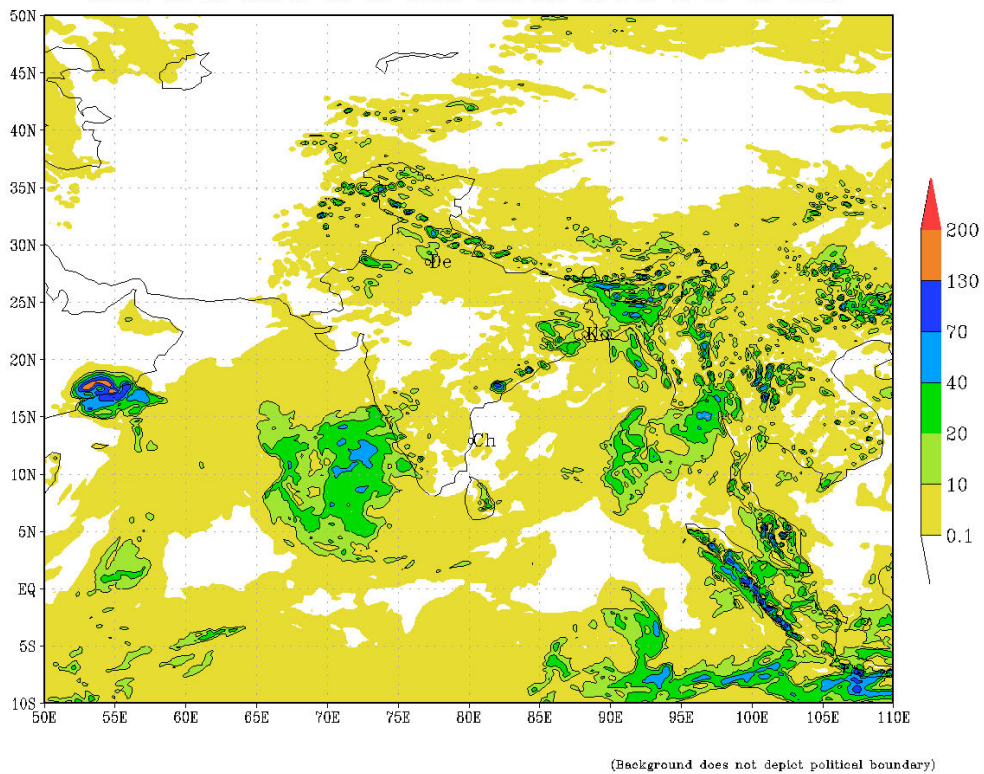
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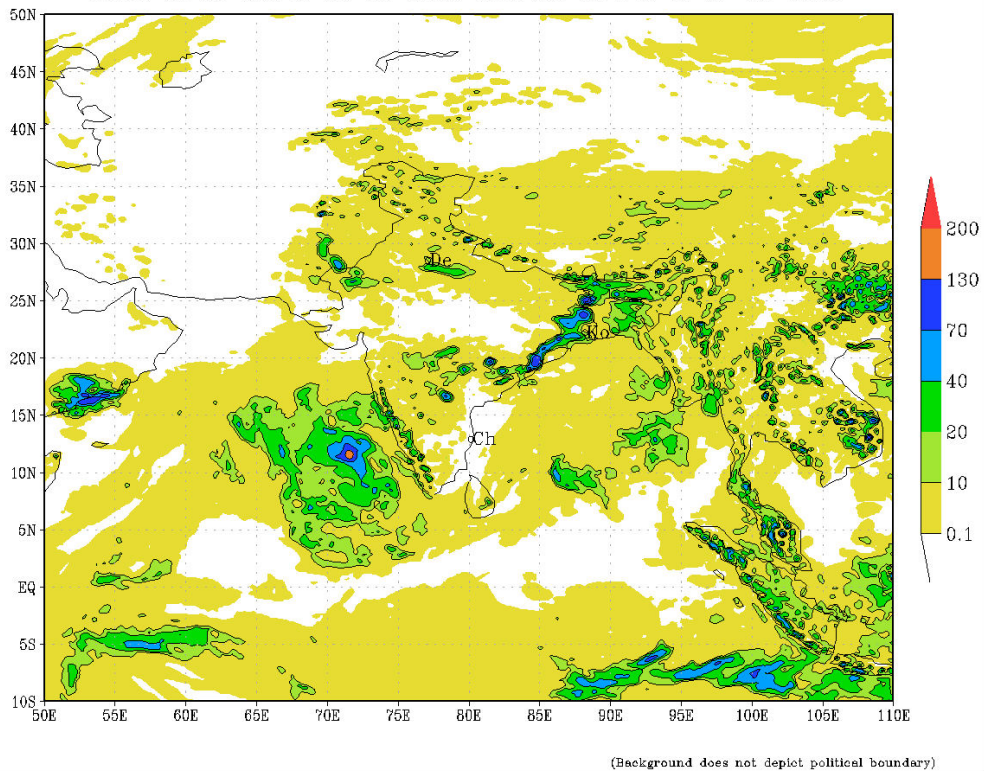
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IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (24 HR)  
 based on 00 UTC of 30-05-2020 valid for 03 UTC of 31-05-2020



IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (48 HR)  
 based on 00 UTC of 30-05-2020 valid for 03 UTC of 01-06-2020



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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