



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 01 (BOB 07/2017)

TIME OF ISSUE: 1150 HOURS IST

DATED: 29.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Depression over southwest Bay of Bengal off Sri Lanka Coast

Latest observations and satellite imageries indicate that a depression has formed over southwest Bay of Bengal off Sri Lanka coast. It lay centred at 0830 hrs IST of today, the 29th November, 2017 near Latitude 6.5° N and Longitude 81.8 °E, about 80 km to the east-southeast of Hambantota and 500 km east southeast of Kanyakumari. The system is very likely to move westnorthwestwards and cross Sri Lanka coast close to northeast of Hambantota around noon of today. It would then continue to move west-northwestwards across Sri Lanka and emerge into Comorin area by tomorrow. The system is very likely to intensify further into a deep depression during next 24 hours.

Warning:

- **Heavy Rainfall warning:**
 - Rainfall at most places with Heavy to very heavy rainfall at isolated places is very likely over south Tamil Nadu during next 48 hours.
 - Rainfall at most places is very likely over south Kerala with heavy rainfall at isolated places during next 24 hours and isolated heavy to very heavy rainfall during subsequent 24 hours.
 - Rainfall at most places with Heavy to very heavy rainfall at isolated places is very likely over Lakshadweep islands on 1st and 2nd December.
- **Wind warning:**

Squally winds reaching 45-55 kmph gusting to 65 kmph is very likely along and off South Tamil Nadu and South Kerala during next 48 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.
- **Sea condition:** Sea conditions would be rough to very rough along & off South Tamil Nadu and South Kerala during next 48 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.
- **Fishermen Warning:** Fishermen along & off South Tamil Nadu and South Kerala coasts are advised not to venture into sea during next 48 hours and along and off Lakshadweep Islands are advised not to venture into the sea on 01st and 02nd December.

The next bulletin will be issued at 1430 hrs IST of 29th November 2017.

**(Neetha K Gopal)
Scientist-E, RSMC, New Delhi**

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



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BULLETIN NO. : 02 (BOB 07/2017)

TIME OF ISSUE: 1415 HOURS IST

DATED: 29.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
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CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Depression over Sri Lanka

Latest observations and satellite imageries indicate that the depression over southwest Bay of Bengal off Sri Lanka coast moved westwards and crossed Sri Lanka coast about 70 km northeast of Hambantota around 0930 hours IST and lay centred at 1130 hrs IST of today, the 29th November, 2017 over Sri Lanka near Latitude 6.5° N and Longitude 80.4 °E, close to Ratnapura (Sri Lanka) and 360 km eastsoutheast of Kanyakumari. The system is very likely to move westnorthwestwards, emerge into Comorin area and intensify further into a deep depression during next 24 hours.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with Heavy to very heavy rainfall at isolated places is very likely over south Tamil Nadu during next 48 hours.
- Rainfall at most places is very likely over south Kerala with heavy rainfall at isolated places during next 24 hours and isolated heavy to very heavy rainfall during subsequent 24 hours.
- Rainfall at most places with Heavy to very heavy rainfall at isolated places is very likely over Lakshadweep islands on 1st and 2nd December.

➤ **Wind warning:**

- Squally winds reaching 45-55 kmph gusting to 65 kmph is very likely along and off South Tamil Nadu and South Kerala during next 48 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

➤ **Sea condition:** Sea conditions would be rough to very rough along & off South Tamil Nadu and South Kerala during next 48 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

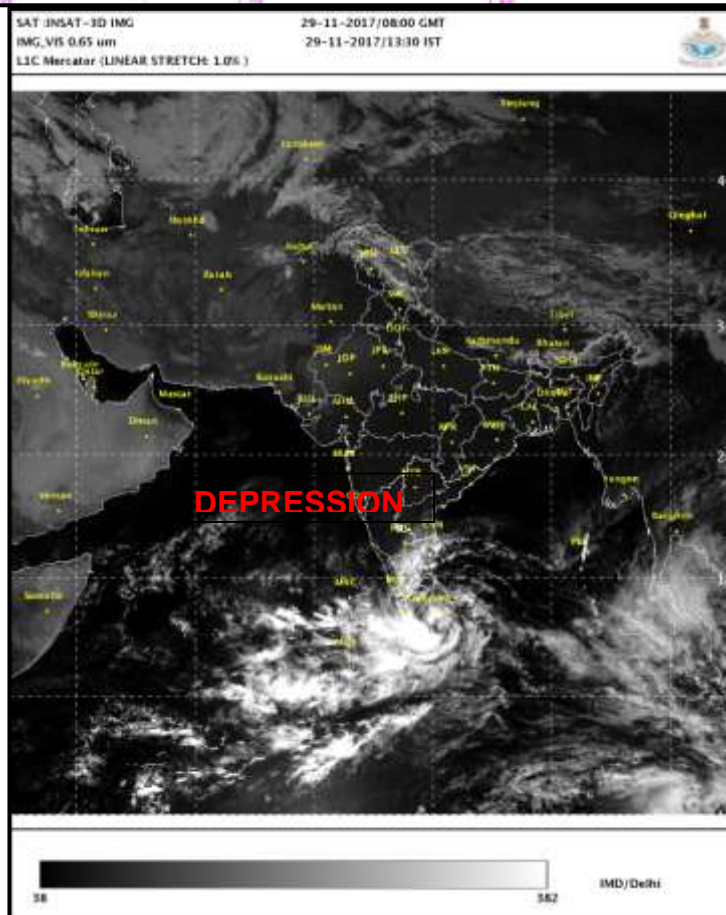
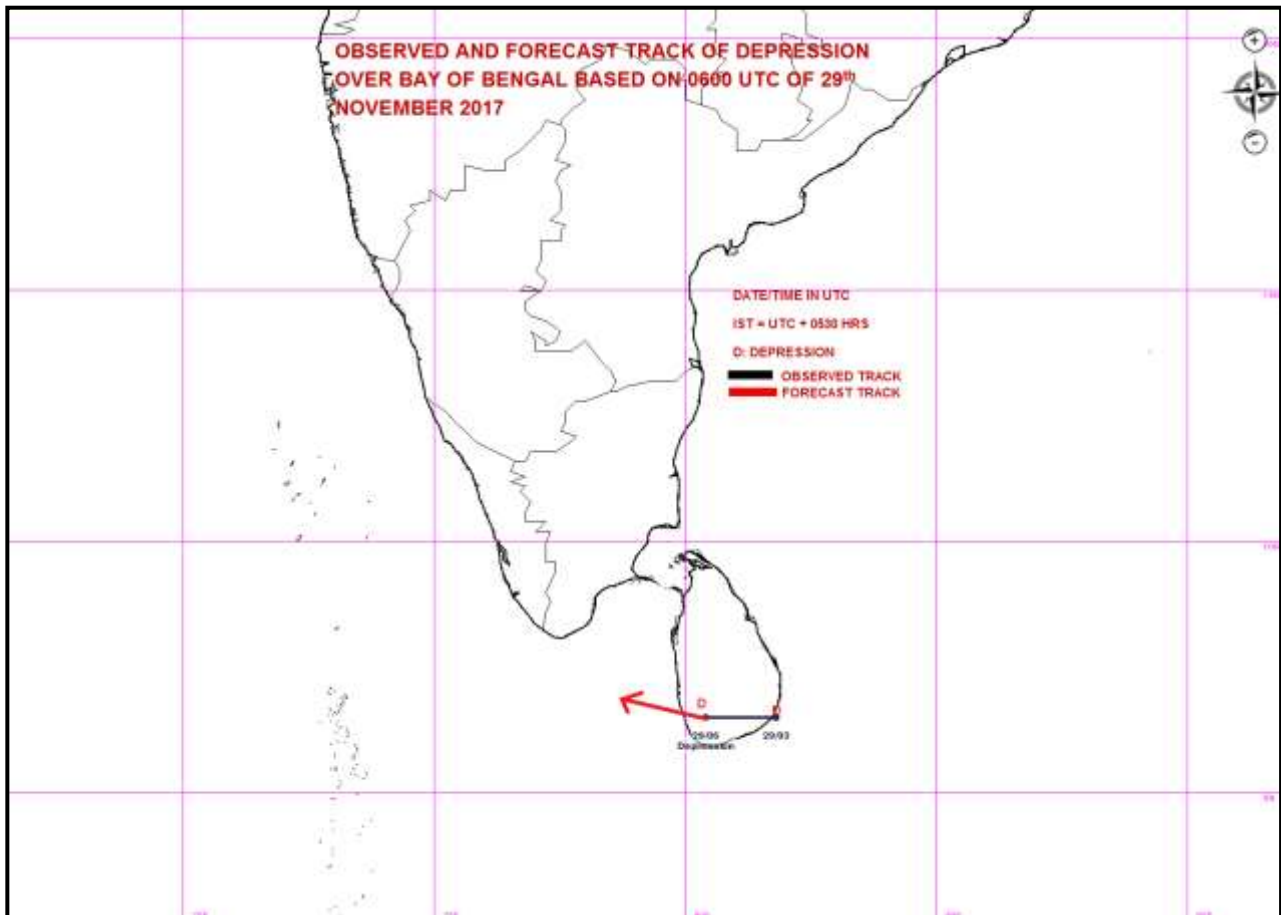
➤ **Fishermen Warning:** Fishermen along & off South Tamil Nadu and South Kerala coasts are advised not to venture into sea during next 48 hours and along and off Lakshadweep Islands are advised not to venture into the sea on 01st and 02nd December.

The next bulletin will be issued at 2030 hrs IST of 29th November 2017.

(Neetha K Gopal)

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



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BULLETIN NO. : 03 (BOB 07/2017)

TIME OF ISSUE: 1915 HOURS IST

DATED: 29.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
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DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Depression over Comorin and adjoining Sri Lanka

Latest observations and satellite imageries indicate that the depression over Sri Lanka moved west-southwestwards and lay centred at 1730 hrs IST of today, the 29th November, 2017 over Comorin area and adjoining Sri Lanka near Latitude 6.2° N and Longitude 80.0 °E, about 30 km northwest of Galle (Sri Lanka) and 340 km southeast of Kanyakumari. The system is very likely to move nearly westwards and intensify further into a deep depression during next 24 hours.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with Heavy to very heavy rainfall at isolated places is very likely over south Tamil Nadu during next 48 hours.
- Rainfall at most places is very likely over south Kerala with heavy rainfall at isolated places during next 24 hours and isolated heavy to very heavy rainfall during subsequent 24 hours.
- Rainfall at most places with Heavy to very heavy rainfall at isolated places is very likely over Lakshadweep islands on 1st and 2nd December.

➤ **Wind warning:**

- Squally winds reaching 45-55 kmph gusting to 65 kmph is very likely along and off South Tamil Nadu and South Kerala during next 48 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

➤ **Sea condition:** Sea conditions would be rough to very rough along & off South Tamil Nadu and South Kerala during next 48 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

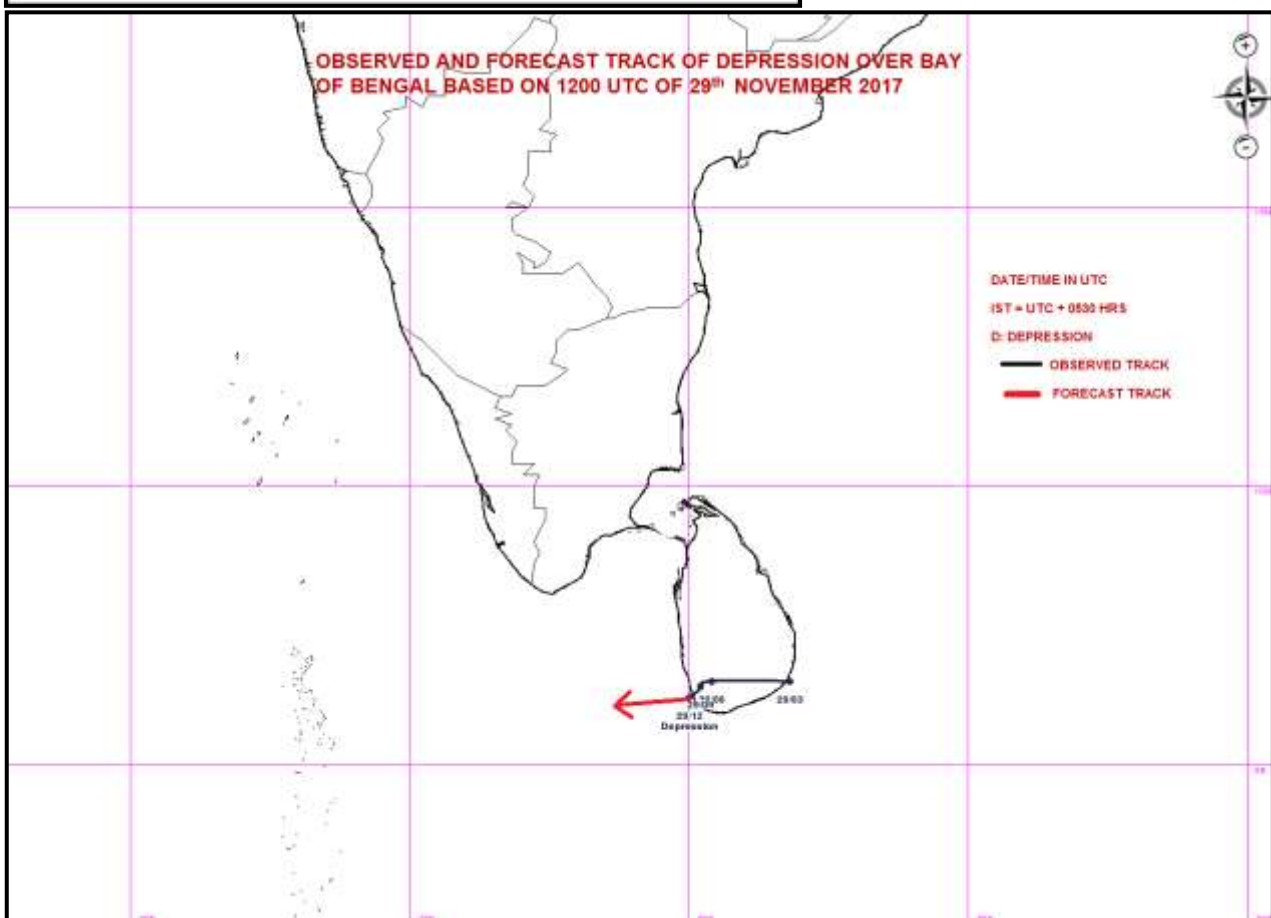
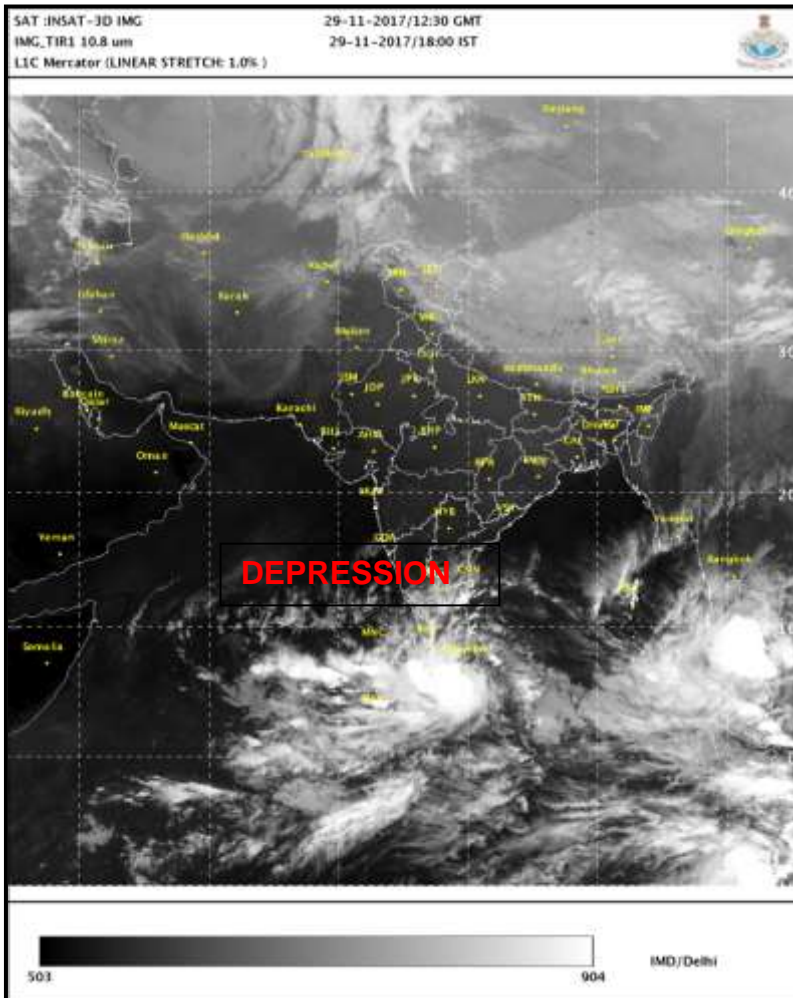
➤ **Fishermen Warning:** Fishermen along & off South Tamil Nadu and South Kerala coasts are advised not to venture into sea during next 48 hours and along and off Lakshadweep Islands are advised not to venture into the sea on 01st and 02nd December.

The next bulletin will be issued at 0230 hrs IST of 30th November 2017.

**(Neetha K Gopal)
Scientist-E, RSMC, New Delhi**

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



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BULLETIN NO. : 04 (BOB 07/2017)

TIME OF ISSUE: 0130 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
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DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Depression over Comorin area and neighbourhood

Latest observations and satellite imageries indicate that the depression over Comorin area and adjoining Sri Lanka moved nearly westward with a speed of 15 kmph during last 6 hours and lay centred at 2330 hrs IST of yesterday, the 29th November, 2017 over Comorin area and neighbourhood near Latitude 6.3° N and Longitude 79.2° E, about 110 km northwest of Galle (Sri Lanka) and 270 km southeast of Kanyakumari. The system is very likely to move nearly westwards and intensify further into a deep depression during next 12 hours.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with Heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu during next 36 hours.
- Rainfall at most places with heavy rainfall at isolated places very likely over south Kerala during next 12 hours and isolated heavy to very heavy rainfall during subsequent 24 hours.
- Rainfall at most places with Heavy to very heavy rainfall at isolated places very likely over Lakshadweep islands on 1st and 2nd December.

➤ **Wind warning:**

- Squally winds reaching 45-55 kmph gusting to 65 kmph is very likely along and off South Tamil Nadu and South Kerala during next 36 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

➤ **Sea condition:** Sea conditions would be rough to very rough along & off South Tamil Nadu and South Kerala during next 36 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

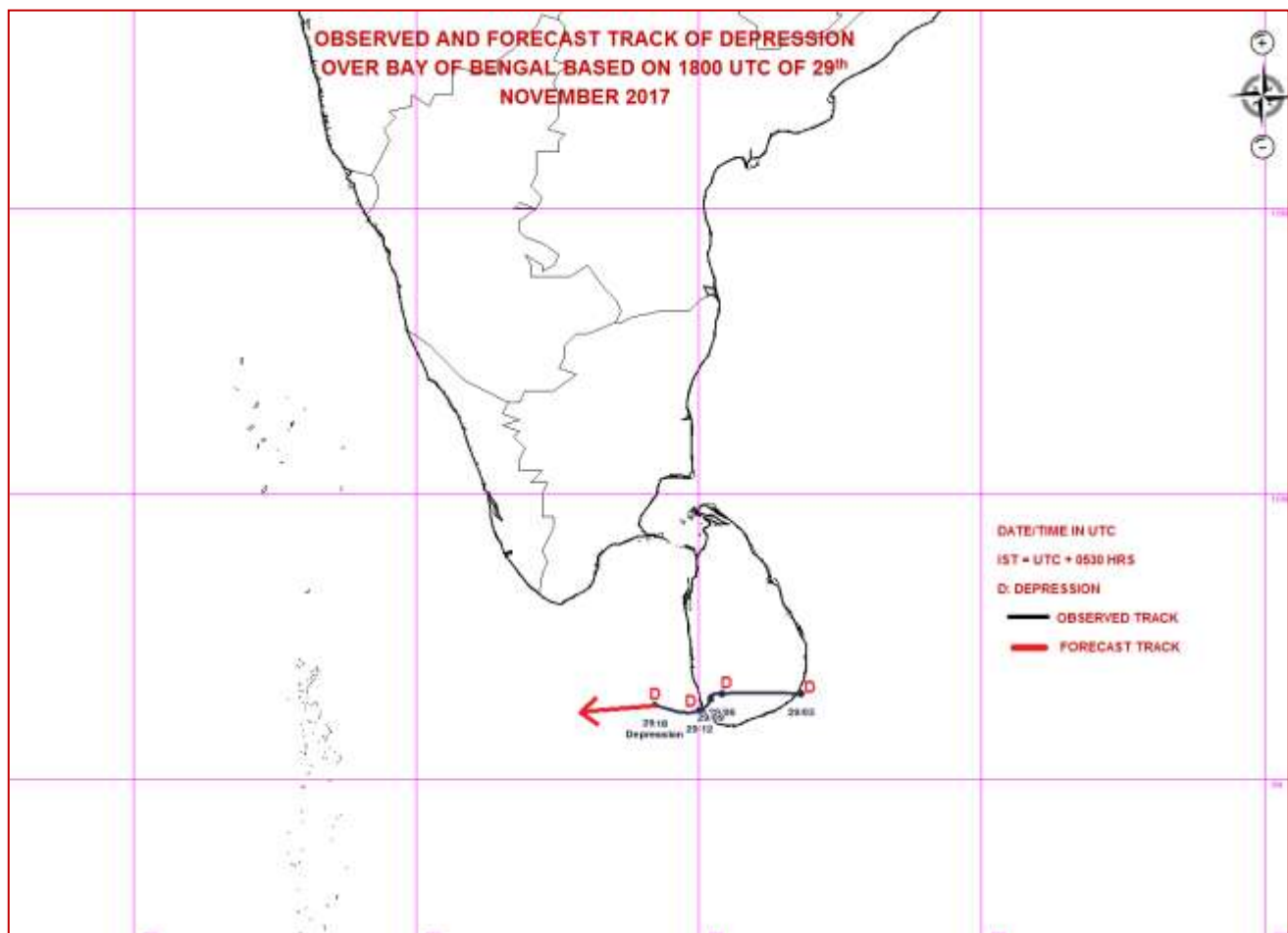
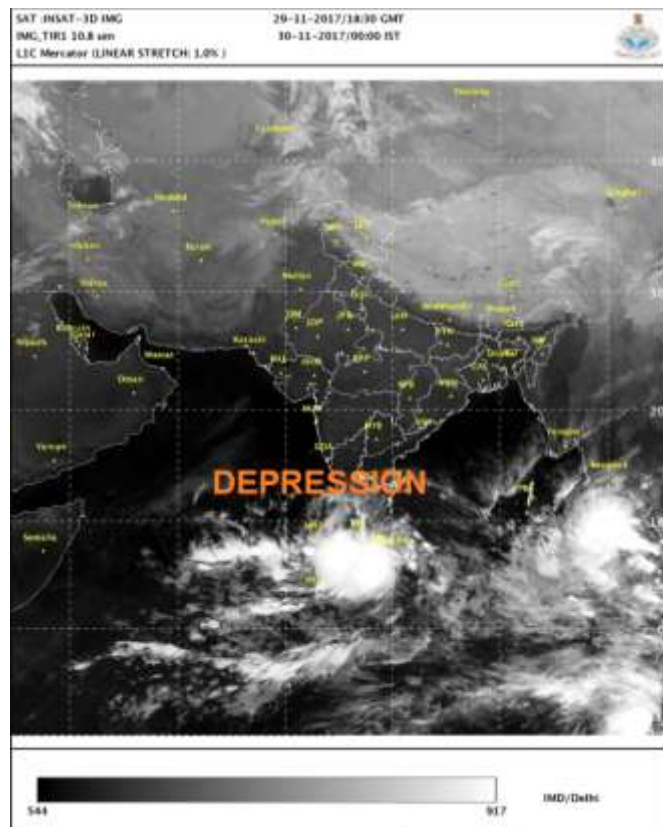
➤ **Fishermen Warning:** Fishermen along & off South Tamil Nadu and South Kerala coasts are advised not to venture into sea during next 36 hours and along and off Lakshadweep Islands are advised not to venture into the sea on 01st and 02nd December.

The next bulletin will be issued at 0830 hrs IST of 30th November 2017.

**(Krishna Mishra)
Scientist-B, RSMC, New Delhi**

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



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BULLETIN NO. : 05 (BOB 07/2017)

TIME OF ISSUE: 0530 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

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DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Deep Depression over Comorin area and neighbourhood

Latest observations and satellite imageries indicate that the depression over Comorin area and neighbourhood moved west-northwestwards with a speed of 20 kmph during past 06 hours and has further intensified into a deep depression and lay centred at 0230 hrs IST of today, the 30th November, 2017 over Comorin area and neighbourhood near Latitude 6.5° N and Longitude 78.6° E, about 185 km northwest of Galle (Sri Lanka) and 210 km south-southeast of Kanyakumari. The system is very likely to move west-northwestwards and intensify further into a cyclonic storm during next 12 hours.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with Heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu during next 36 hours.
- Rainfall at most places with heavy rainfall at isolated places very likely over south Kerala during next 12 hours and isolated heavy to very heavy rainfall during subsequent 24 hours.
- Rainfall at most places with Heavy to very heavy rainfall at isolated places very likely over Lakshadweep islands on 1st and 2nd December.

➤ **Wind warning:**

- Squally winds reaching 45-55 kmph gusting to 65 kmph is very likely along and off South Tamil Nadu and South Kerala during next 36 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

➤ **Sea condition:** Sea conditions would be rough to very rough along & off South Tamil Nadu and South Kerala during next 36 hours and over Lakshadweep Islands and adjoining sea areas on 01st and 02nd December.

➤ **Fishermen Warning:** Fishermen along & off South Tamil Nadu and South Kerala coasts are advised not to venture into sea during next 36 hours and along and off Lakshadweep Islands are advised not to venture into the sea on 01st and 02nd December.

The next bulletin will be issued at 0830 hrs IST of 30th November 2017.

**(Krishna Mishra)
Scientist-B, RSMC, New Delhi**

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



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BULLETIN NO. : 06 (BOB 07/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
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CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Deep Depression over Comorin area & Cyclone Alert for Lakshadweep Islands

Latest observations and satellite imageries indicate that the deep depression over Comorin area moved west-northwestwards with a speed of 18 kmph during past 06 hours and lay centred at 0530 hrs IST of today, the 30th November, 2017 over Comorin area and neighbourhood near Latitude 6.7° N and Longitude 78.3° E, about 240 km west-northwest of Galle (Sri Lanka), 170 km southeast of Kanyakumari and 600 km east-southeast of Minicoy. The system is very likely to move west-northwestwards and intensify further into a cyclonic storm during next 12 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/0530	6.7/78.3	50-60 GUSTING TO 70	DEEP DEPRESSION
30/1130	7.0/77.5	55-65 GUSTING TO 75	DEEP DEPRESSION
30/1730	7.4/76.7	60-70 GUSTING TO 80	CYCLONIC STORM
30/2330	7.8/75.8	70-80 GUSTING TO 90	CYCLONIC STORM
01/0530	8.2/75.0	80-90 GUSTING TO 100	CYCLONIC STORM
01/1730	9.2/73.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
02/0530	10.2/72.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
02/1730	11.2/70.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03/0530	12.2/69.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu & south Kerala during next 24 hours and isolated heavy falls during subsequent 24 hours.
- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours.

➤ **Wind warning:**

- Squally wind speed reaching 55-65 kmph gusting to 75 kmph very likely along & off South Kerala during next 48 hours and along & off south Tamilnadu during next 24 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

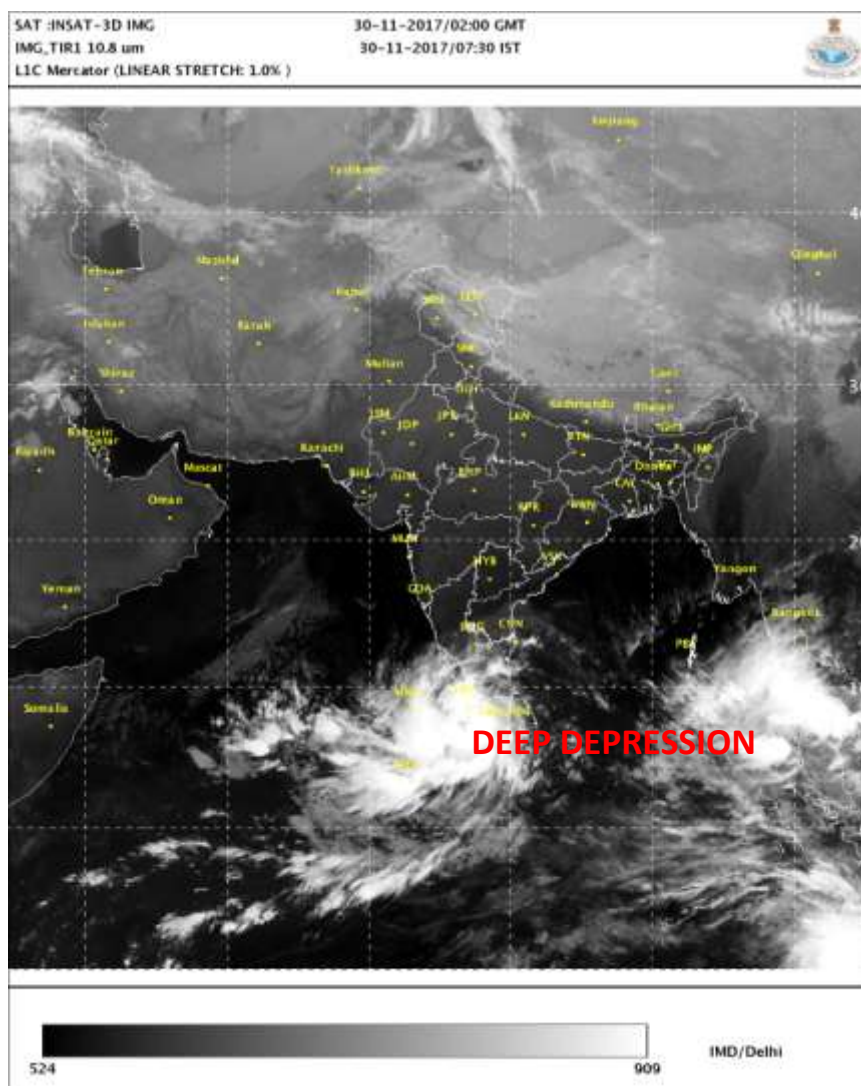
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- Squally winds speed reaching 55-65 kmph gusting to 75 kmph very likely along & around Lakshadweep Islands during next 24 hours and gradual increase in wind speed becoming 70-80 kmph gusting to 90 kmph during subsequent 24 hours.
- **Sea condition:**
 - Sea conditions would be very rough to high along & off South Kerala coast during next 48 hours and along & off south Tamilnadu coast during next 24 hours.
 - Sea conditions would be very rough to high over and around Lakshadweep Islands during next 24 hours and high during subsequent 24 hours.
- **Damage Expected over south Kerala, adjoining districts of south Tamil Nadu Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutch houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 24 hrs and along and off South Kerala coasts during next 48 hours.

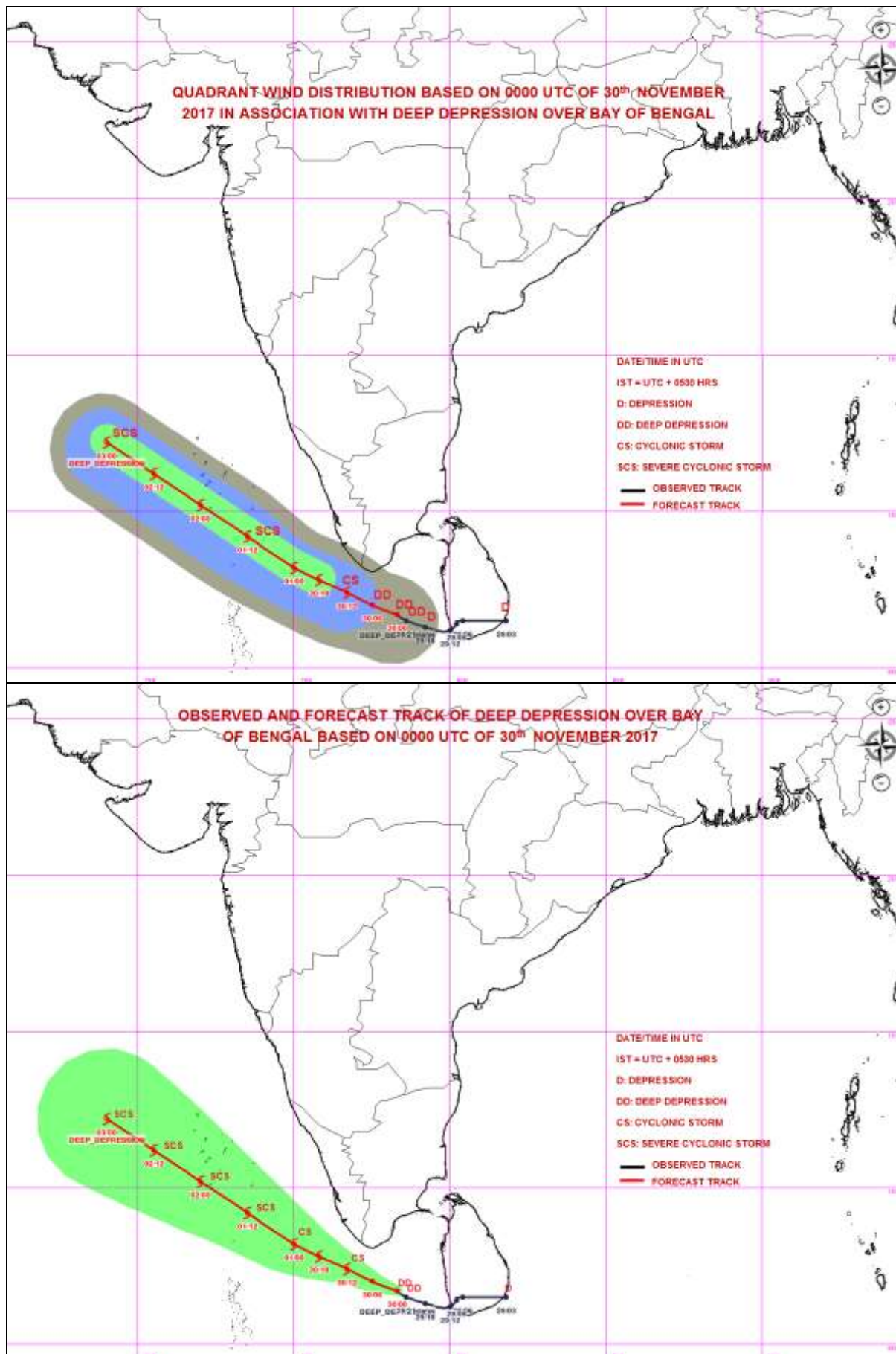
The next bulletin will be issued at 1130 hrs IST of 30th November 2017.

(Krishna Mishra)
Scientist-B, RSMC, New Delhi

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
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BULLETIN NO. : 07 (BOB 07/2017)

TIME OF ISSUE: 1200 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
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CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Cyclonic Storm 'OCKHI' over Comorin area & Cyclone Warning for South Kerala, adjoining districts of south Tamil Nadu and Lakshadweep Islands- ORANGE message

Latest observations and satellite imageries indicate that the deep depression over Comorin area moved west-northwestwards with a speed of 38 kmph during past 06 hours and intensified into a cyclonic storm 'OCKHI' and lay centred at 0830 hrs IST of today, the 30th November, 2017 over Comorin area and neighbourhood near Latitude 7.5° N and Longitude 77.5° E, about 340 km west-northwest of Galle (Sri Lanka), 60 km south of Kanyakumari, 120 km southwest of Thiruvananthapuram and 480 km east-southeast of Minicoy. The system is very likely to move west-northwestwards towards Lakshadweep Islands and intensify further into a severe cyclonic storm during next 24 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/0830	7.5/77.5	60-70 GUSTING TO 80	CYCLONIC STORM
30/1130	7.8/77.0	60-70 GUSTING TO 80	CYCLONIC STORM
30/1730	8.5/75.8	70-75 GUSTING TO 85	CYCLONIC STORM
30/2330	9.0/75.0	80-90 GUSTING TO 100	CYCLONIC STORM
01/0830	9.5/74.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1730	10.4/72.7	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
02/0830	11.4/71.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/1730	12.4/69.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu & south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours.
- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

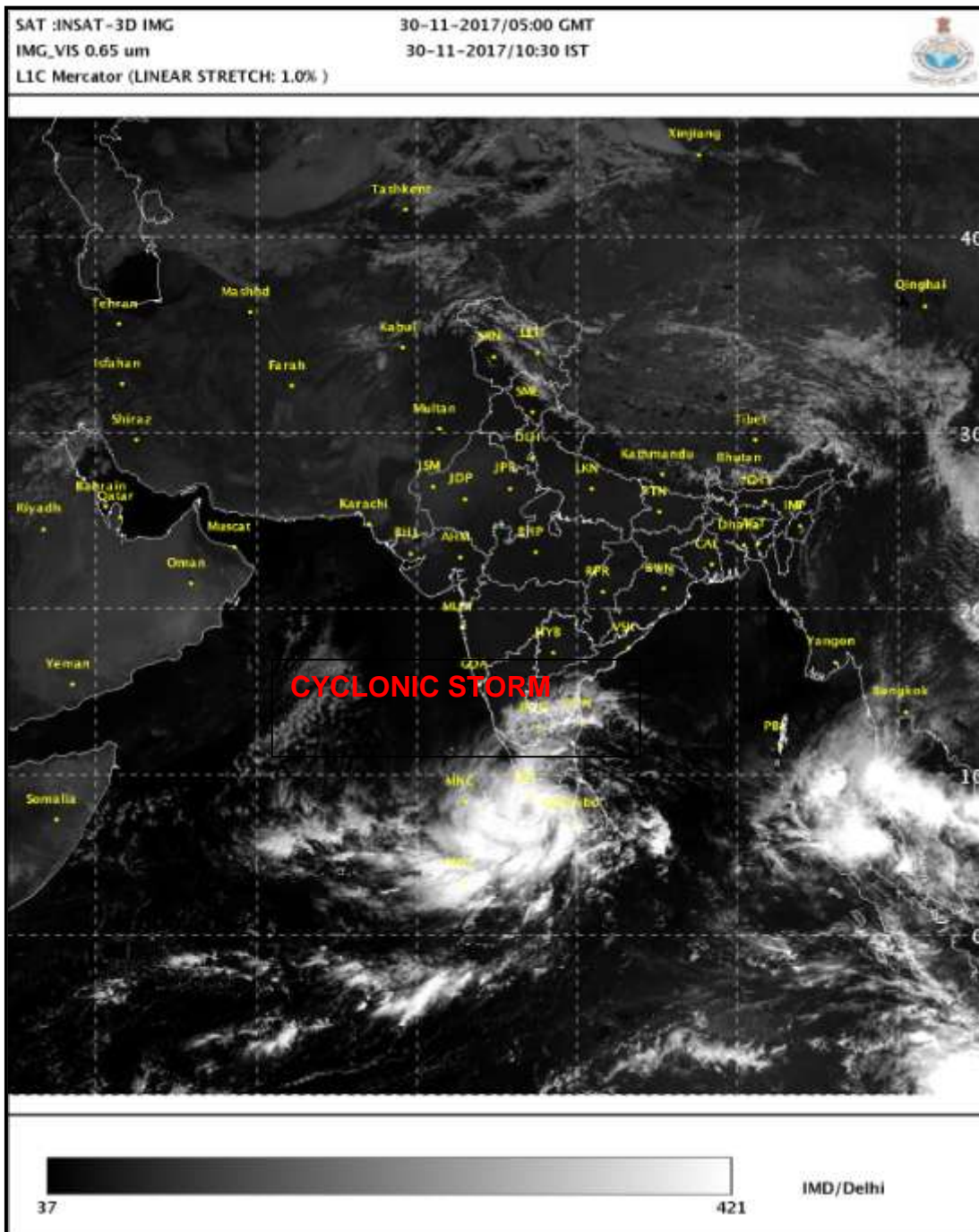
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- **Wind warning:**
 - Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely along & off South Kerala during next 48 hours and along & off south Tamilnadu during next 24 hours.
 - Squally winds speed reaching 55-65 kmph gusting to 75 kmph very likely along & around Lakshadweep Islands during next 12 hours and increase thereafter with wind speeds becoming 80-90 kmph gusting to 100 kmph from tonight, the 30th November 2017.
- **Sea condition:**
 - Sea conditions would be high along & off South Kerala coast during next 48 hours and along & off south Tamilnadu coast during next 24 hours.
 - Sea conditions would be very rough to high over and around Lakshadweep Islands during next 12 hours and high to very high during subsequent 48 hours.
- **Damage Expected over south Kerala (Alappuzha, Kottayam, Idukki, Kollam, Pathanathitta, Thiruvananthapuram districts), adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) and Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutcha houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 24 hrs and along and off South Kerala coasts during next 48 hours.

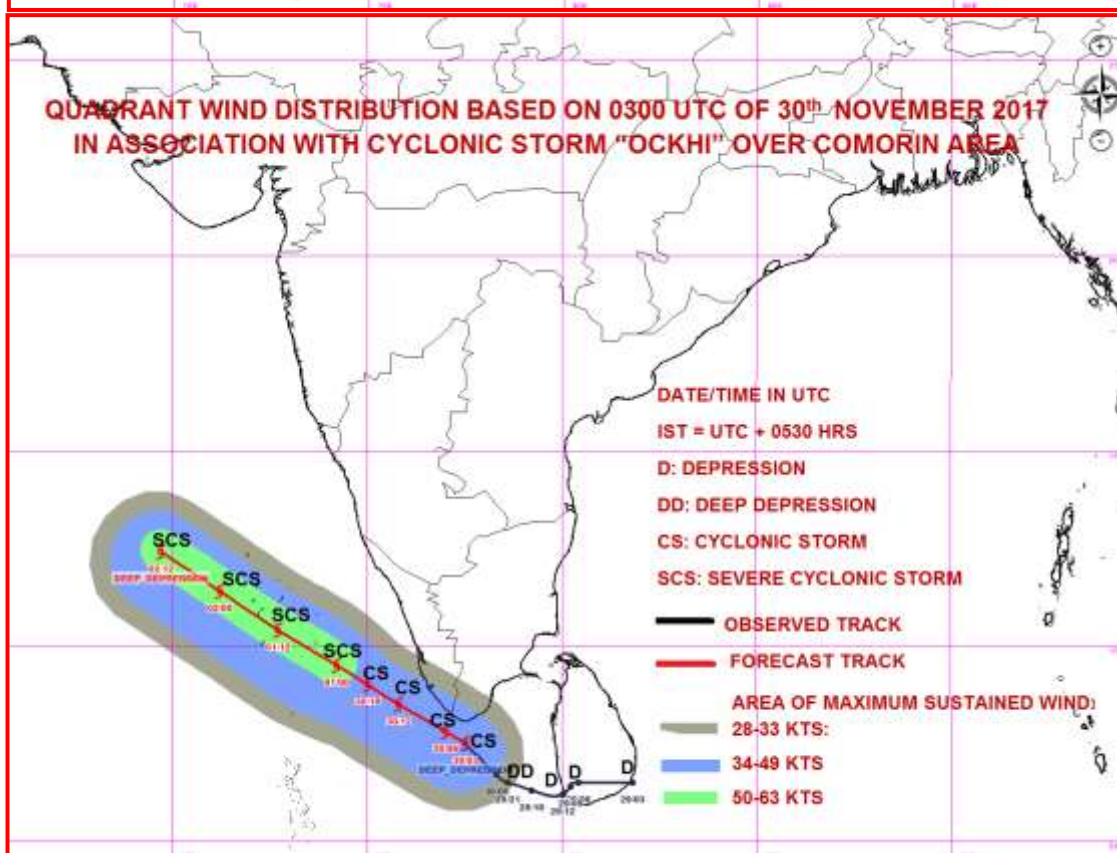
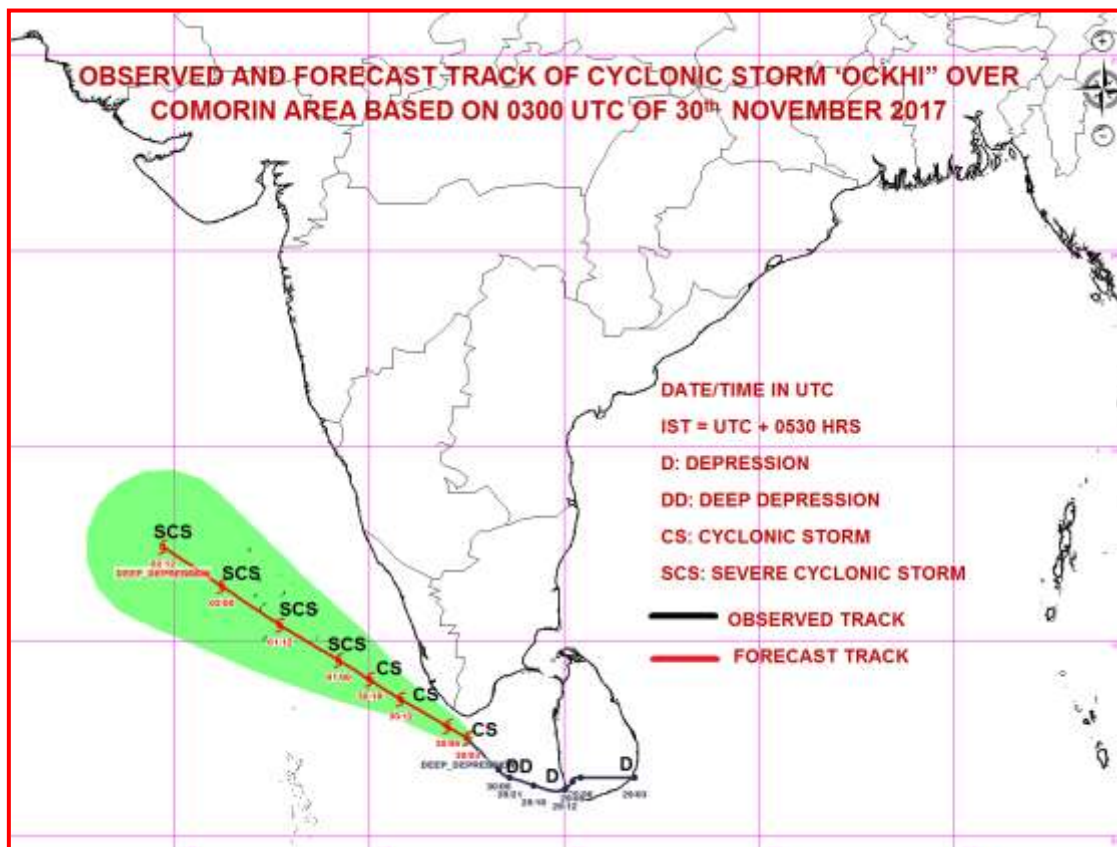
The next bulletin will be issued at 1430 hrs IST of 30th November 2017.

(Neetha K Gopal)
Scientist-E, RSMC, New Delhi

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 08 (BOB 07/2017)

TIME OF ISSUE: 1430 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Cyclonic Storm 'OCKHI' over Comorin area & Cyclone Warning for South Kerala, adjoining districts of south Tamil Nadu and Lakshadweep Islands- ORANGE message

Latest observations and satellite imageries indicate that the cyclonic storm 'OCKHI' over Comorin area moved west-northwestwards with a speed of 32 kmph during past 06 hours and lay centred at 1130 hrs IST of today, the 30th November, 2017 over Comorin area and neighbourhood near Latitude 7.8° N and Longitude 76.9° E, about 410 km west-northwest of Galle (Sri Lanka), 70 km southwest of Kanyakumari, 70 km south of Thiruvananthapuram and 410 km east-southeast of Minicoy. The system is very likely to move west-northwestwards towards Lakshadweep Islands and intensify further into a severe cyclonic storm during next 24 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/1130	7.8/76.9	70-80 GUSTING TO 90	CYCLONIC STORM
30/1730	8.5/76.0	80-90 GUSTING TO 100	CYCLONIC STORM
30/2330	9.0/75.0	85-95 GUSTING TO 100	CYCLONIC STORM
01/0530	9.5/74.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1130	10.0/73.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/2330	11.0/72.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1130	12.0/70.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu & south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours.
- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours.

➤ **Wind warning:**

- Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely along & off South Kerala during next 48 hours and along & off south Tamilnadu during next 24 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- Squally winds speed reaching 55-65 kmph gusting to 75 kmph very likely along & around Lakshadweep Islands during next 12 hours and increase thereafter with wind speeds becoming 80-90 kmph gusting to 100 kmph from tonight, the 30th November 2017.
- **Sea condition:**
 - Sea conditions would be high along & off South Kerala coast during next 48 hours and along & off south Tamilnadu coast during next 24 hours.
 - Sea conditions would be very rough to high over and around Lakshadweep Islands during next 12 hours and high to very high during subsequent 48 hours.
- **Damage Expected over south Kerala (Alappuzha, Kottayam, Idukki, Kollam, Pathanathitta, Thiruvananthapuram districts), adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) and Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutcha houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands from tonight, the 30th November 2017.
 - Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of coastal districts of south Kerala (Alappuzha, Kollam, and Thiruvananthapuram districts), and adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) during next 12 hours.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 24 hrs and along and off South Kerala coasts during next 48 hours.

The next bulletin will be issued at 1730 hrs IST of 30th November 2017.

(Neetha K Gopal)
Scientist-E, RSMC, New Delhi

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

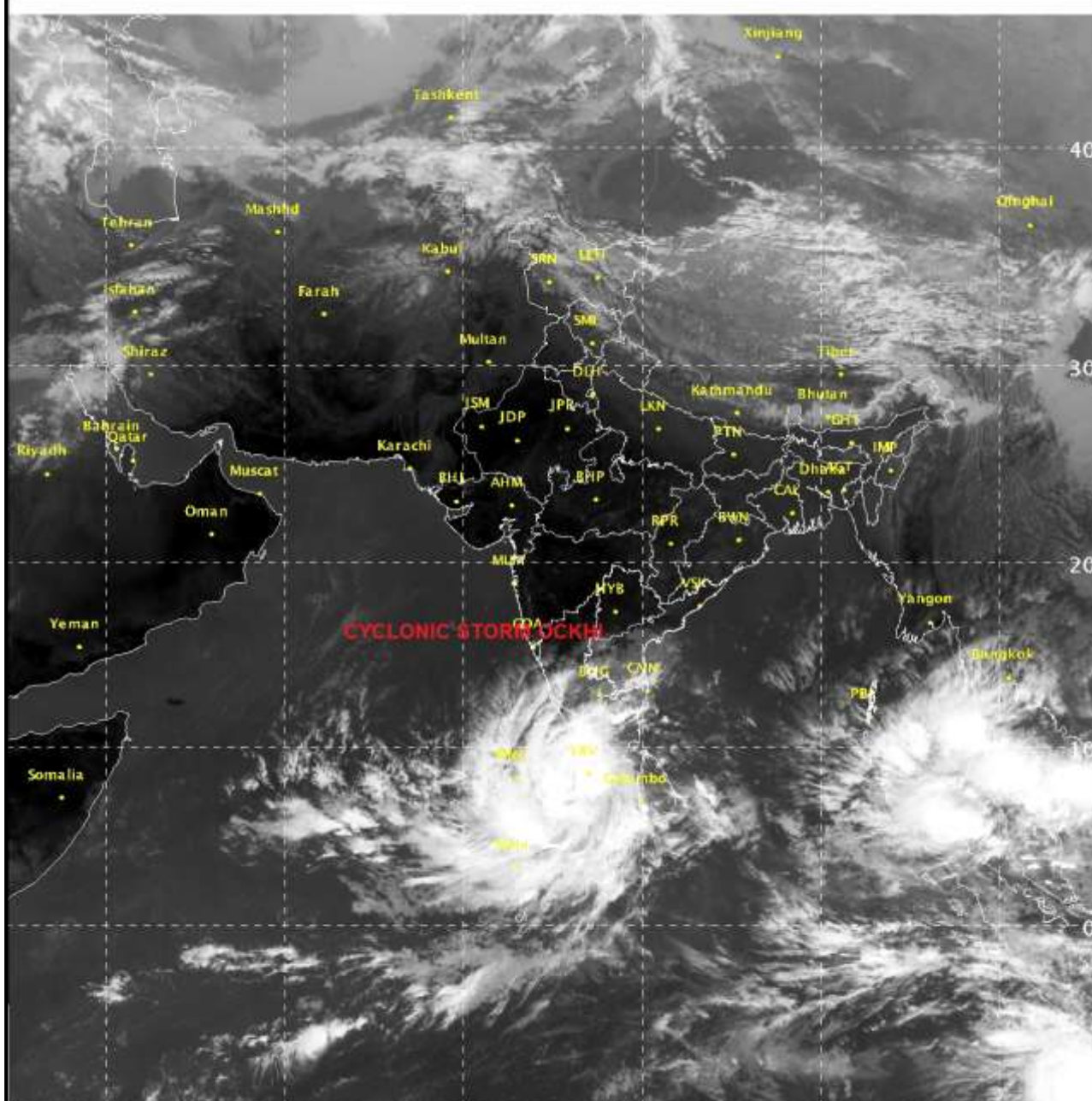
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IMG_TIR1 10.8 um

L1C Mercator (LINEAR STRETCH: 1.0%)

30-11-2017/07:30 GMT

30-11-2017/13:00 IST

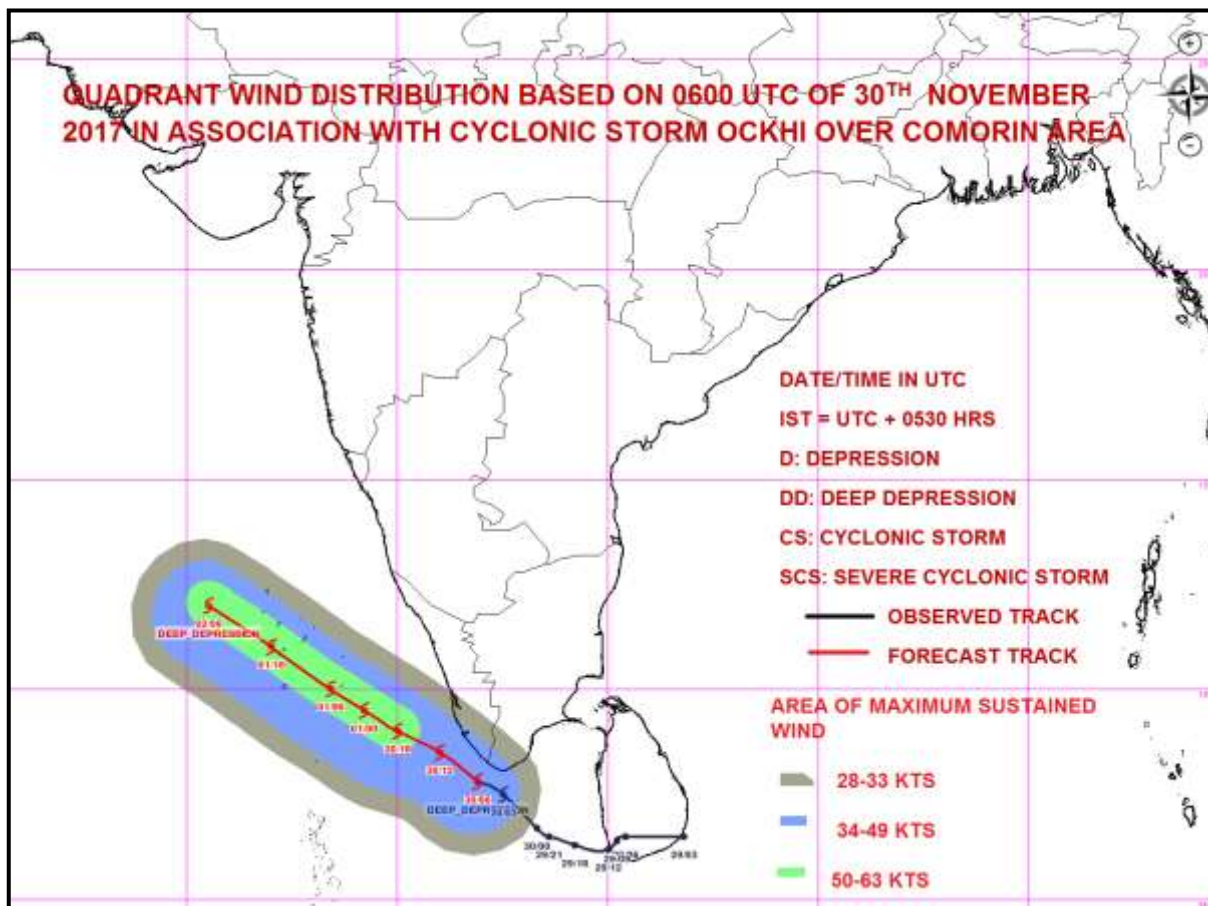


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895

IMD/Delhi

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.





**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 09 (BOB 07/2017)

TIME OF ISSUE: 1700 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Cyclonic Storm 'OCKHI' over south Kerala coast and neighbourhood & Cyclone Warning for South Kerala, adjoining districts of south Tamil Nadu and Lakshadweep Islands- ORANGE message

Latest observations and satellite imageries indicate that the cyclonic storm 'OCKHI' over Comorin area moved west-northwestwards with a speed of 20 kmph during past 06 hours and lay centred at 1430 hrs IST of today, the 30th November, 2017 over south Kerala coast and neighbourhood near Latitude 7.9° N and Longitude 76.4° E, about 120 km west-southwest of Kanyakumari, 180 km south-southwest of Thiruvananthapuram and 360 km east-southeast of Minicoy. The system is very likely to move west-northwestwards towards Lakshadweep Islands and intensify further into a severe cyclonic storm during next 24 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/1430	7.9/76.4	75-85 GUSTING TO 95	CYCLONIC STORM
30/1730	8.5/76.0	80-90 GUSTING TO 100	CYCLONIC STORM
30/2330	9.0/75.0	85-95 GUSTING TO 100	CYCLONIC STORM
01/0530	9.5/74.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1130	10.0/73.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/2330	11.0/72.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1130	12.0/70.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu & south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours.
- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours.

➤ **Wind warning:**

- Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely along & off South Kerala during next 48 hours and along & off south Tamilnadu during next 24 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

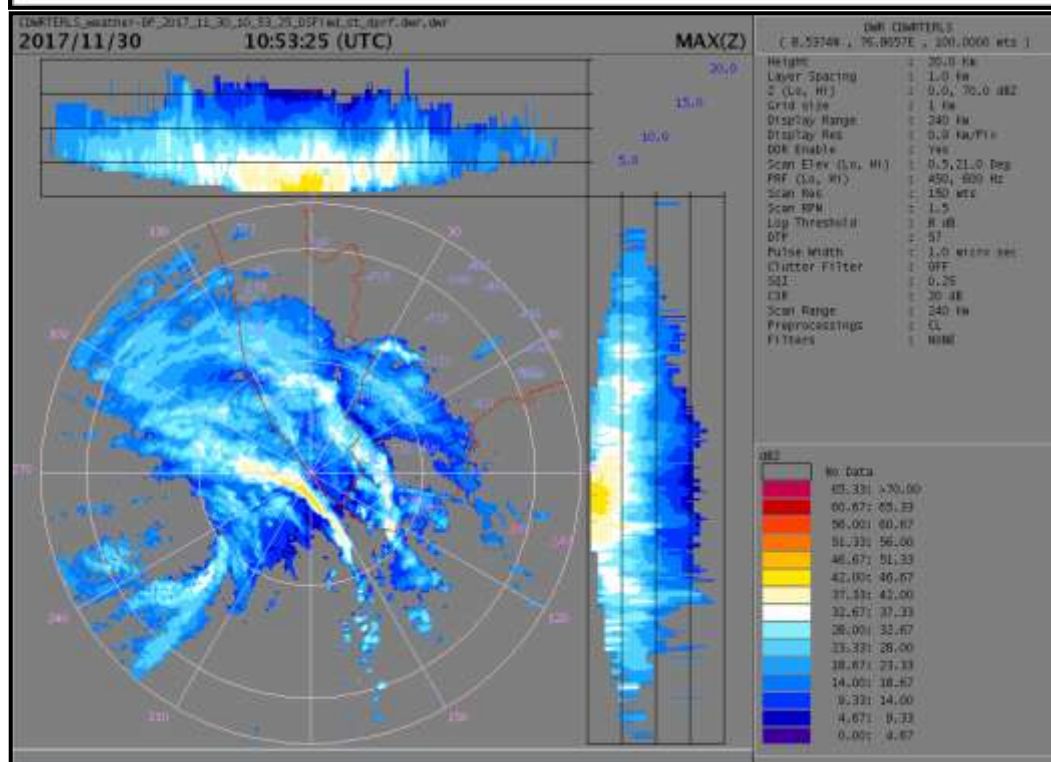
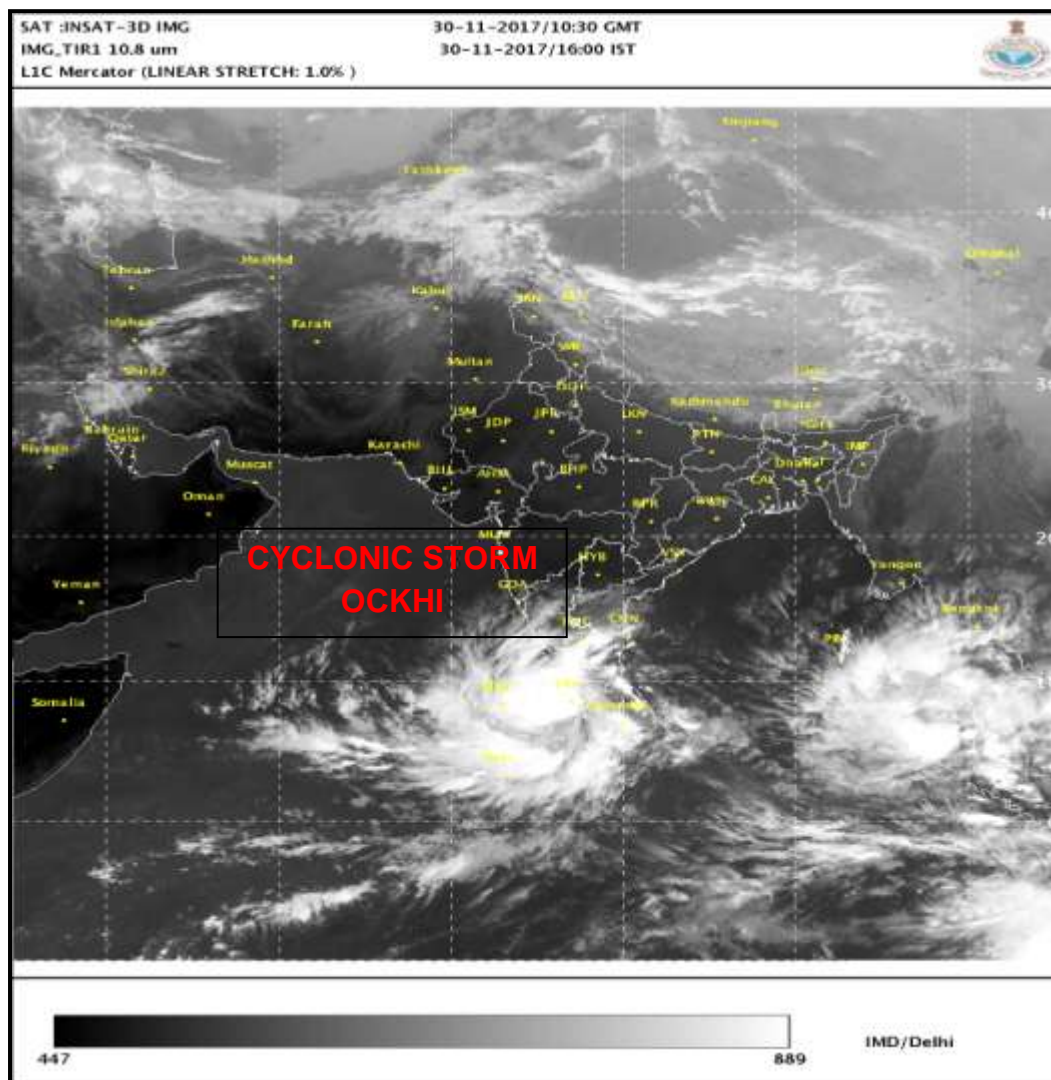
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- Squally winds speed reaching 55-65 kmph gusting to 75 kmph very likely along & around Lakshadweep Islands during next 12 hours and increase thereafter with wind speeds becoming 80-90 kmph gusting to 100 kmph from tonight, the 30th November 2017.
- **Sea condition:**
 - Sea conditions would be high along & off South Kerala coast during next 48 hours and along & off south Tamilnadu coast during next 24 hours.
 - Sea conditions would be very rough to high over and around Lakshadweep Islands during next 12 hours and high to very high during subsequent 48 hours.
- **Damage Expected over south Kerala (Alappuzha, Kottayam, Idukki, Kollam, Pathanathitta, Thiruvananthapuram districts), adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) and Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutcha houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands from tonight, the 30th November 2017.
 - Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of coastal districts of south Kerala (Alappuzha, Kollam, and Thiruvananthapuram districts), and adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) during next 12 hours.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 24 hrs and along and off South Kerala coasts during next 48 hours.

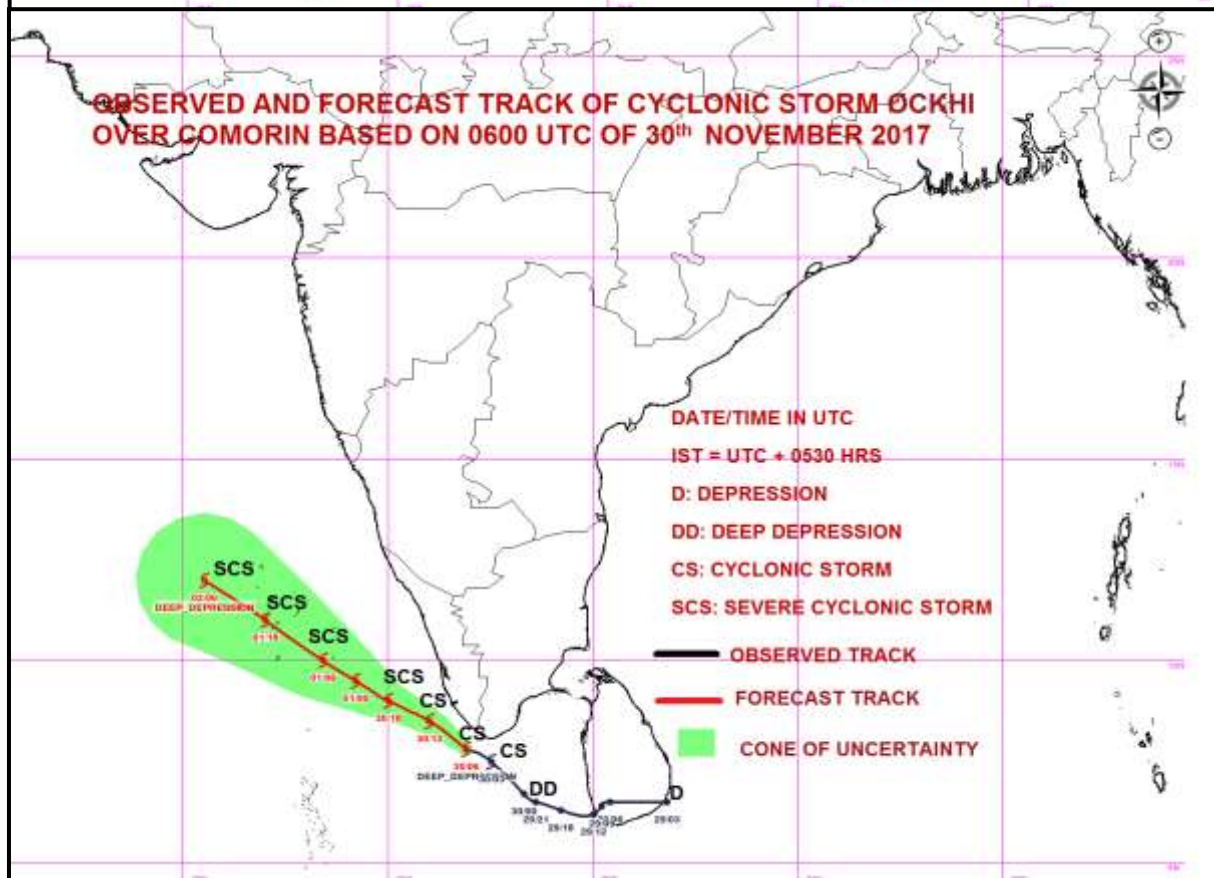
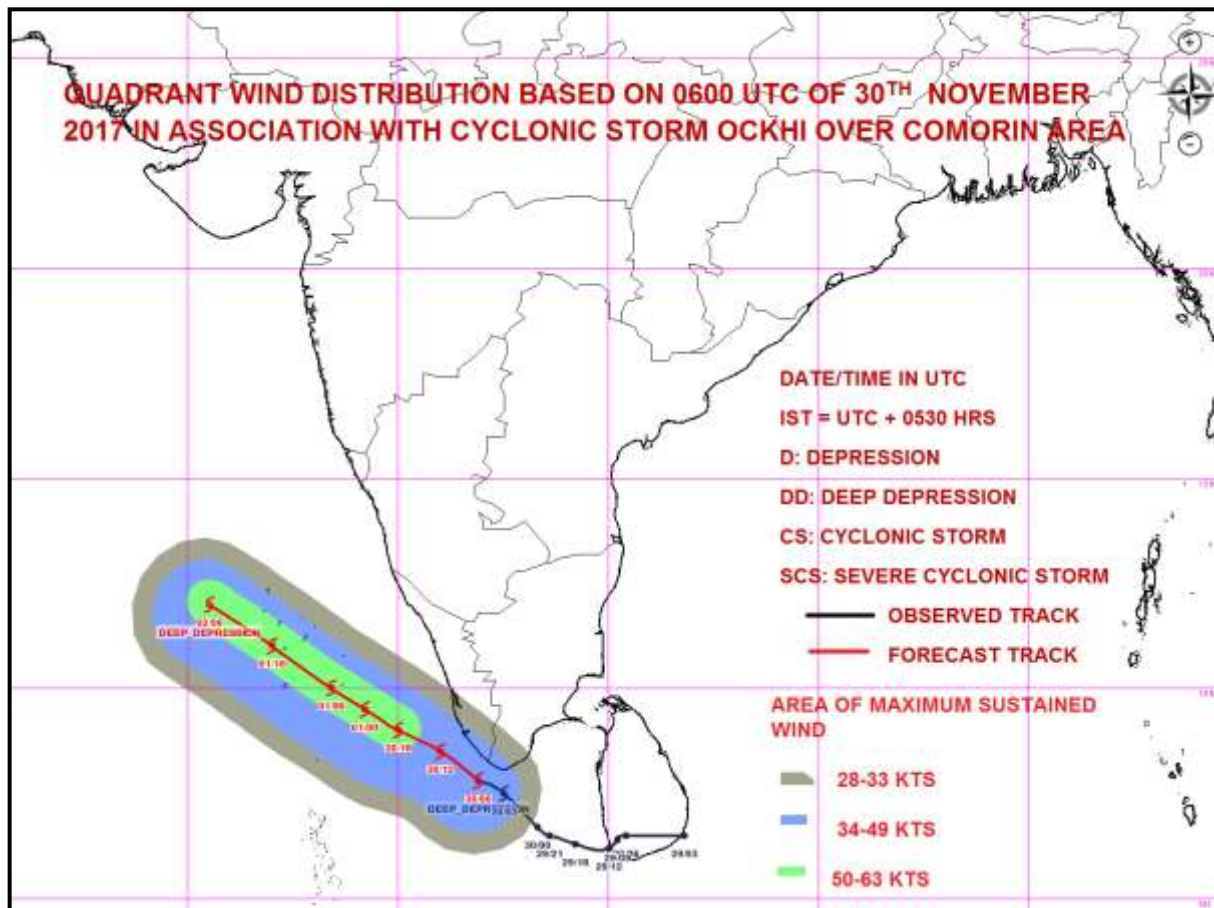
The next bulletin will be issued at 2030 hrs IST of 30th November 2017.

(Neetha K Gopal)
Scientist-E, RSMC, New Delhi

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 10 (BOB 07/2017)

TIME OF ISSUE: 2030 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Cyclonic Storm 'OCKHI' over Arabian Sea and Cyclone Warning for South Kerala, adjoining districts of south Tamil Nadu and Lakshadweep Islands- ORANGE message

Latest observations, Radar and satellite imageries indicate that the cyclonic storm 'OCKHI' over Arabian Sea off south Kerala coast moved west-northwestwards with a speed of 20 kmph during past 06 hours and lay centred at 1730 hrs IST of today, the 30th November, 2017 over southeast Arabian Sea near Latitude 8.2° N and Longitude 75.8° E, about 130 km west-southwest of Thiruvananthapuram and 290 km east- southeast of Minicoy. The system is very likely to intensify further into a severe cyclonic storm during next 24 hours. It is very likely to move west-northwestwards across Lakshadweep Islands during next 36 hours and then move northwestwards during the subsequent 24 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/1730	8.2 /75.8	75-85 GUSTING TO 95	CYCLONIC STORM
30/2330	8.5/75.1	80-90 GUSTING TO 100	CYCLONIC STORM
01/0530	8.8/74.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1130	9.2/73.5	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1730	9.6/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/0530	10.4/71.1	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/1730	11.4/69.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0530	12.5/68.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1730	13.7/67.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0530	14.8/67.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1730	16.1/67.7	80-90 GUSTING TO 100	CYCLONIC STORM
05/0530	17.4/68.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	18.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu during next 12 hours and over south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

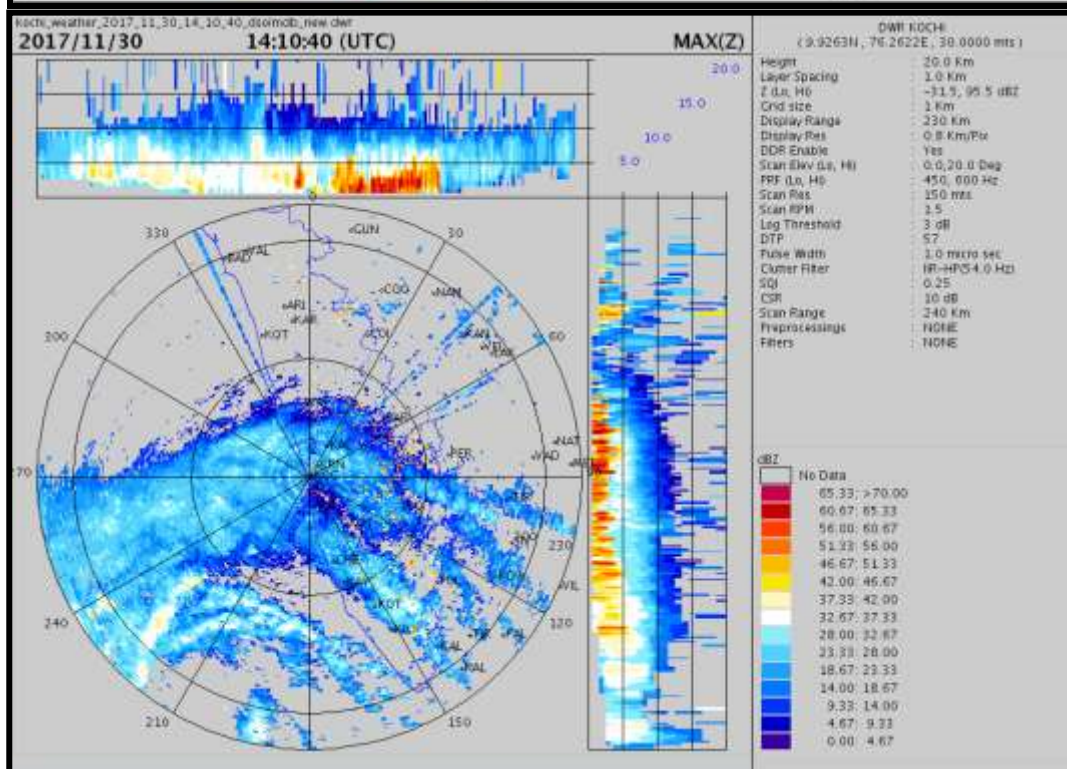
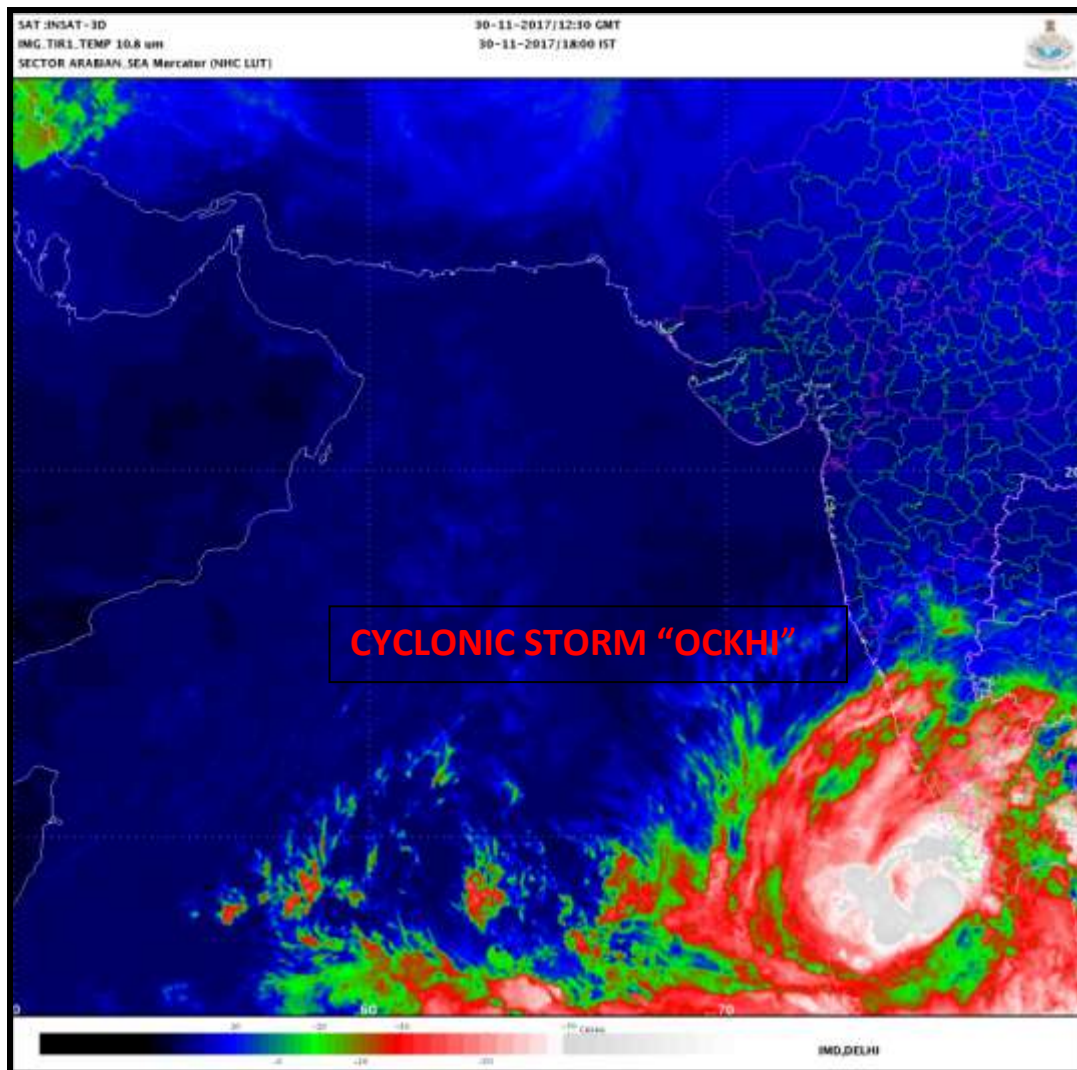
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls very likely over Lakshadweep area during next 48 hours.
- **Wind warning:**
 - Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely along & off South Kerala during next 36 hours and along & off south Tamilnadu during next 12 hours.
 - Gale winds speed reaching 60-70 kmph gusting to 80 kmph very likely over & around Lakshadweep Islands during next 12 hours and increase thereafter with wind speeds becoming 100-110 kmph gusting to 120 kmph around the evening of 01st December, 2017.
- **Sea condition:**
 - Sea conditions would be high along & off South Kerala coast during next 36 hours and very rough to high along & off south Tamilnadu coast during next 12 hours.
 - Sea conditions would be high over and around Lakshadweep Islands during next 12 hours and very high during subsequent 48 hours.
- **Damage Expected over south Kerala (Alappuzha, Kottayam, Idukki, Kollam, Pathanathitta, Thiruvananthapuram districts), adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) and Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutcha houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands from tonight, the 30th November 2017.
 - Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of coastal districts of south Kerala (Alappuzha, Kollam, and Thiruvananthapuram districts), and adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) during next 12 hours.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 12 hrs and along and off South Kerala coasts during next 36 hours.

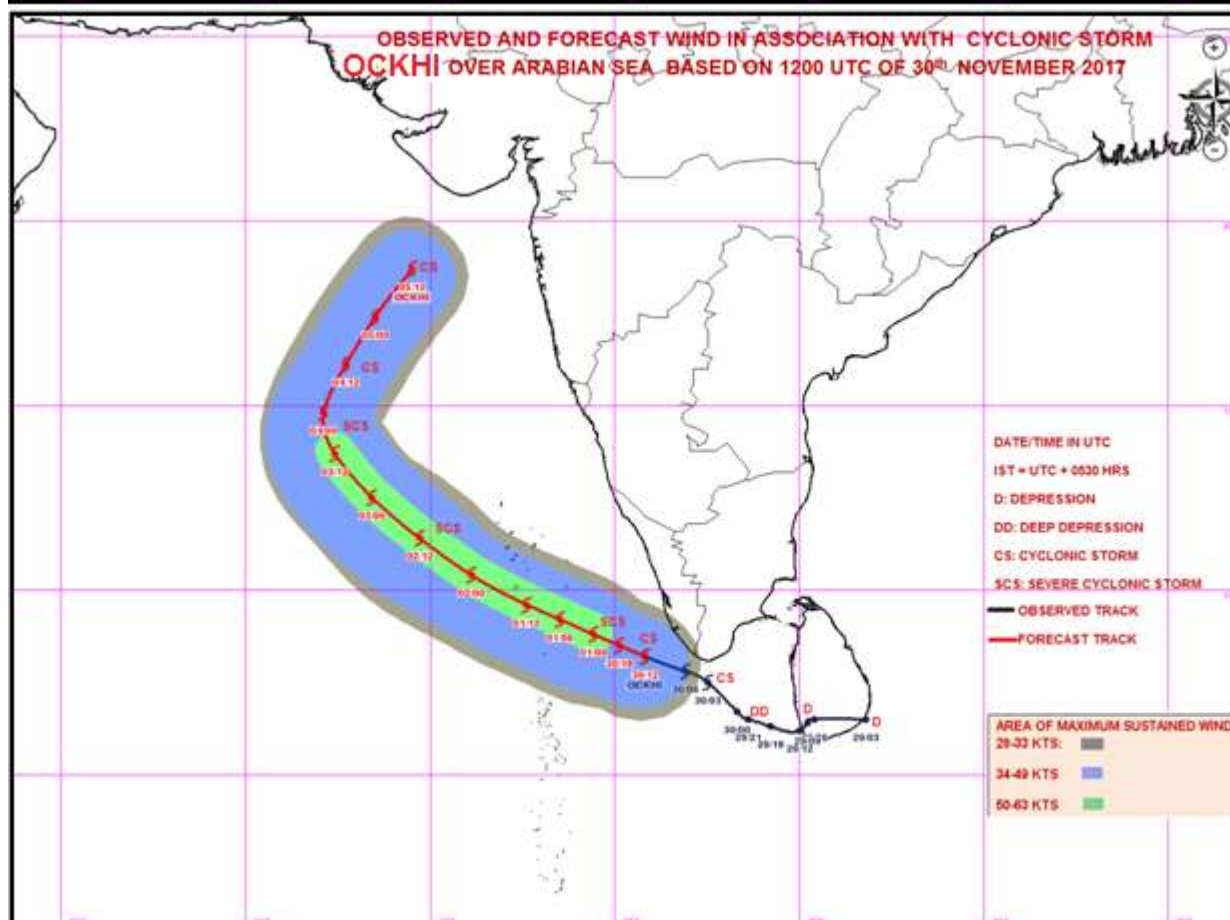
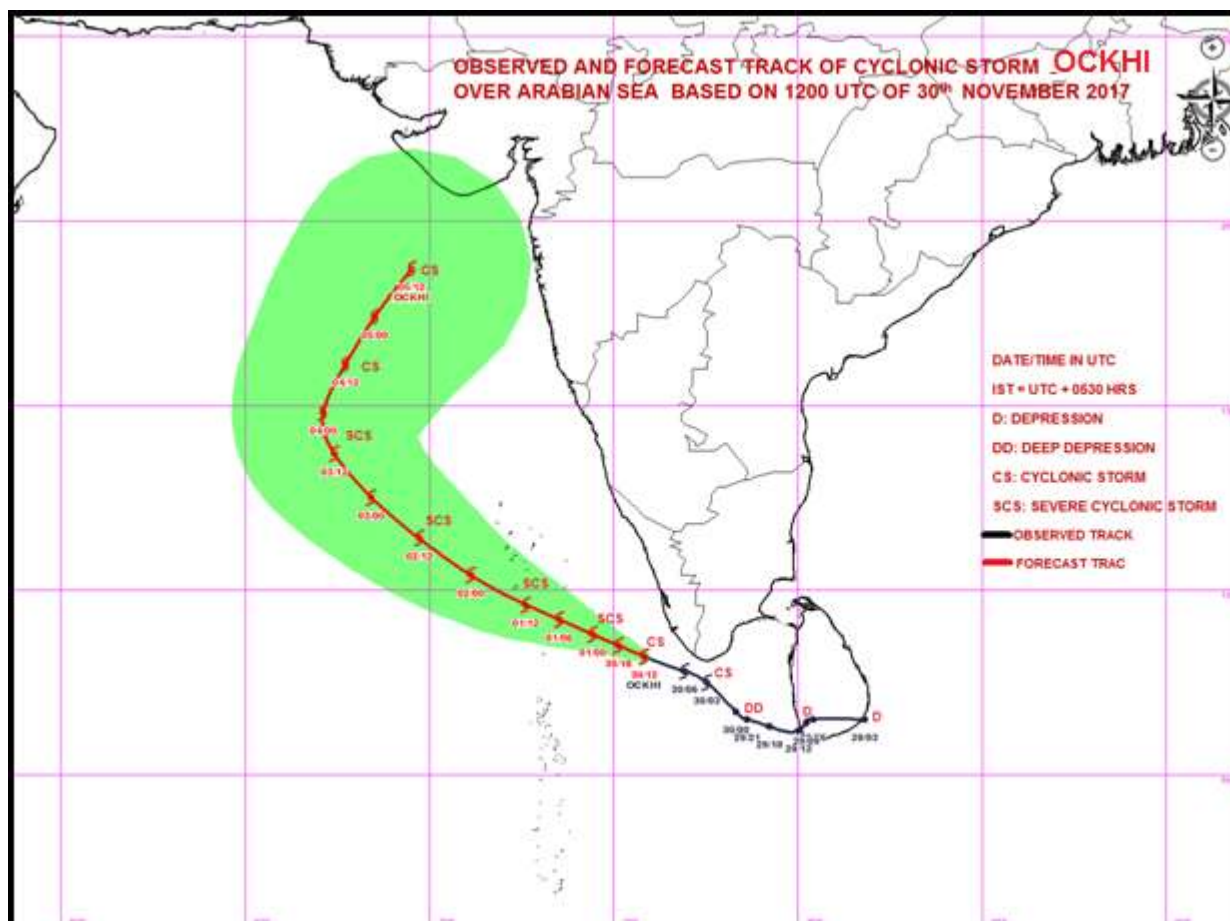
The next bulletin will be issued at 2330 hrs IST of 30th November 2017.

(Neetha K Gopal)
Scientist-E, RSMC, New Delhi

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 11 (BOB 07/2017)

TIME OF ISSUE: 2315 HOURS IST

DATED: 30.11.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for South Kerala, adjoining districts of south Tamil Nadu and Lakshadweep Islands- ORANGE message

Latest observations, Radar and satellite imageries indicate that the cyclonic storm 'OCKHI' over Southeast Arabian Sea moved west-northwestwards with a speed of 25 kmph during past 06 hours and lay centred at 2030 hrs IST of today, the 30th November, 2017 over southeast Arabian Sea near Latitude 8.3° N and Longitude 75.4° E, about 125 km west of Thiruvananthapuram and 250 km east of Minicoy. The system is very likely to intensify further into a severe cyclonic storm during next 12 hours. It is very likely to move west-northwestwards across Lakshadweep Islands during next 24 hours and then move northwestwards during the subsequent 24 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/2030	8.3 /75.4	80-90 GUSTING TO 100	CYCLONIC STORM
30/2330	8.5/75.0	85-95 GUSTING TO 105	CYCLONIC STORM
01/0530	8.8/74.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1130	9.2/73.5	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1730	9.6/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/0530	10.4/71.1	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/1730	11.4/69.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0530	12.5/68.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1730	13.7/67.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0530	14.8/67.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1730	16.1/67.7	80-90 GUSTING TO 100	CYCLONIC STORM
05/0530	17.4/68.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	18.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu during next 12 hours and over south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours.
- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls(>20 cm) very likely over Lakshadweep area during next 48 hours.

➤ **Wind warning:**

- Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely along & off South Kerala during next 36 hours and along & off south Tamilnadu during next 12 hours.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph very likely along and off North Kerala coast during next 24 hours.
- Gale winds speed reaching 60-70 kmph gusting to 80 kmph very likely over & around Lakshadweep Islands during next 12 hours and increase thereafter with wind speeds becoming 100-110 kmph gusting to 120 kmph around the afternoon/evening of 01st December, 2017.

➤ **Sea condition:**

- Sea conditions would be high along & off South Kerala coast and very rough to high along and off North Kerala coast during next 36 hours and very rough to high along & off south Tamilnadu coast during next 12 hours.
- Sea conditions would be high over and around Lakshadweep Islands during next 12 hours and very high during subsequent 48 hours.

➤ **Damage Expected over south Kerala (Alappuzha, Kottayam, Idukki, Kollam, Pathanathitta, Thiruvananthapuram districts), adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) and Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutcha houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards.

➤ **Storm surge:**

- Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands from tonight, the 30th November 2017.
- Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of coastal districts of south Kerala (Alappuzha, Kollam, and Thiruvananthapuram districts), and adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) during next 12 hours.

➤ **Action suggested**

- **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
- **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 12 hrs and along and off Kerala coasts during next 36 hours.

The next bulletin will be issued at 0230 hrs IST of 01st December 2017.

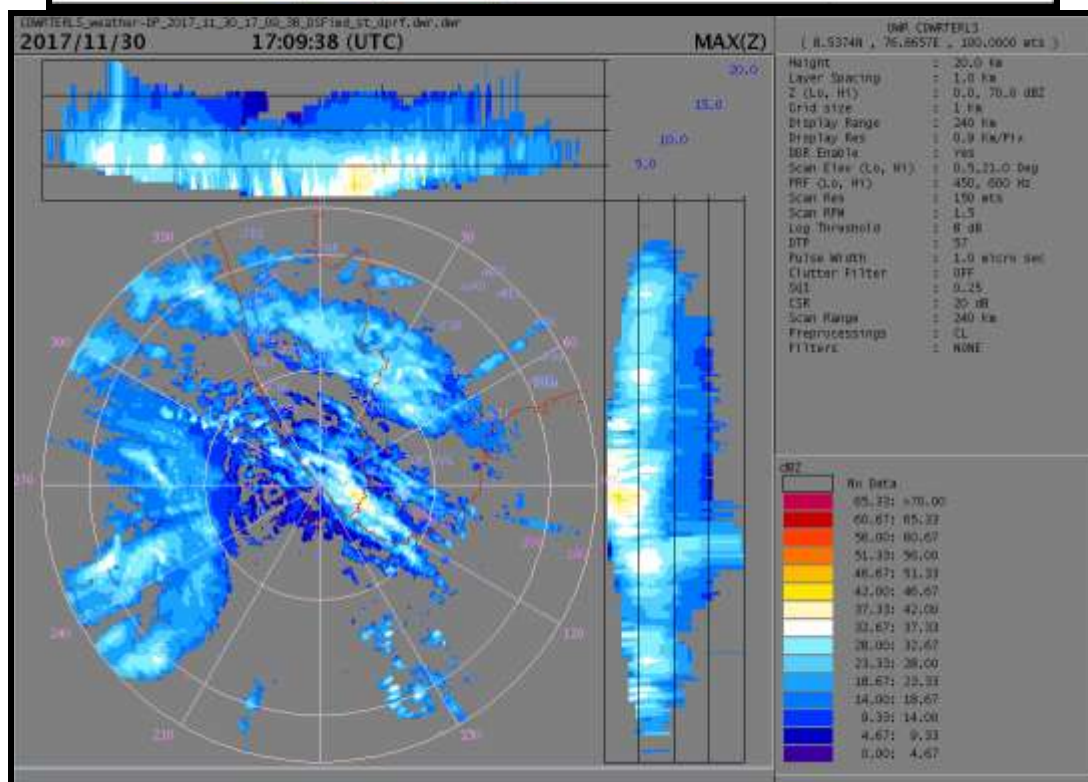
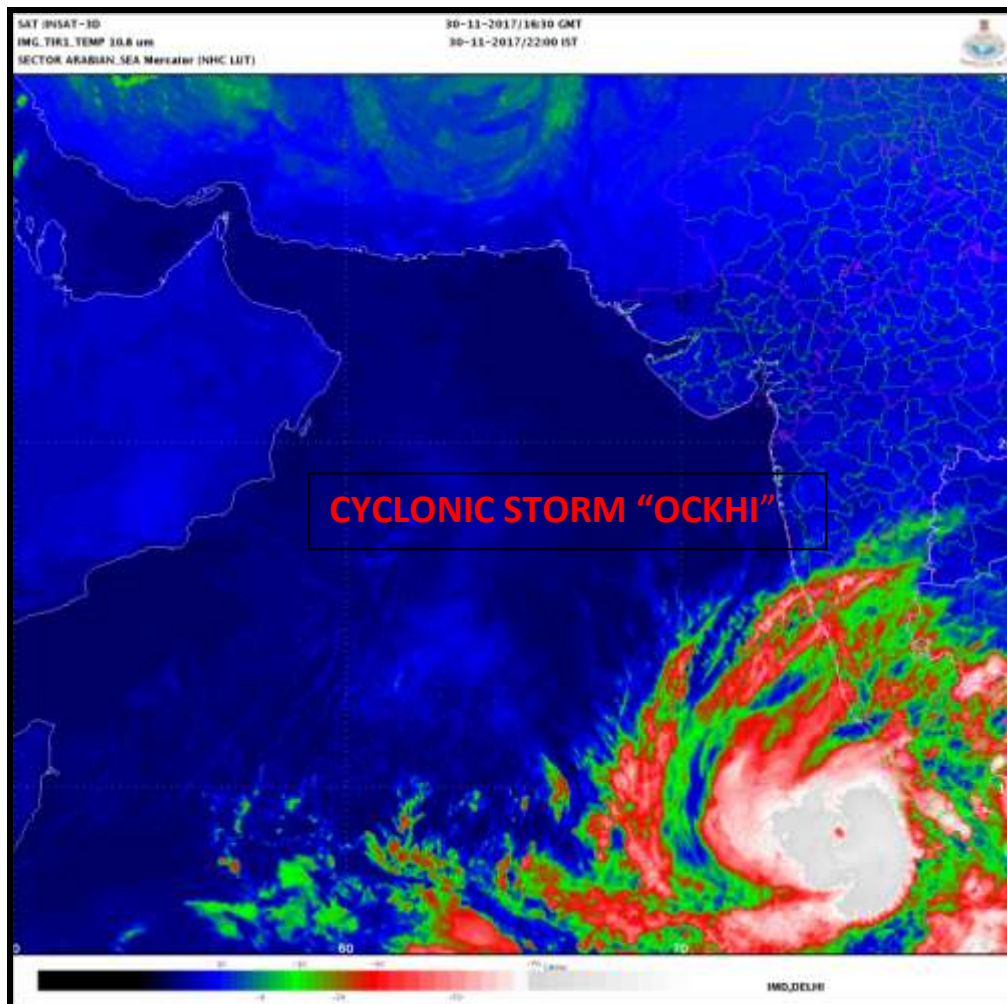
(SHIBIN B)

Scientist-B, RSMC, New Delhi

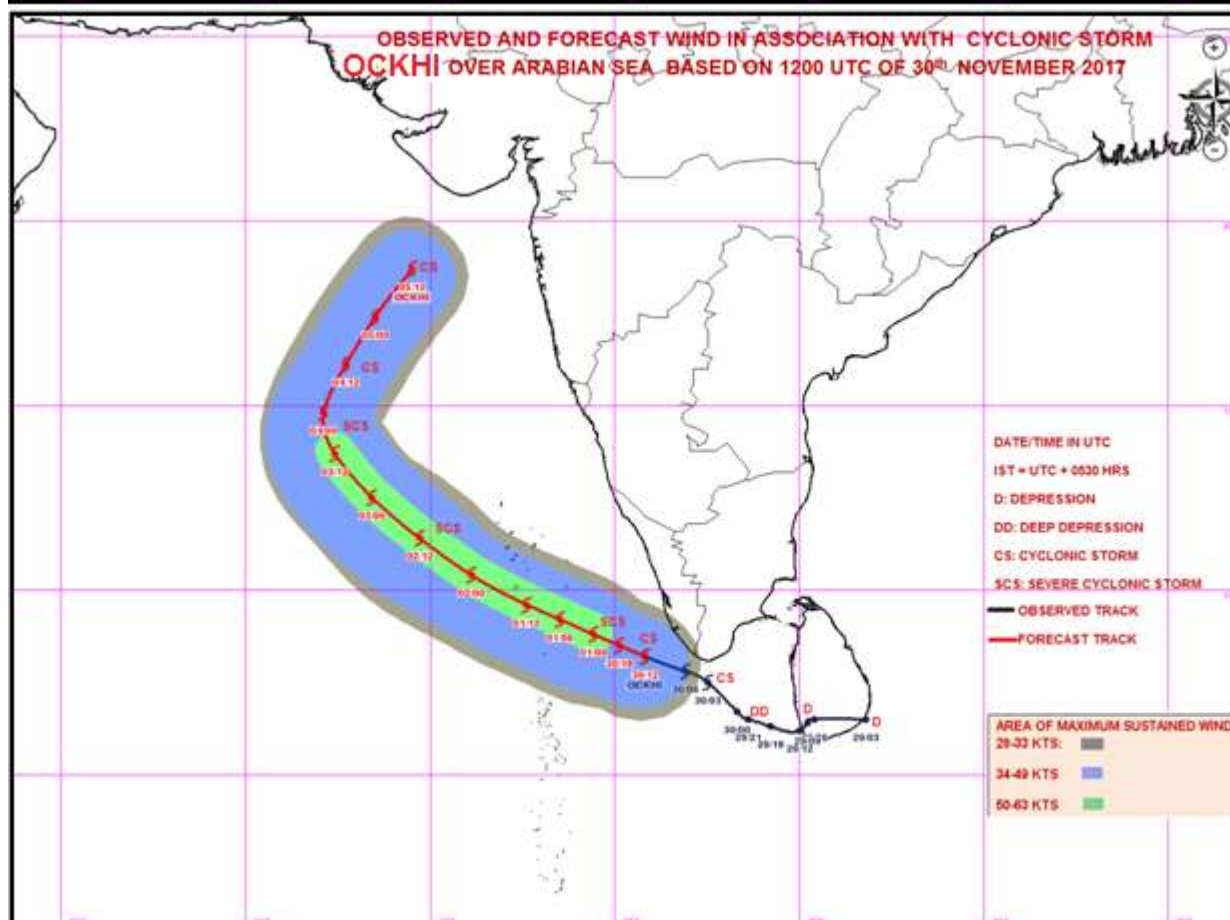
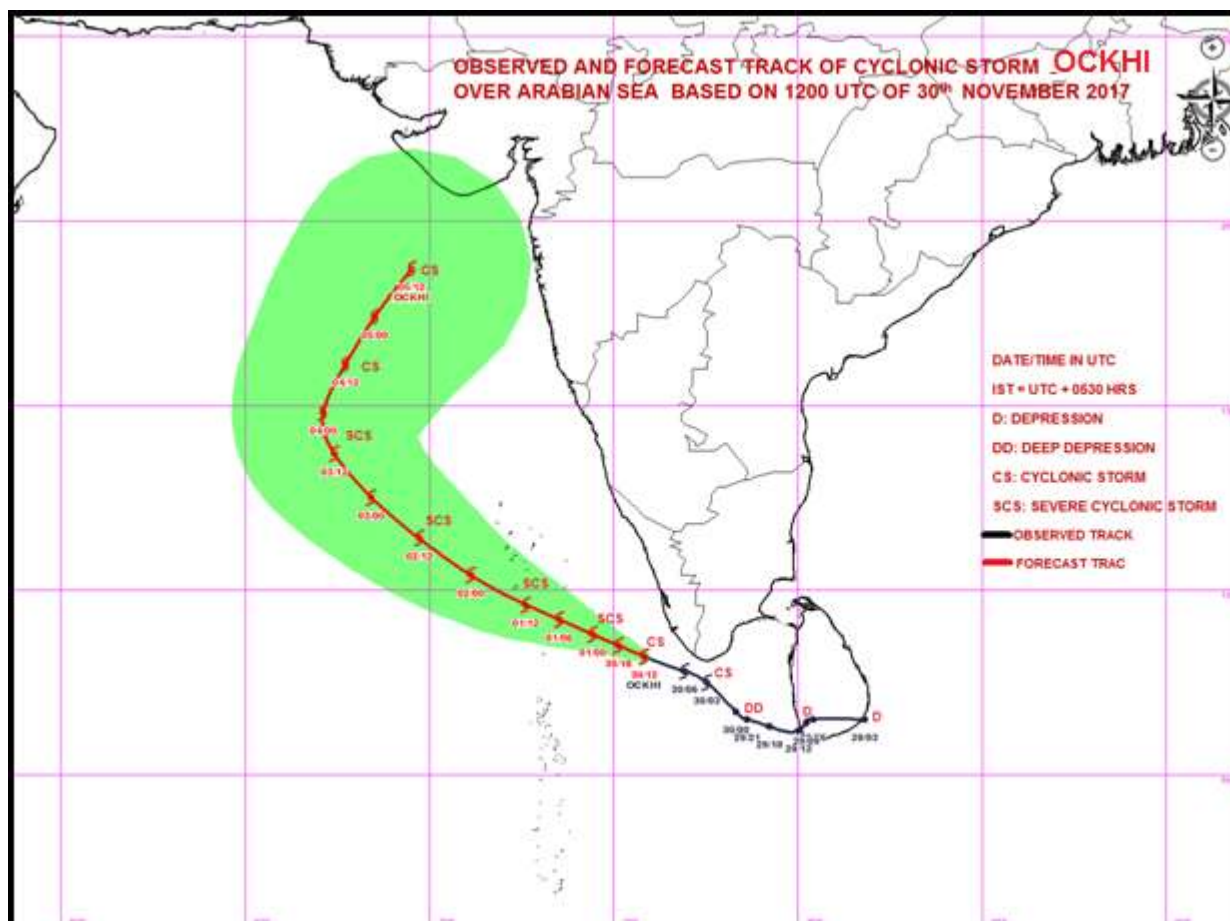
Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 12 (BOB 07/2017)

TIME OF ISSUE: 0315 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for South Kerala, adjoining districts of south Tamil Nadu and Lakshadweep Islands- ORANGE message

Latest observations, Radar and satellite imageries indicate that the cyclonic storm 'OCKHI' over Southeast Arabian Sea moved west-northwestwards with a speed of 25 kmph during past 06 hours and lay centred at 2330 hrs IST of 30th November, 2017 over southeast Arabian Sea near Latitude 8.5° N and Longitude 74.9° E, about 180 km west of Thiruvananthapuram and 200 km east of Minicoy. The system is very likely to intensify further into a severe cyclonic storm during next 12 hours. It is very likely to move west-northwestwards across Lakshadweep Islands during next 24 hours and then move northwestwards during the subsequent 24 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/2330	8.5/74.9	85-95 GUSTING TO 105	CYCLONIC STORM
01/0530	8.9/74.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1130	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1730	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/2330	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/1130	10.9.4/70.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/2330	12.0/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1130	13.1/67.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03/2330	14.3/67.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1130	15.4/67.9	80-90 GUSTING TO 100	CYCLONIC STORM
04/2330	16.5/68.9	70-80 GUSTING TO 90	CYCLONIC STORM
05/1130	17.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	19.0/70.2	50-60 GUSTING TO 70	DEEP DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu during next 12 hours and over south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours.
- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls(>20 cm) very likely over Lakshadweep area during next 48 hours.

• **Wind warning:**

- Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely along & off South Kerala during next 36 hours and along & off south Tamilnadu during next 12 hours.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph very likely along and off North Kerala coast during next 24 hours.
- Gale winds speed reaching 60-70 kmph gusting to 80 kmph very likely over & around Lakshadweep Islands during next 12 hours and increase thereafter with wind speeds becoming 100-110 kmph gusting to 120 kmph around the afternoon/evening of 01st December, 2017.

➤ **Sea condition:**

- Sea conditions would be high along & off South Kerala coast and very rough to high along and off North Kerala coast during next 36 hours and very rough to high along & off south Tamilnadu coast during next 12 hours.
- Sea conditions would be high over and around Lakshadweep Islands during next 12 hours and very high during subsequent 48 hours.

➤ **Damage Expected over south Kerala (Alappuzha, Kottayam, Idukki, Kollam, Pathanathitta, Thiruvananthapuram districts), adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) and Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutcha houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards.

➤ **Storm surge:**

- Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands from tonight, the 30th November 2017.
- Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of coastal districts of south Kerala (Alappuzha, Kollam, and Thiruvananthapuram districts), and adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) during next 12 hours.

➤ **Action suggested**

- **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
- **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 12 hrs and along and off Kerala coasts during next 36 hours.

The next bulletin will be issued at 0530 hrs IST of 01st December 2017.

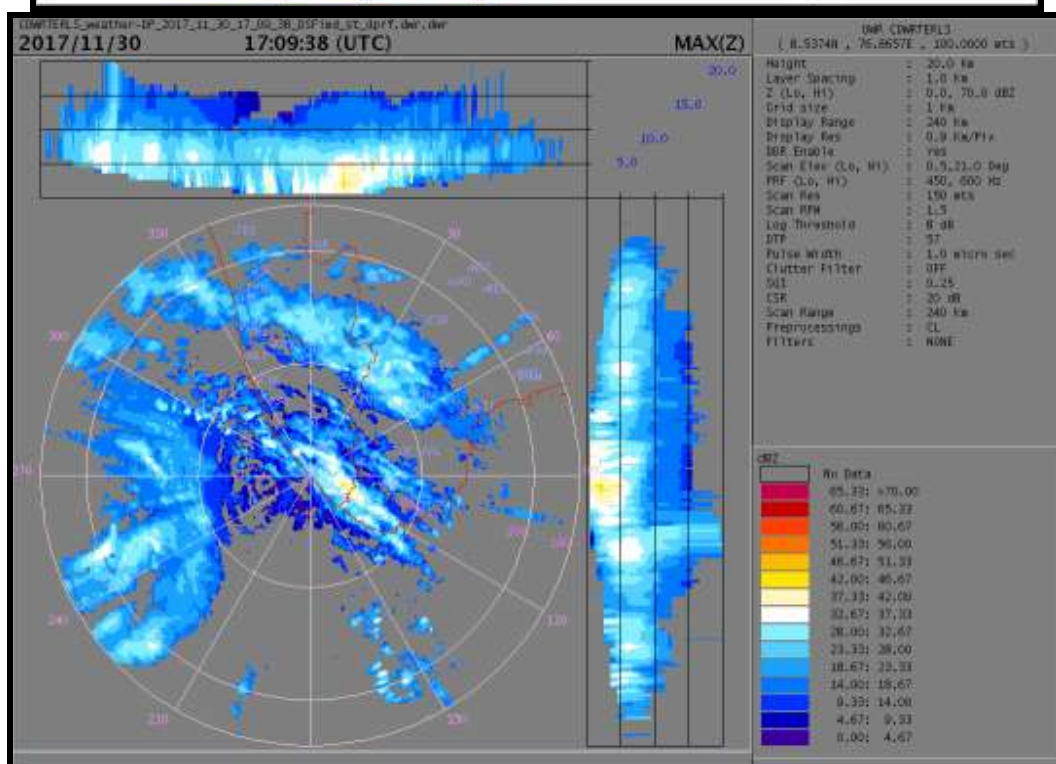
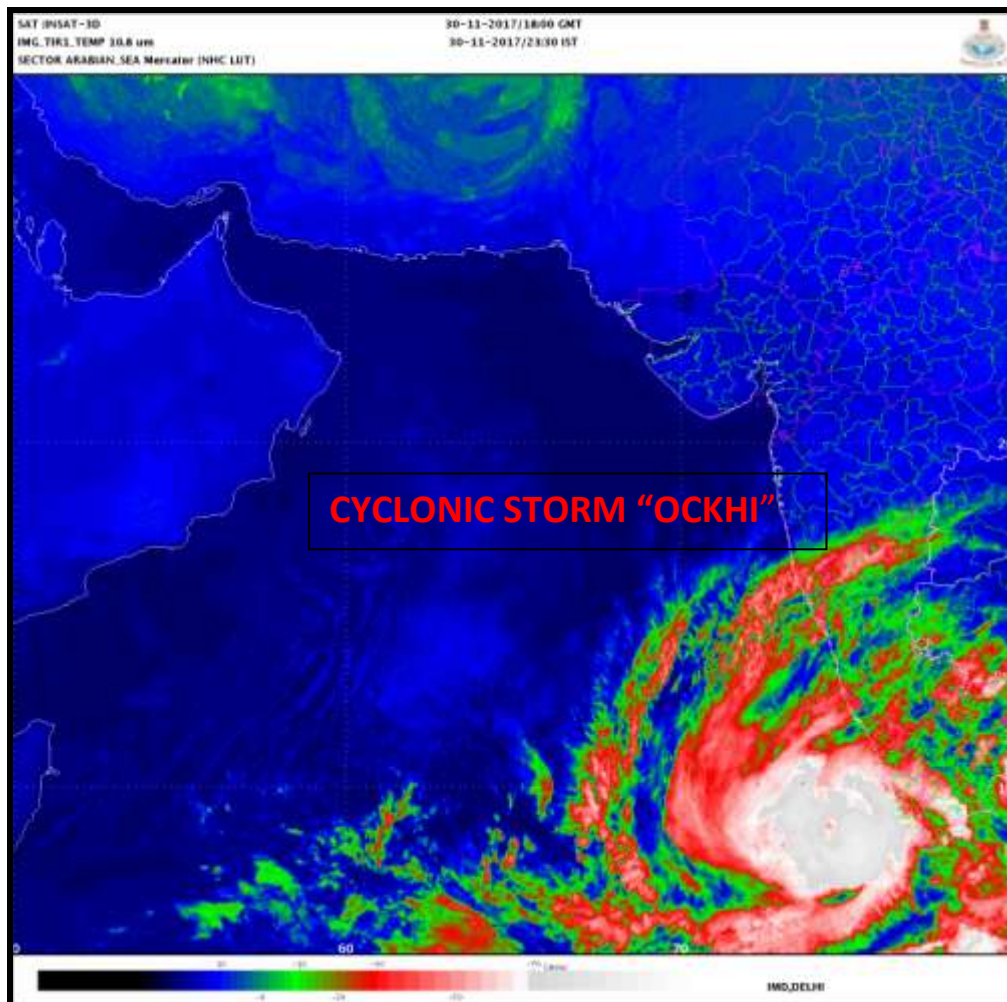
(SHIBIN B)

Scientist-B, RSMC, New Delhi

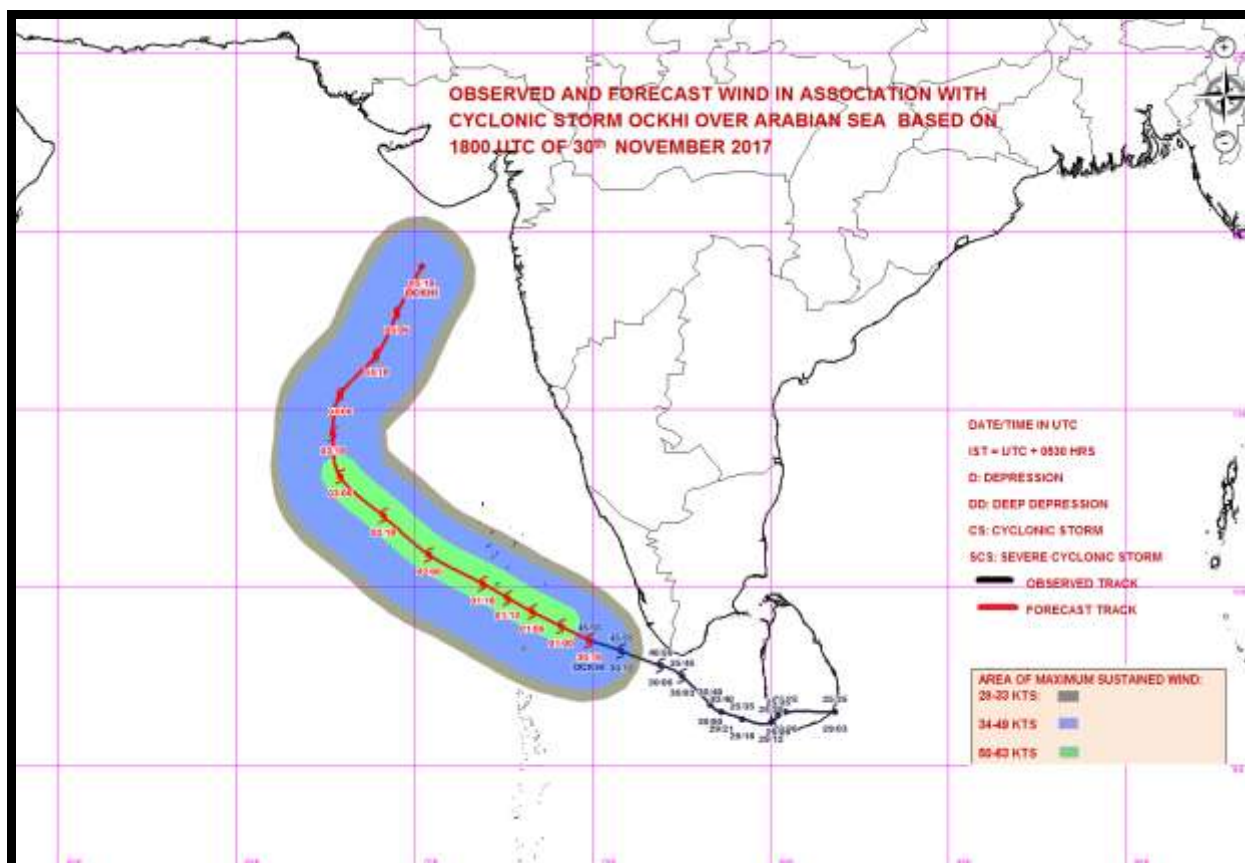
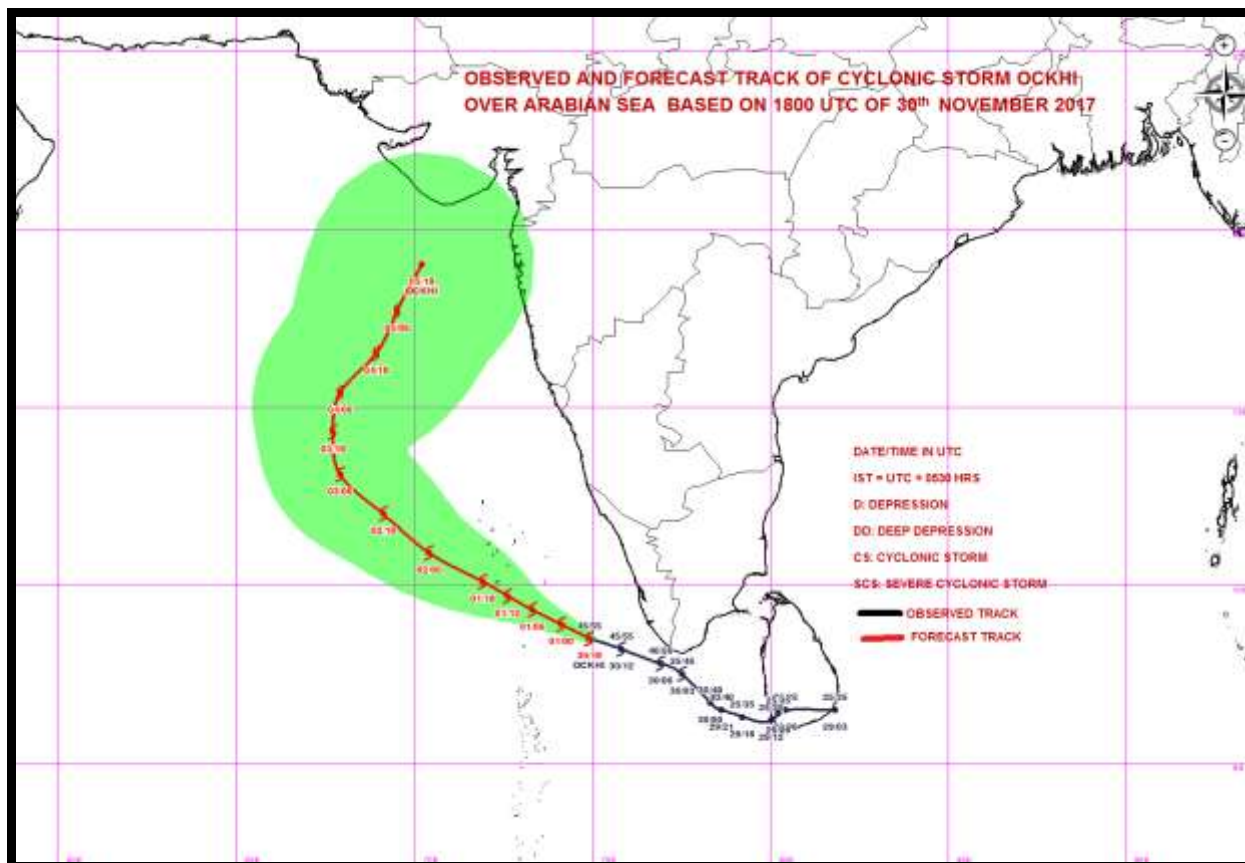
Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 13 (BOB 07/2017)

TIME OF ISSUE: 0430 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for South Kerala, adjoining districts of south Tamil Nadu and Lakshadweep Islands- ORANGE message

Latest observations, Radar and satellite imageries indicate that the cyclonic storm 'OCKHI' over Southeast Arabian Sea moved west-northwestwards with a speed of 25 kmph during past 06 hours and lay centred at 0230 hrs IST of today, the 01st December, 2017 over southeast Arabian Sea near Latitude 8.6° N and Longitude 74.5° E, about 230 km west of Thiruvananthapuram and 160 km east of Minicoy. The system is very likely to intensify further into a severe cyclonic storm during next 12 hours. It is very likely to move west-northwestwards across Lakshadweep Islands during next 24 hours and then move northwestwards during the subsequent 24 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/0230	8.6/74.5	85-95 GUSTING TO 105	CYCLONIC STORM
01/0530	8.9/74.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1130	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1730	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/2330	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/1130	10.9.4/70.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/2330	12.0/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1130	13.1/67.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03/2330	14.3/67.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1130	15.4/67.9	80-90 GUSTING TO 100	CYCLONIC STORM
04/2330	16.5/68.9	70-80 GUSTING TO 90	CYCLONIC STORM
05/1130	17.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	19.0/70.2	50-60 GUSTING TO 70	DEEP DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over south Tamil Nadu during next 12 hours and over south Kerala during next 24 hours and isolated heavy falls over interior Tamil Nadu and Kerala during subsequent 24 hours.
- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls(>20 cm) very likely over Lakshadweep area during next 48 hours.

➤ **Wind warning:**

- Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely along & off South Kerala during next 36 hours and along & off south Tamilnadu during next 12 hours.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph very likely along and off North Kerala coast during next 24 hours.
- Gale winds speed reaching 60-70 kmph gusting to 80 kmph very likely over & around Lakshadweep Islands during next 12 hours and increase thereafter with wind speeds becoming 100-110 kmph gusting to 120 kmph around the afternoon/evening of 01st December, 2017.

➤ **Sea condition:**

- Sea conditions would be high along & off South Kerala coast and very rough to high along and off North Kerala coast during next 36 hours and very rough to high along & off south Tamilnadu coast during next 12 hours.
- Sea conditions would be high over and around Lakshadweep Islands during next 12 hours and very high during subsequent 48 hours.

➤ **Damage Expected over south Kerala (Alappuzha, Kottayam, Idukki, Kollam, Pathanathitta, Thiruvananthapuram districts), adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) and Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of trees. Damage to thatched houses: Major damage to kutcha houses and minor damage to pucca roads. Damage to paddy crops, banana, Papaya trees and orchards.

➤ **Storm surge:**

- Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands from tonight, the 30th November 2017.
- Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of coastal districts of south Kerala (Alappuzha, Kollam, and Thiruvananthapuram districts), and adjoining districts of south Tamil Nadu (Kanyakumari, Tutukudi and Tirunelveli districts) during next 12 hours.

➤ **Action suggested**

- **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
- **South Tamil Nadu and South Kerala :** Fishermen are advised not to venture into the sea along & off South Tamil Nadu coast during next 12 hrs and along and off Kerala coasts during next 36 hours.

The next bulletin will be issued at 0830 hrs IST of 01st December 2017.

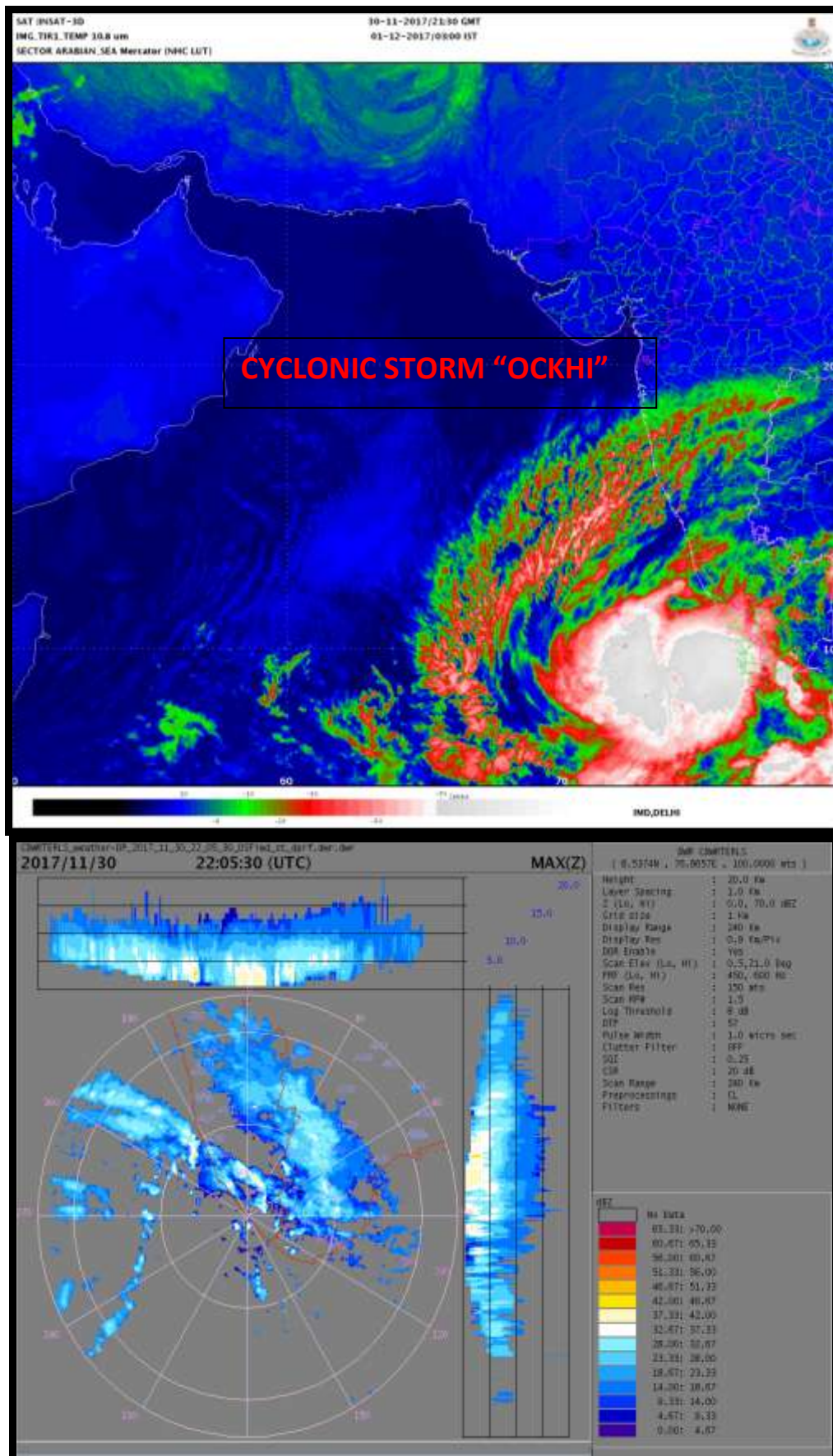
(SHIBIN B)

Scientist-B, RSMC, New Delhi

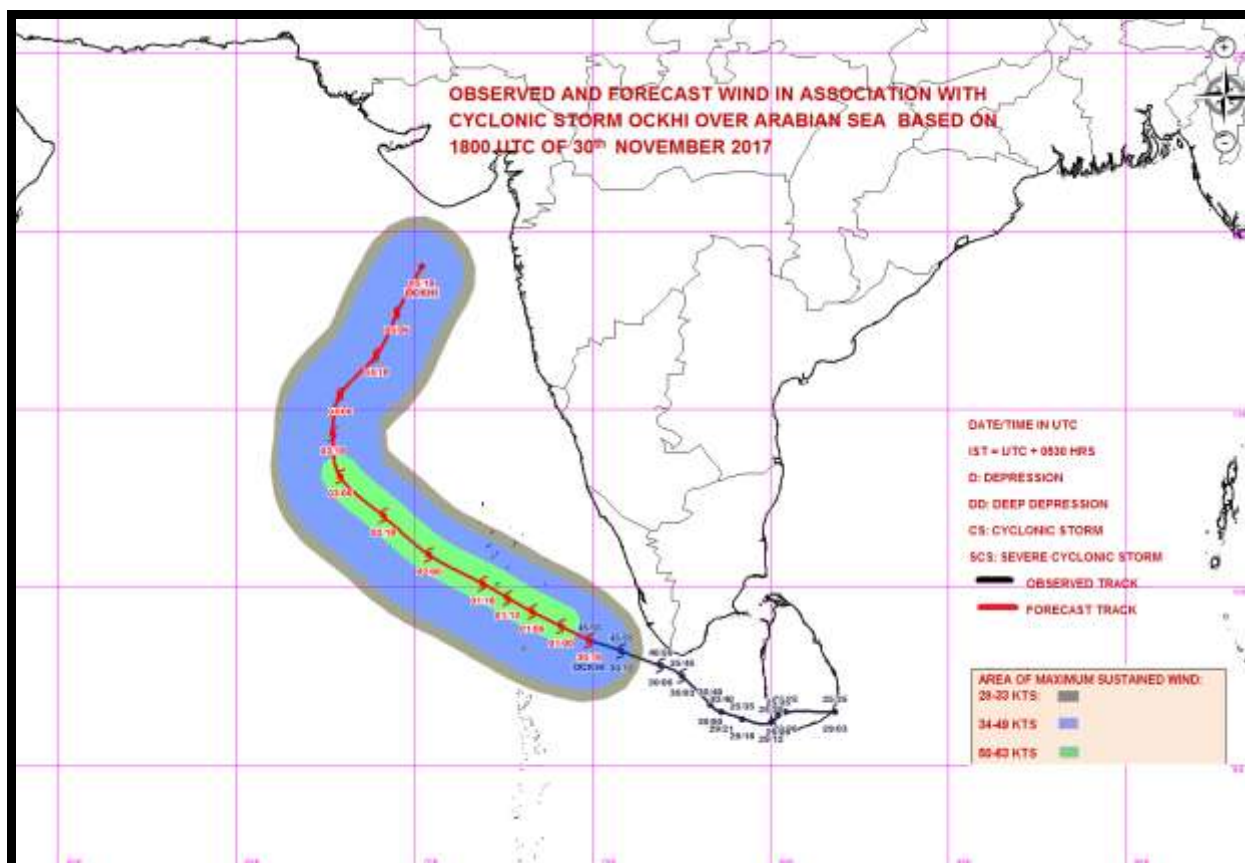
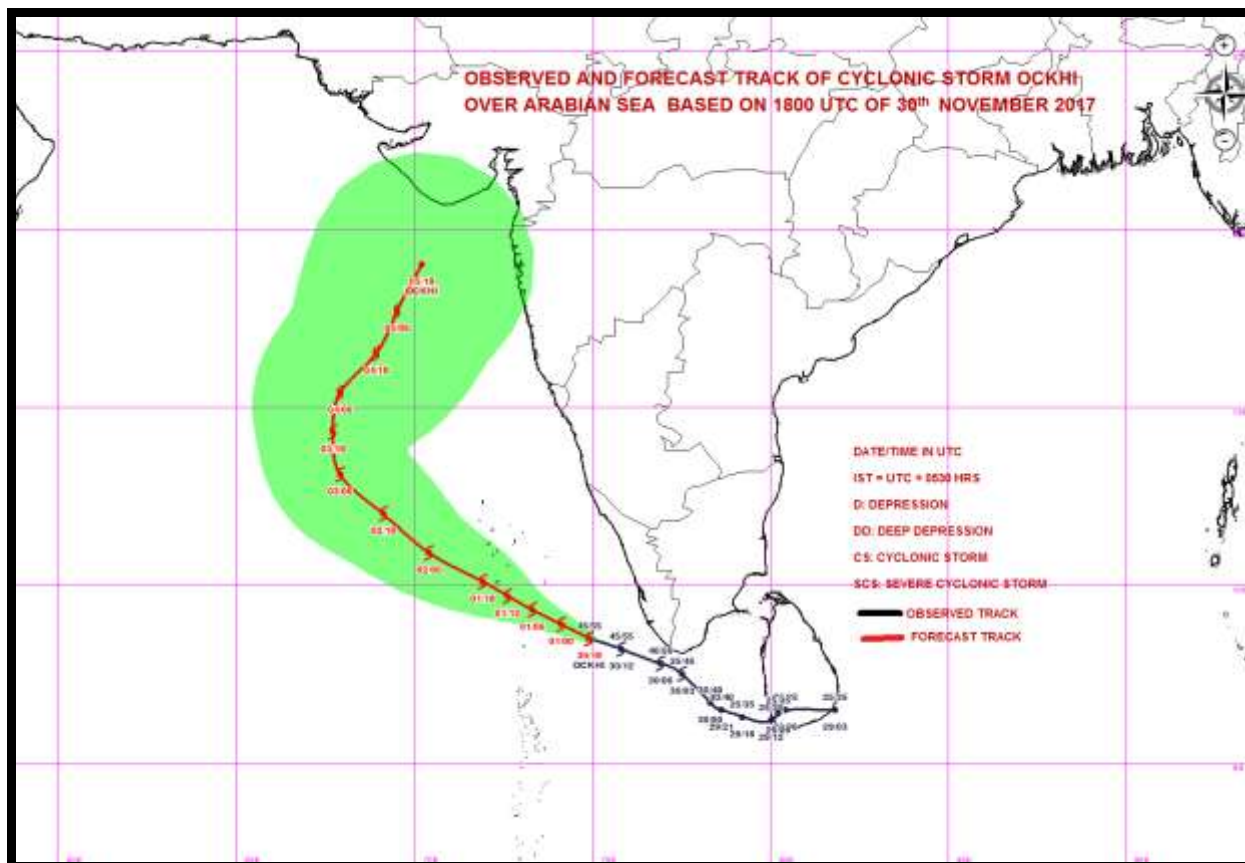
Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 14 (BOB 07/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS**

Sub: Severe Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for Kerala and Lakshadweep Islands- RED message

The cyclonic storm 'OCKHI' over Southeast Arabian Sea continued to move west-northwestwards with a speed of 17 kmph during past 06 hours, intensified into a severe cyclonic storm and lay centred at 0530 hrs IST of today, the 01st December, 2017 over southeast Arabian Sea near Latitude 8.8° N and Longitude 74.0° E, about 110 km north-northeast of Minicoy and 290 km southeast of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then move north/northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/0530	8.8/74.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1130	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1730	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/2330	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/0530	10.5/71.2	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/1730	11.5/69.8	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0530	12.6/68.5	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
03/1730	13.7/67.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0530	14.8/67.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1730	16.0/68.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/0530	17.2/69.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	18.4/69.8	60-70 GUSTING TO 80	CYCLONIC STORM
06/0530	19.6/70.4	50-60 GUSTING TO 70	DEEP DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

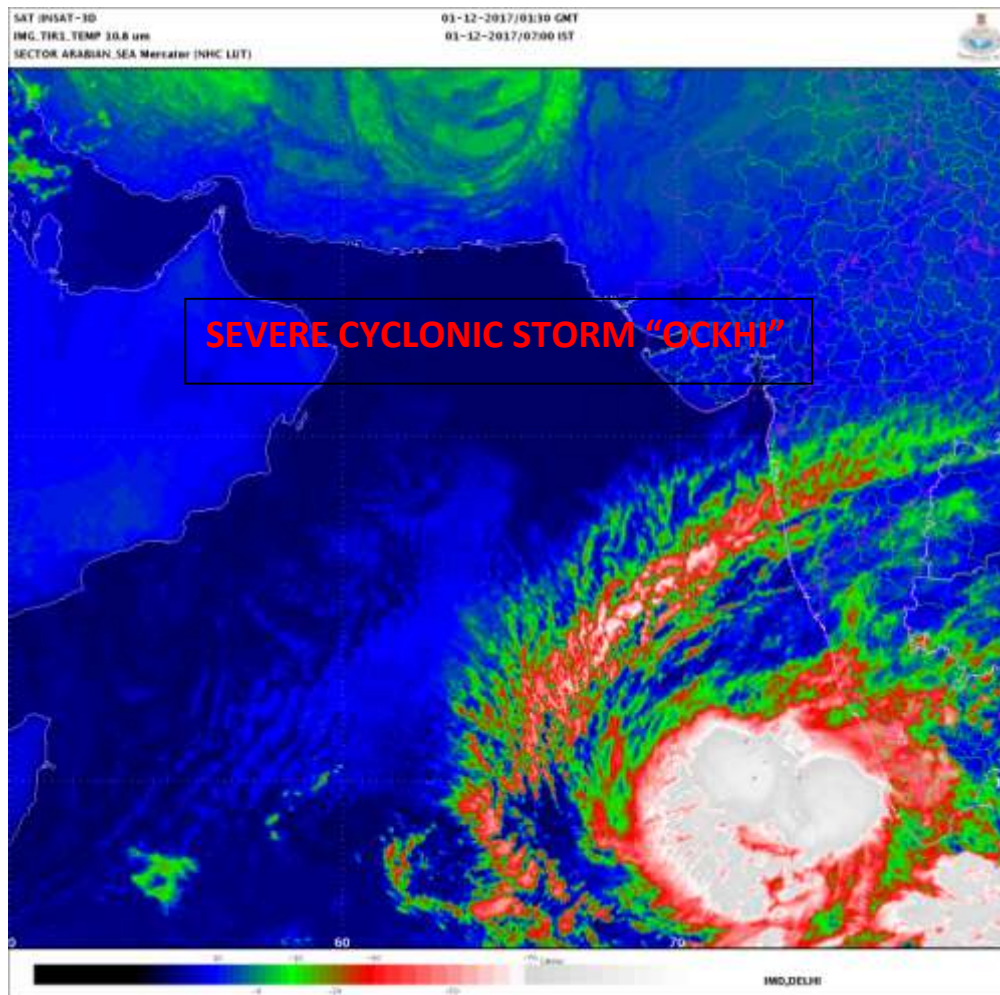
Warning:

- **Heavy Rainfall warning:**
 - Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
 - Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- **Wind warning:**
 - Gale winds speed reaching 110-120 kmph gusting to 130 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.
- **Sea condition:**
 - Sea conditions would be high to very high over and around Lakshadweep Islands during next 24 hours and high during subsequent 24 hours.
 - Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.
- **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

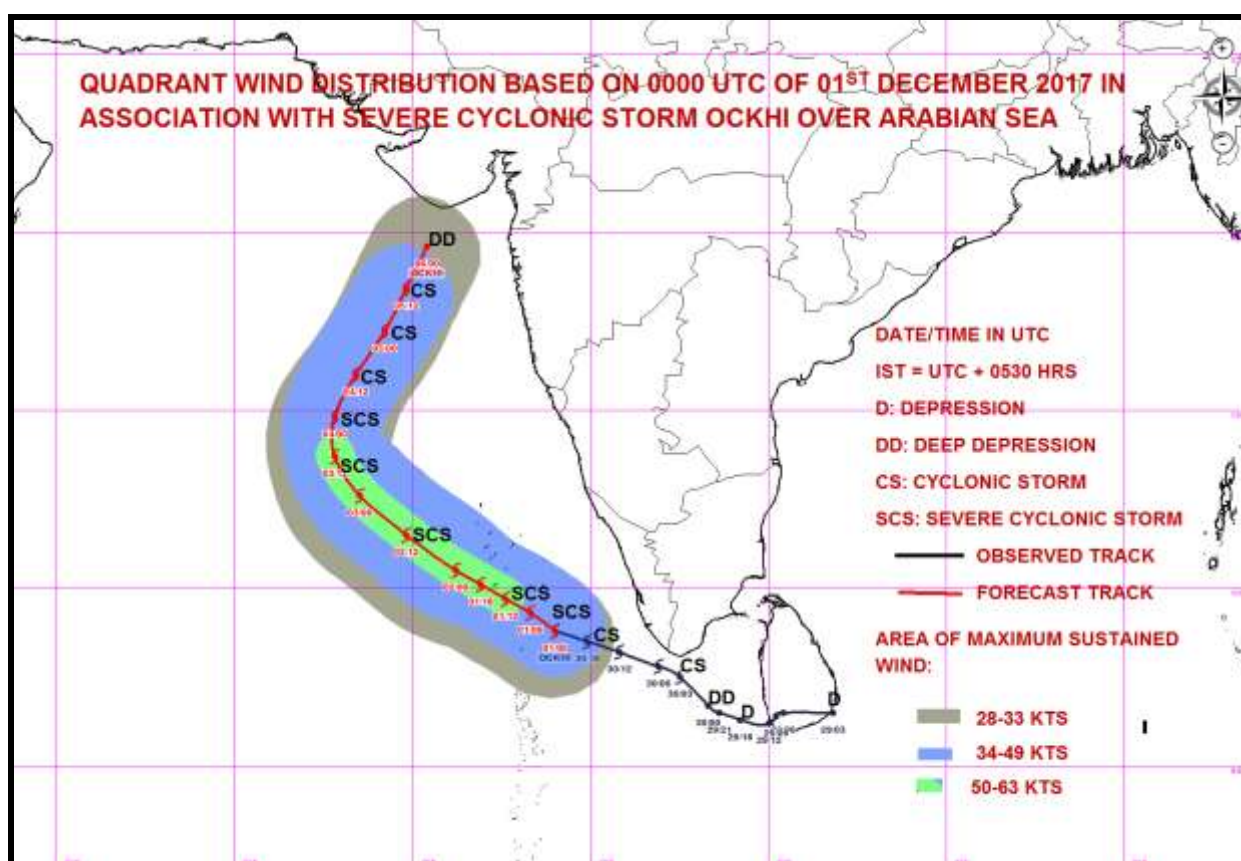
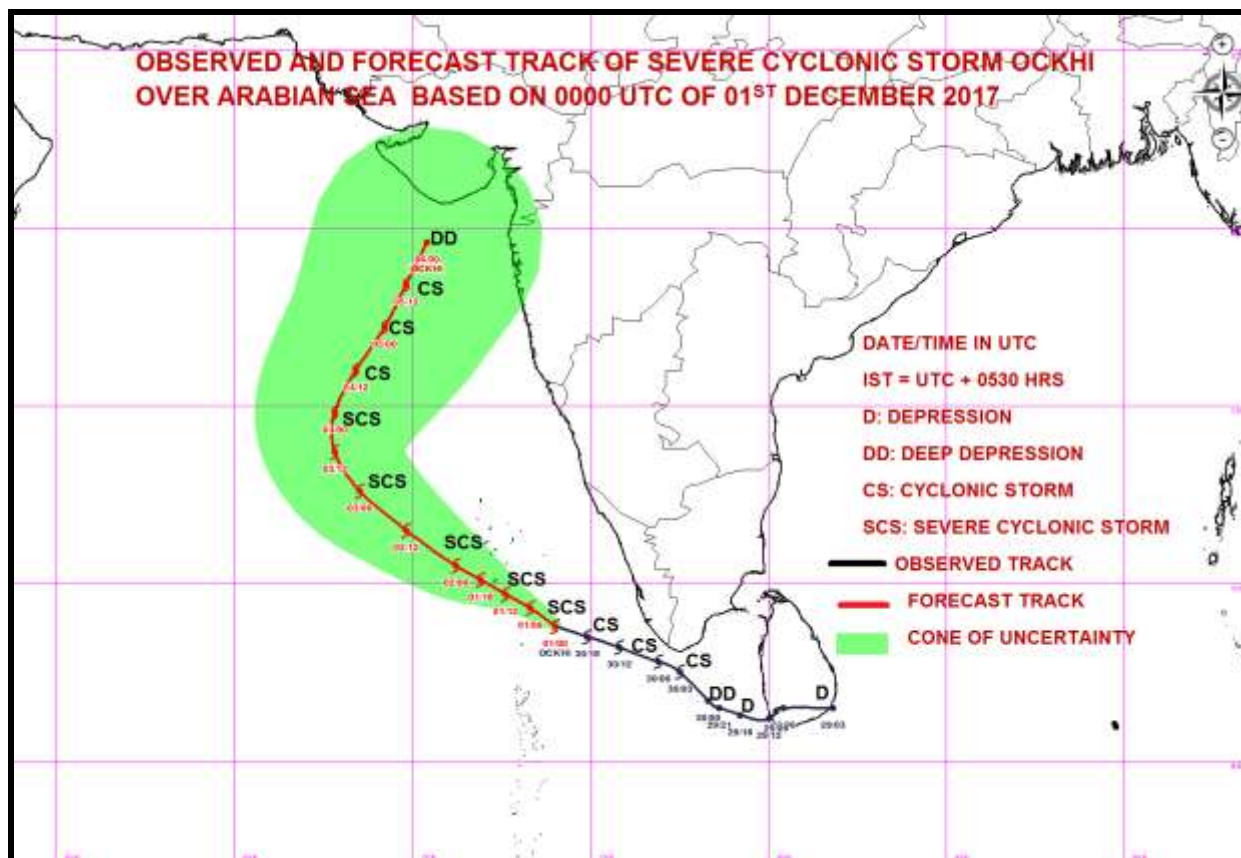
The next bulletin will be issued at 1130 hrs IST of 01st December 2017.

(SHIBIN B)
Scientist-B, RSMC, New Delhi

Copy to: CRS, Pune/ ACWC Chennai/ MC Thiruvananthapuram/ MC Begaluru.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 15 (BOB 07/2017)

TIME OF ISSUE: 1130 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The severe cyclonic storm 'OCKHI' over Southeast Arabian Sea continued to move west-northwestwards with a speed of 13 kmph during past 06 hours and lay centred at 0830 hrs IST of today, the 01st December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 8.9° N and Longitude 73.8° E, about 90 km northeast of Minicoy and 270 km south-southeast of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then move north/north-northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/0830	8.9/73.8	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1130	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1730	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/2330	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/0530	10.5/71.2	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/1730	11.5/69.8	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0530	12.6/68.5	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
03/1730	13.7/67.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0530	14.8/67.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1730	16.0/68.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/0530	17.2/69.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	18.4/69.8	60-70 GUSTING TO 80	CYCLONIC STORM
06/0530	19.6/70.4	50-60 GUSTING TO 70	DEEP DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

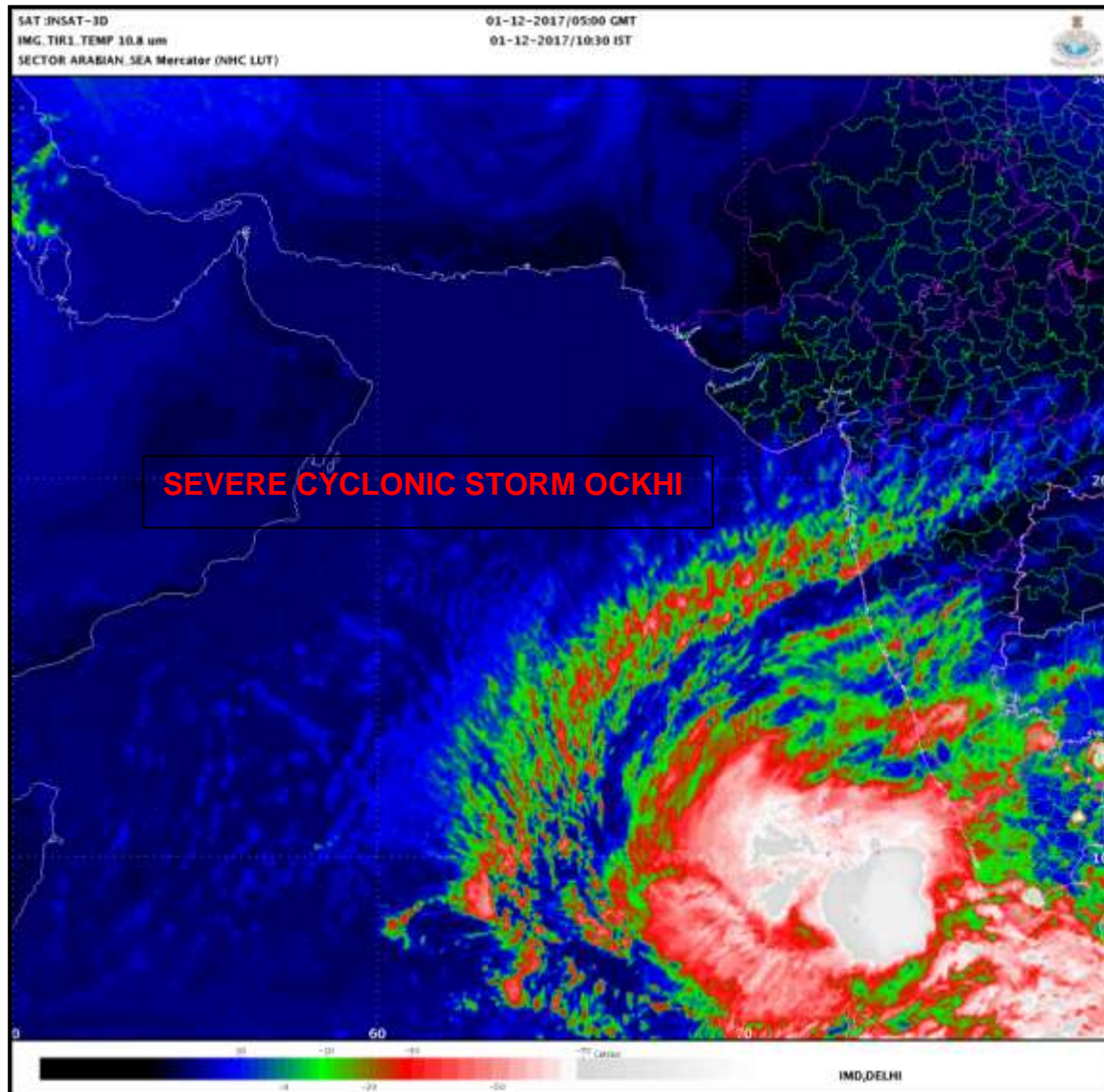
- **Heavy Rainfall warning:**
 - Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
 - Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- **Wind warning:**
 - Gale winds speed reaching 110-120 kmph gusting to 130 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.
- **Sea condition:**
 - Sea conditions would be high to very high over and around Lakshadweep Islands during next 24 hours and high during subsequent 24 hours.
 - Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.
- **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 1430 hrs IST of 01st December 2017.

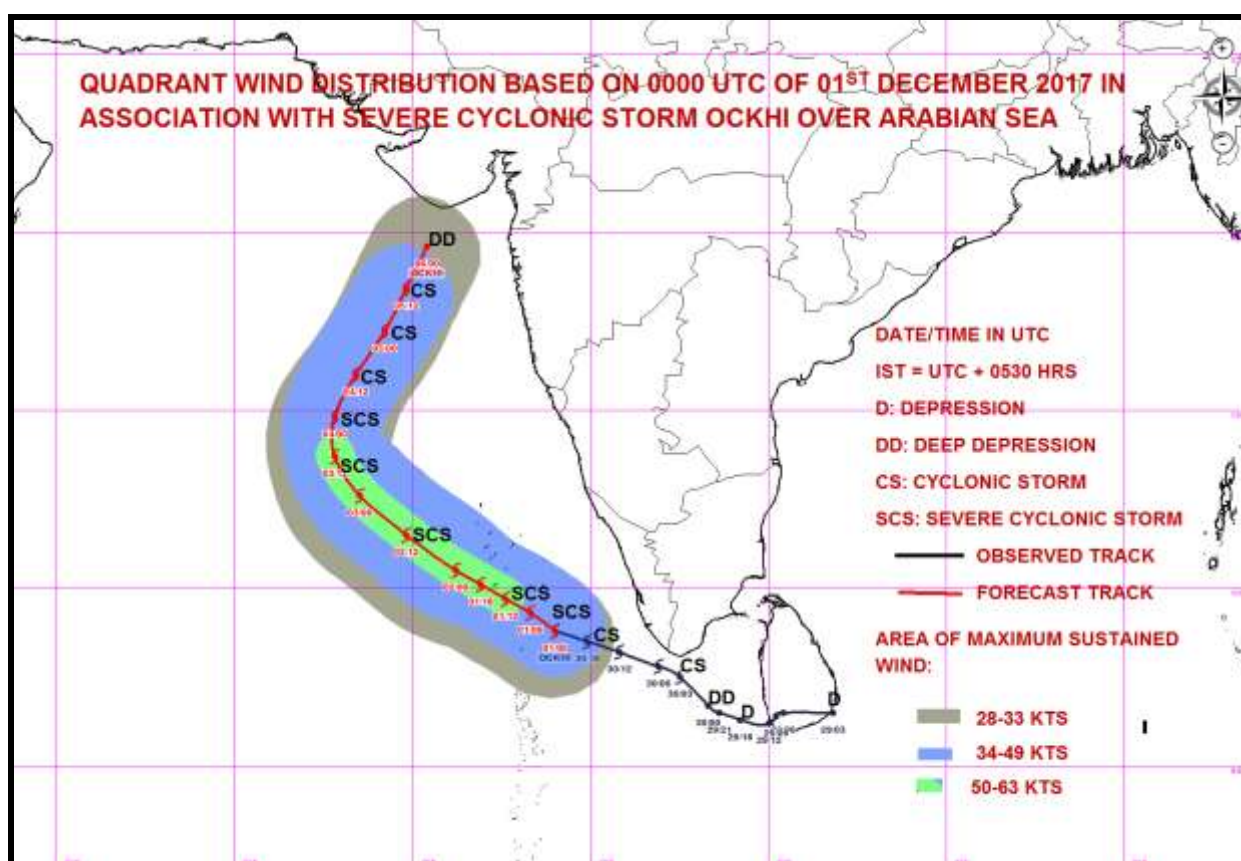
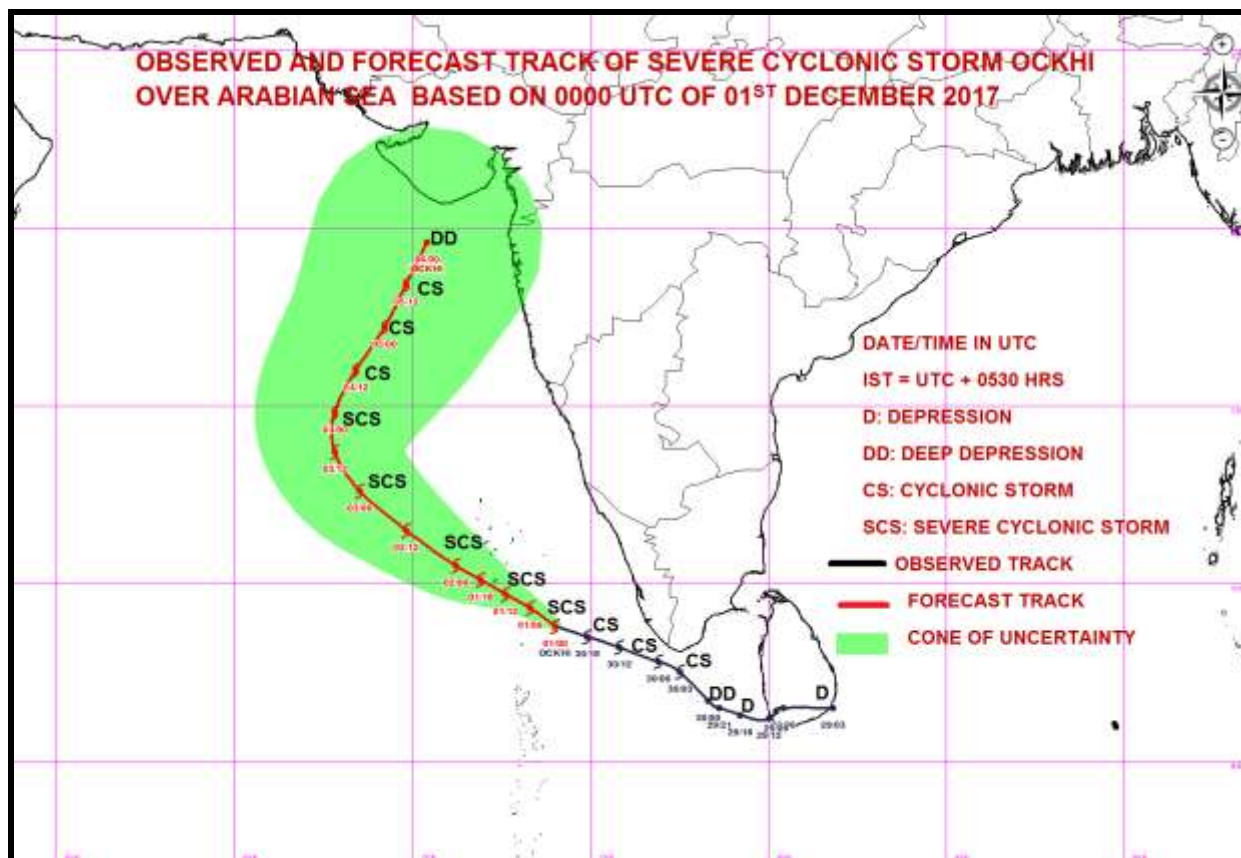
(NEETHA K GOPAL)
Scientist-E, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 16 (BOB 07/2017)

TIME OF ISSUE: 1415 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The severe cyclonic storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea continued to move west-northwestwards with a speed of 11 kmph during past 06 hours and lay centred at 1130 hrs IST of today, the 01st December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.0° N and Longitude 73.4° E, about 80 km north-northeast of Minicoy and 240 km south-southeast of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then move north/ northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/1130	9.0/73.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/1730	9.3/72.8	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
01/2330	9.7/72.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
02/0530	10.1/71.4	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
02/1130	10.7/70.8	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
02/2330	11.9/69.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
03/1130	13.4/68.9	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
03/2330	14.8/68.7	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
04/1130	16.2/69.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
04/2330	17.6/70.3	70-80 GUSTING TO 90	CYCLONIC STORM
05/1130	18.9/71.5	50-60 GUSTING TO 70	DEEP DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

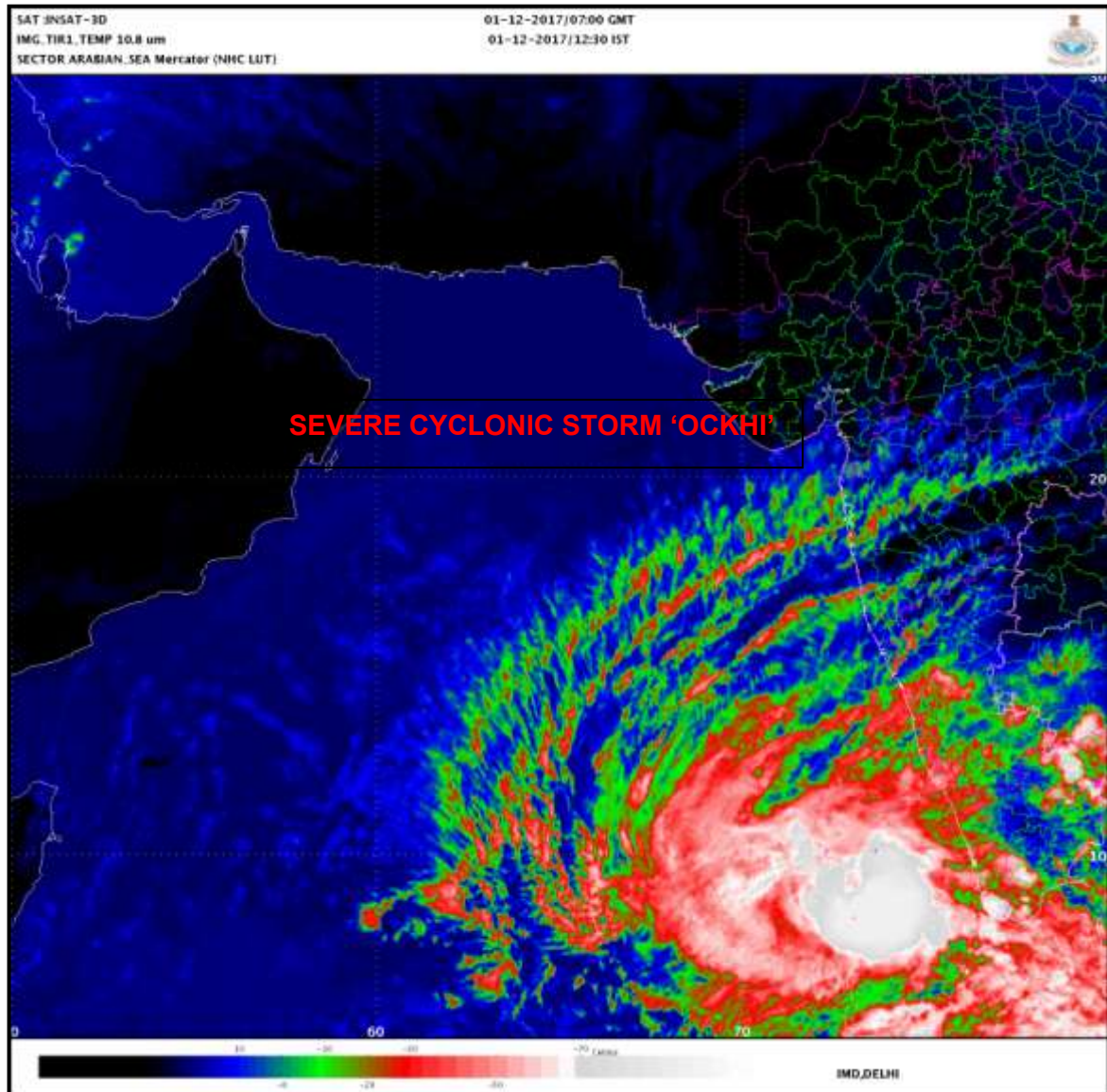
- **Heavy Rainfall warning:**
 - Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
 - Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- **Wind warning:**
 - Gale winds speed reaching 110-120 kmph gusting to 130 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.
- **Sea condition:**
 - Sea conditions would be high to very high over and around Lakshadweep Islands during next 24 hours and high during subsequent 24 hours.
 - Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.
- **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 1730 hrs IST of 01st December 2017.

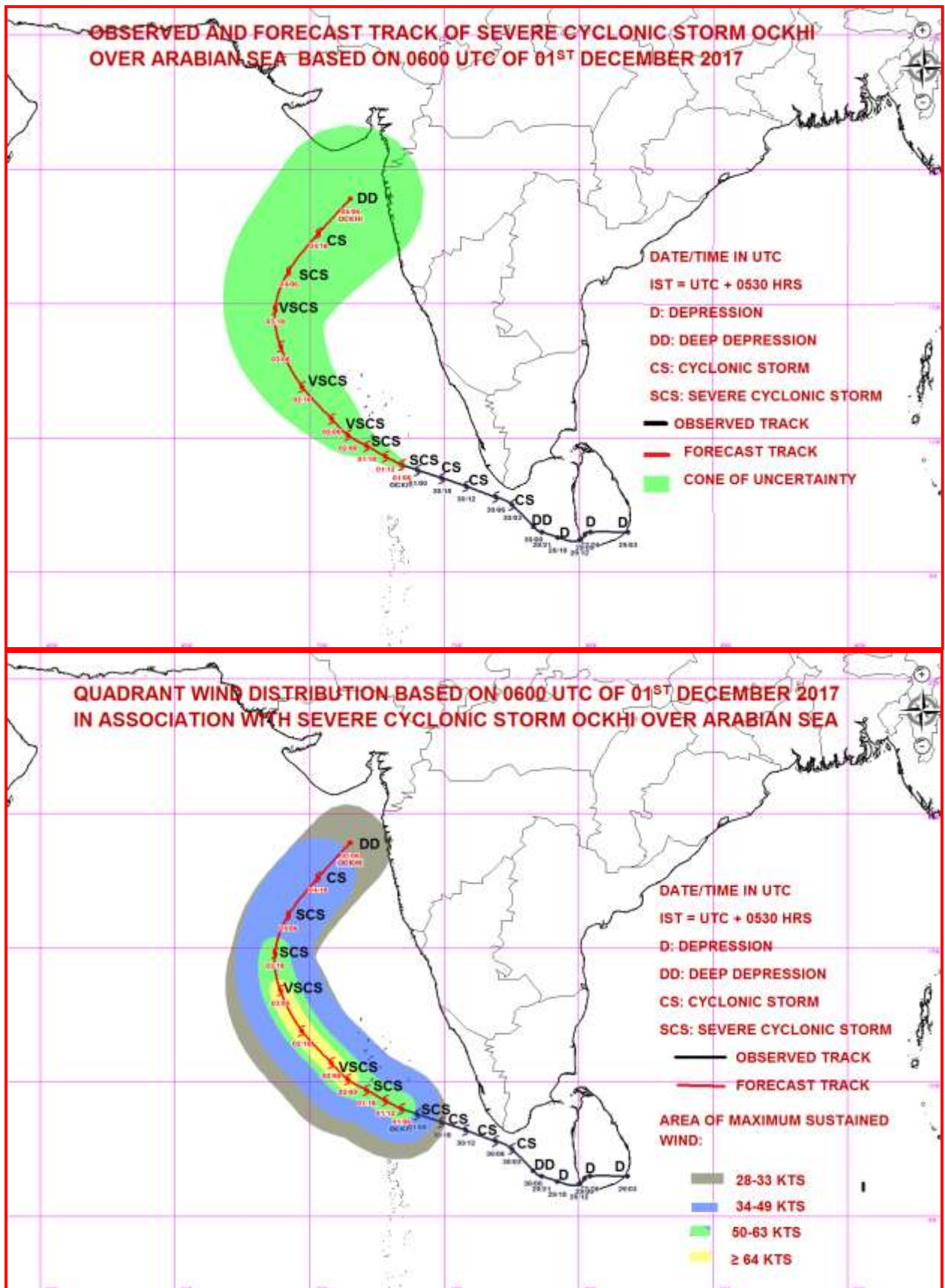
(NEETHA K GOPAL)
Scientist-E, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 17 (BOB 07/2017)

TIME OF ISSUE: 1730 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

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CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The severe cyclonic storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea continued to move west-northwestwards with a speed of 15 kmph during past 06 hours and intensified further into a **Very Severe Cyclonic Storm** and lay centred at 1430 hrs IST of today, the 01st December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.1° N and Longitude 73.0° E, about 90 km north of Minicoy and 220 km south-southeast of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then move north/northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/1430	9.1/73.0	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
01/1730	9.3/72.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
01/2330	9.7/72.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
02/0530	10.1/71.4	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/1130	10.7/70.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/2330	11.9/69.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1130	13.4/68.9	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
03/2330	14.8/68.7	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
04/1130	16.2/69.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
04/2330	17.6/70.3	70-80 GUSTING TO 90	CYCLONIC STORM
05/1130	18.9/71.5	50-60 GUSTING TO 70	DEEP DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
- Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.

➤ **Wind warning:**

- Gale winds speed reaching 120-130 kmph gusting to 145 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.

➤ **Sea condition:**

- Sea conditions would be phenomenal over and around Lakshadweep Islands during next 24 hours and very high during subsequent 24 hours.
- Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.

➤ **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.

➤ **Storm surge:**

- Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.

➤ **Action suggested**

- **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 2030 hrs IST of 01st December 2017.

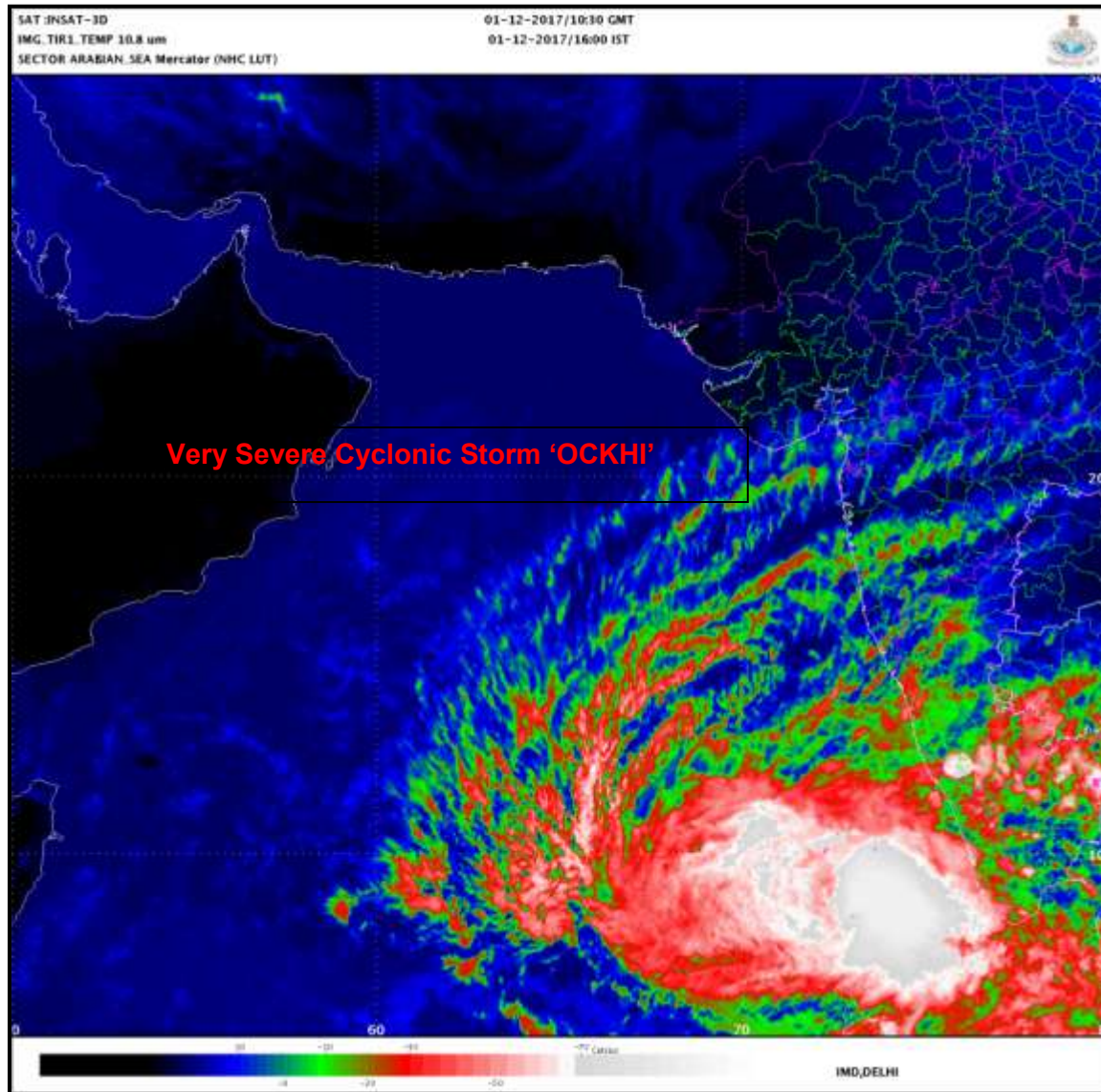
(NEETHA K GOPAL)

Scientist-E, RSMC, New Delhi

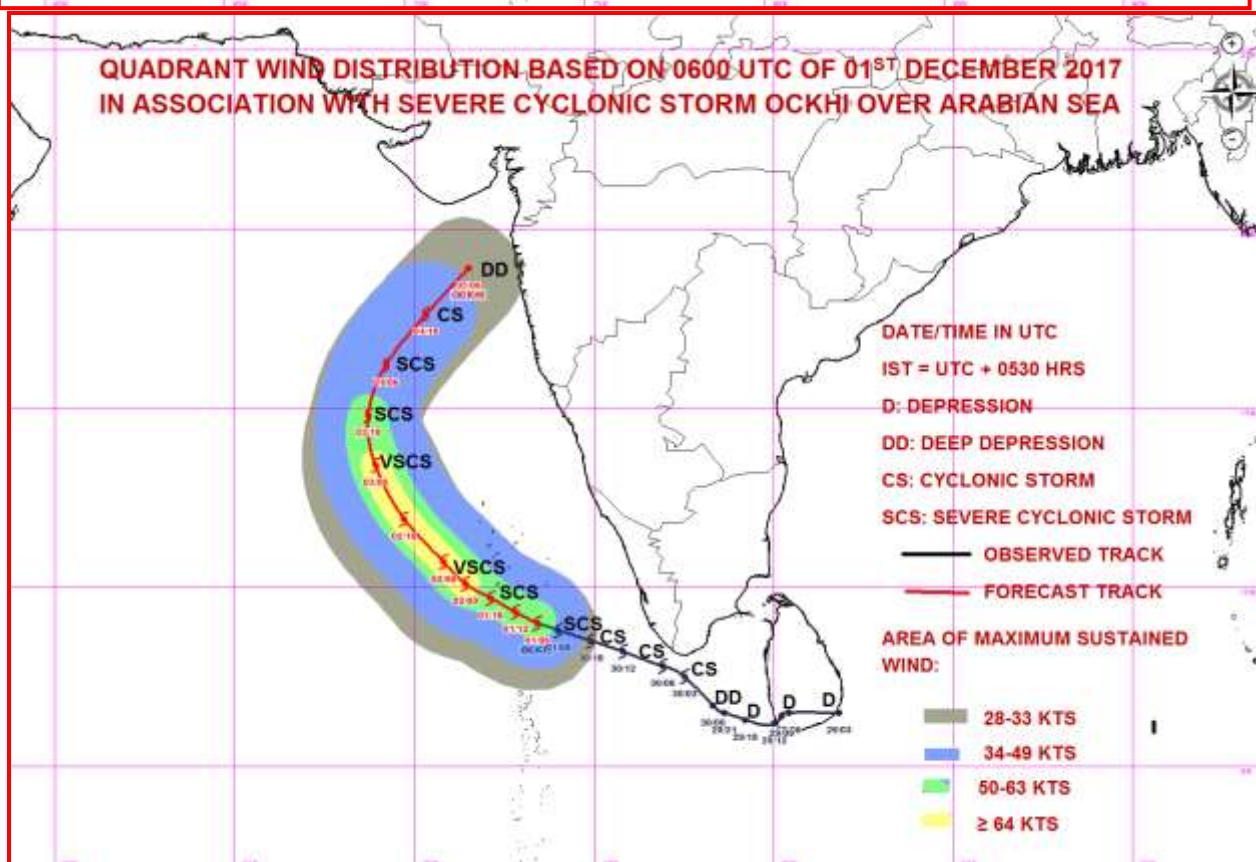
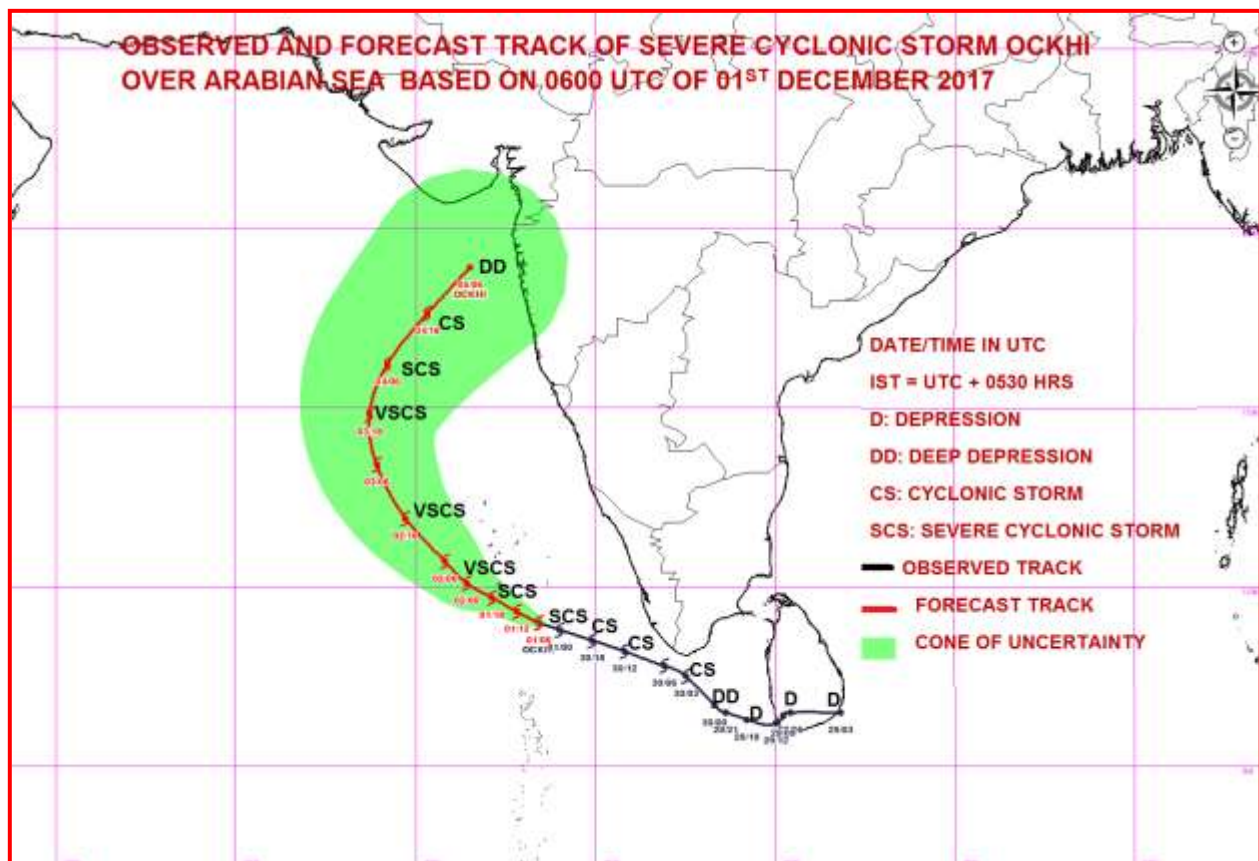
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 18 (BOB 07/2017)

TIME OF ISSUE: 2000 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved west-northwestwards with a speed of 12 kmph during past 06 hours and lay centred at 1730 hrs IST of today, the 01st December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.2° N and Longitude 72.8° E, about 100 km north-northwest of Minicoy and 210 km south of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/1730	9.2/72.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
01/2330	9.6/72.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0530	10.1/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/1130	10.7/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1730	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0530	12.6/69.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/1730	14.1/68.8	115-125 GUSTING TO 135	VERY SEVERE CYCLONIC STORM
04/0530	15.5/69.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1730	16.9/69.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/0530	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/1730	19.6/72.1	40-50 GUSTING TO 60	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

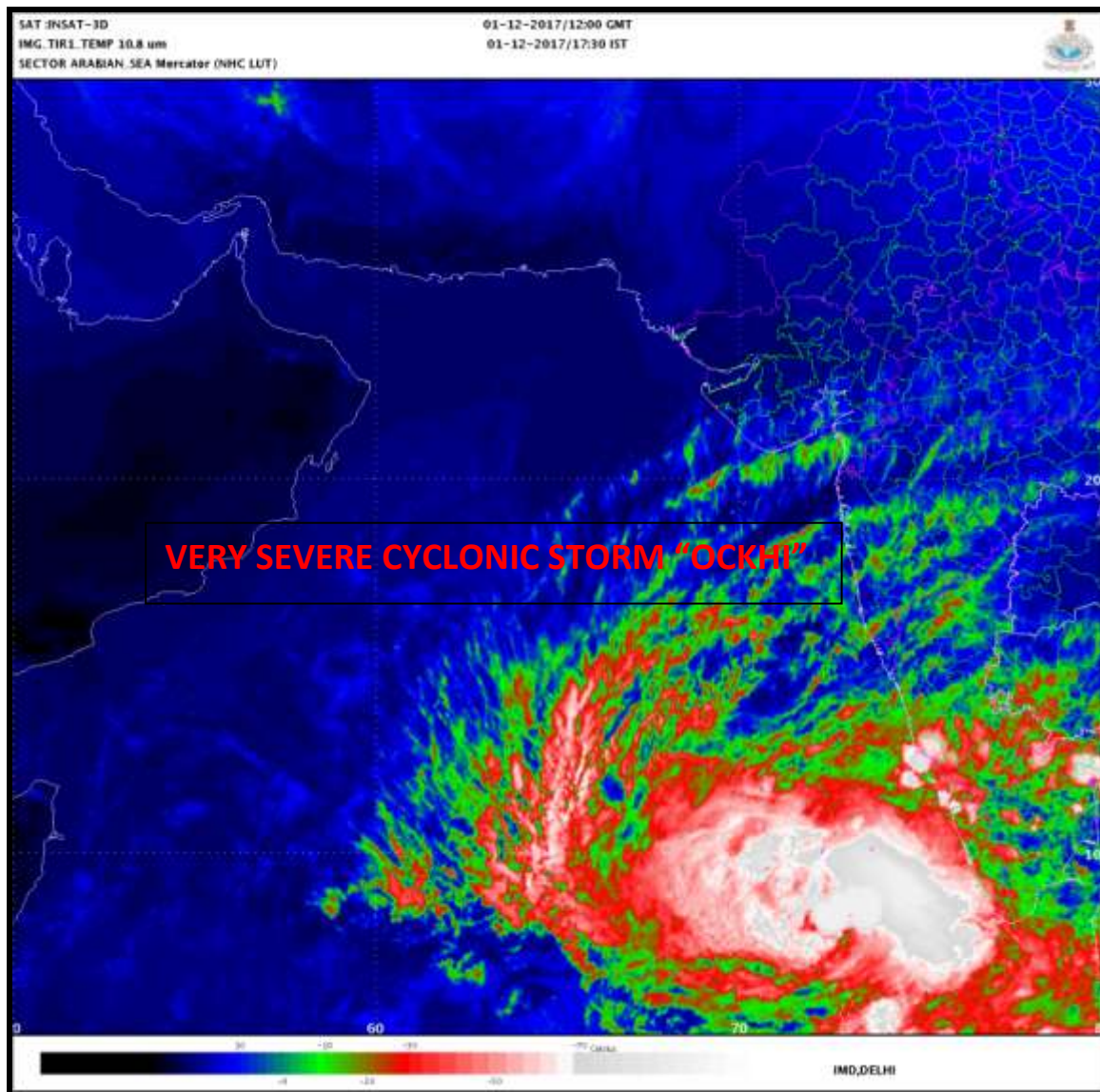
- **Heavy Rainfall warning:**
 - Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
 - Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- **Wind warning:**
 - Gale winds speed reaching 120-130 kmph gusting to 145 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.
- **Sea condition:**
 - Sea conditions would be phenomenal over and around Lakshadweep Islands during next 24 hours and very high during subsequent 24 hours.
 - Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.
- **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 2330 hrs IST of 01st December 2017.

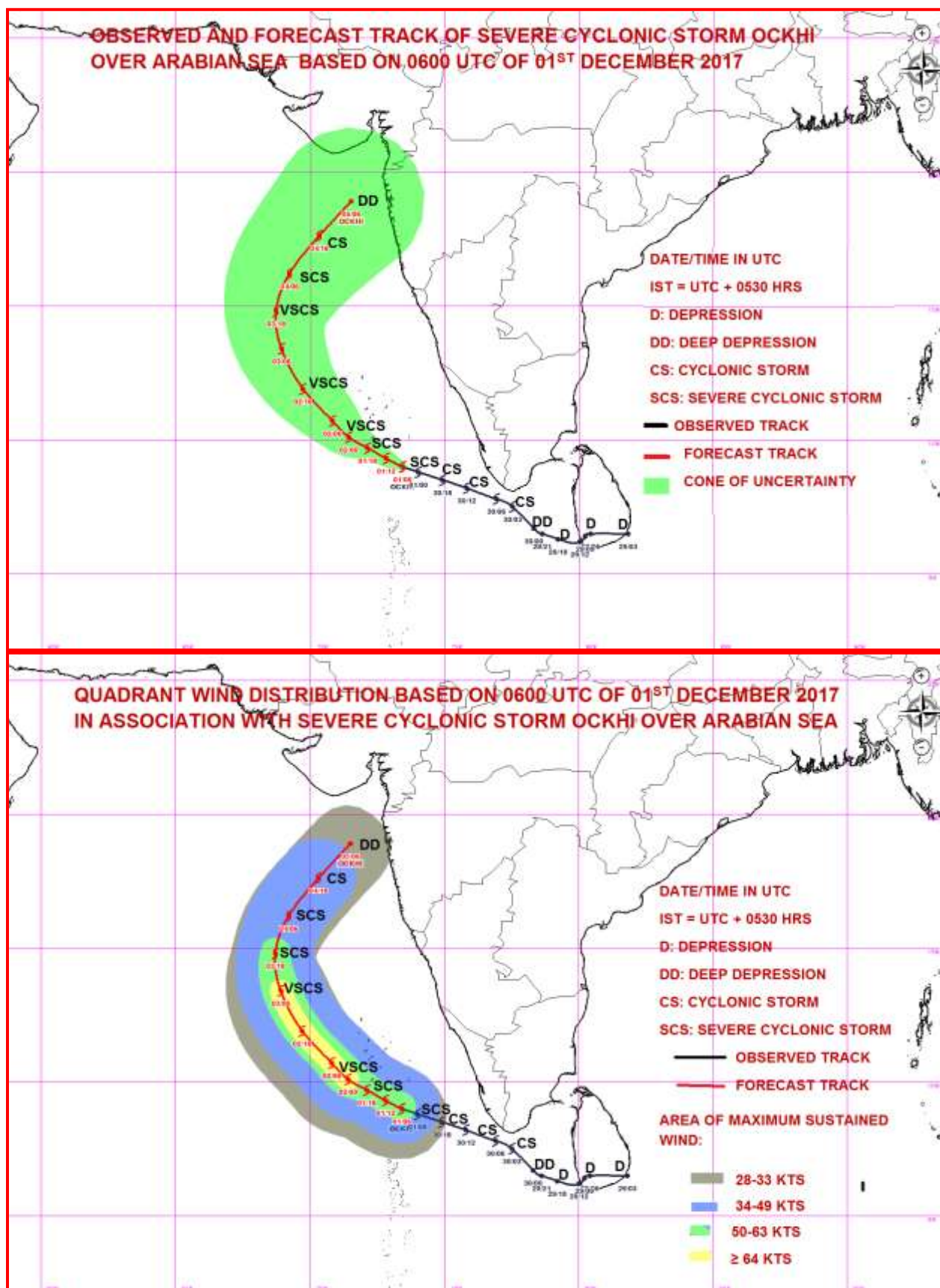
(NEETHA K GOPAL)
Scientist-E, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 19 (BOB 07/2017)

TIME OF ISSUE: 2230 HOURS IST

DATED: 01.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF SECRETARY, GOVT.OF KERALA
CHIEF SECRETARY, GOVT.OF TAMIL NADU
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
CHIEF SECRETARY, GOVT.OF PUDUCHERRY
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT.OF GOA
CHIEF SECRETARY, GOVT.OF MAHARASHTRA
CHIEF SECRETARY, GOVT.OF GUJRAT**

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved west-northwestwards with a speed of 10 kmph during past 06 hours and lay centred at 2030 hrs IST of today, the 01st December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.3° N and Longitude 72.5° E, about 130 km north-northwest of Minicoy and 200 km south of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/2030	9.3/72.5	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
01/2330	9.6/72.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0530	10.1/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/1130	10.7/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1730	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0530	12.6/69.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/1730	14.1/68.8	115-125 GUSTING TO 135	VERY SEVERE CYCLONIC STORM
04/0530	15.5/69.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1730	16.9/69.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/0530	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/1730	19.6/72.1	40-50 GUSTING TO 60	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

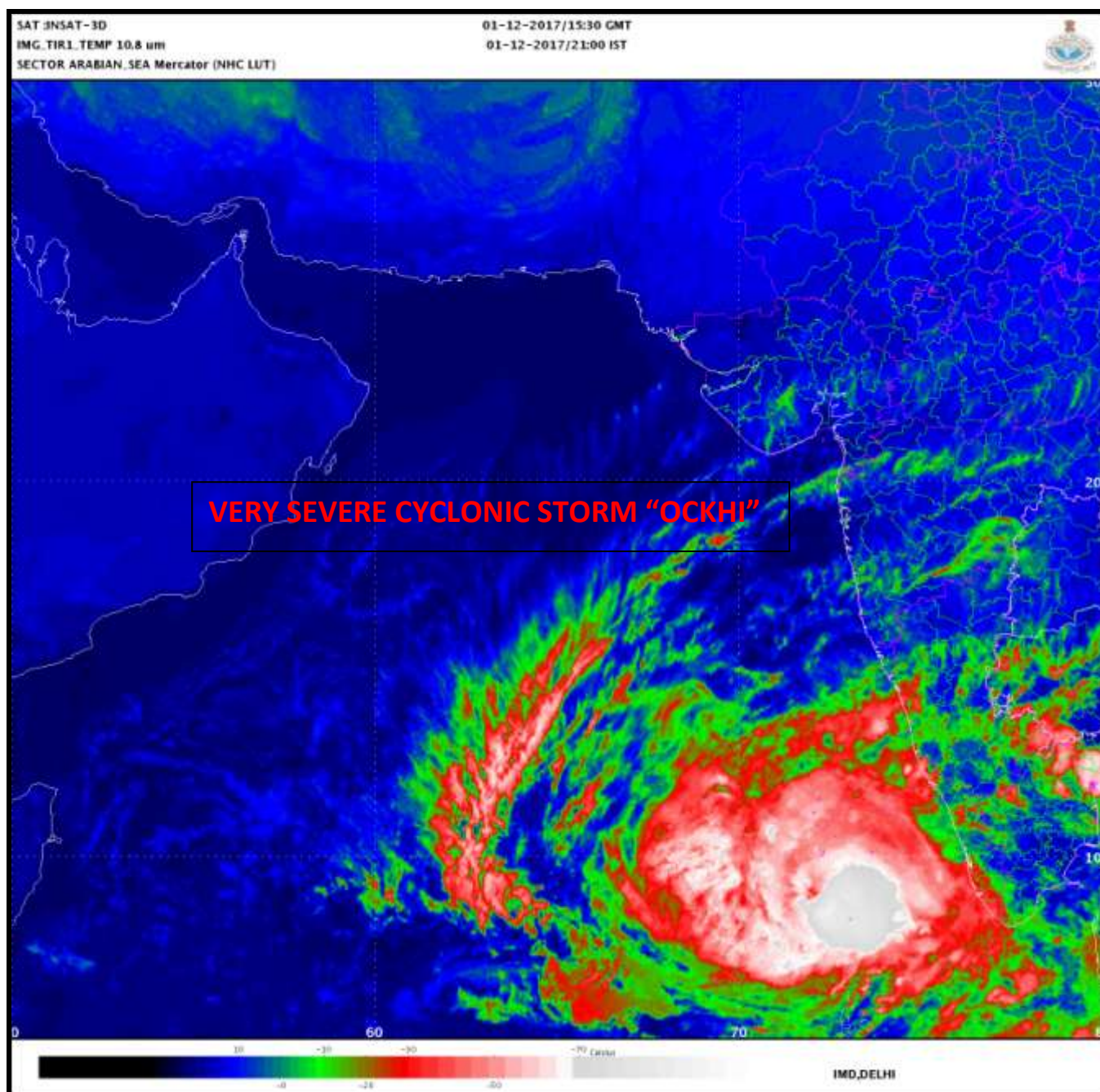
- **Heavy Rainfall warning:**
 - Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
 - Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- **Wind warning:**
 - Gale winds speed reaching 120-130 kmph gusting to 145 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.
- **Sea condition:**
 - Sea conditions would be phenomenal over and around Lakshadweep Islands during next 24 hours and very high during subsequent 24 hours.
 - Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.
- **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 0230 hrs IST of 02nd December 2017.

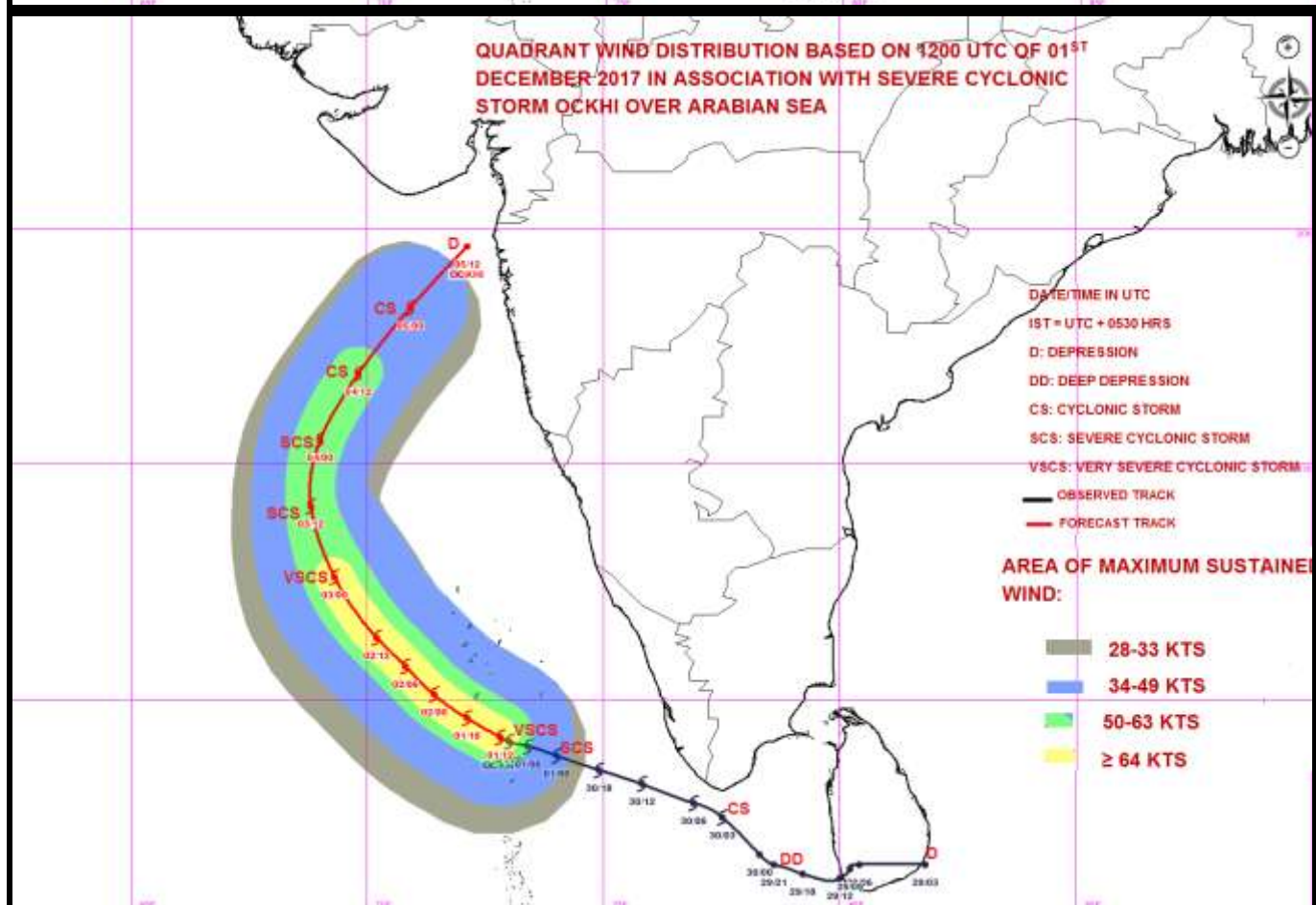
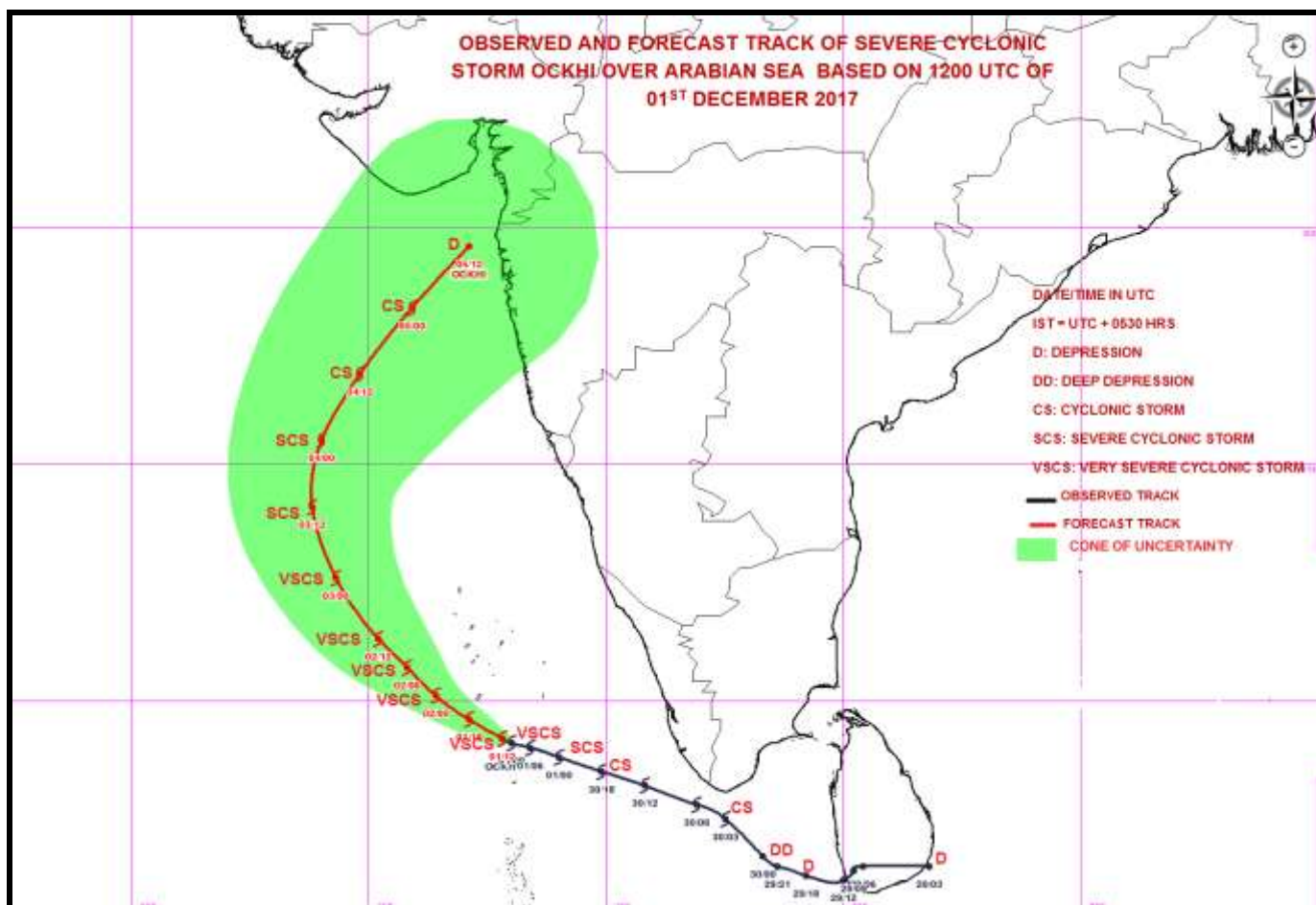
(SHIBIN B)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 20 (BOB 07/2017)

TIME OF ISSUE: 0230 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved further west-northwestwards with a speed of 14 kmph during past 06 hours and lay centred at 2330 hrs IST of yesterday, the 01st December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.5° N and Longitude 72.1° E, about 170 km north-northwest of Minicoy and 190 km south of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/2330	9.5/72.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0530	10.0/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/1130	10.6/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1730	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/2330	12.3/69.4	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1130	13.3/68.8	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
03/2330	14.8/68.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1130	16.2/69.2	80-90 GUSTING TO 100	CYCLONIC STORM
04/2330	17.5/70.1	60-70 GUSTING TO 80	CYCLONIC STORM
05/1130	18.6/71.2	40-50 GUSTING TO 60	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

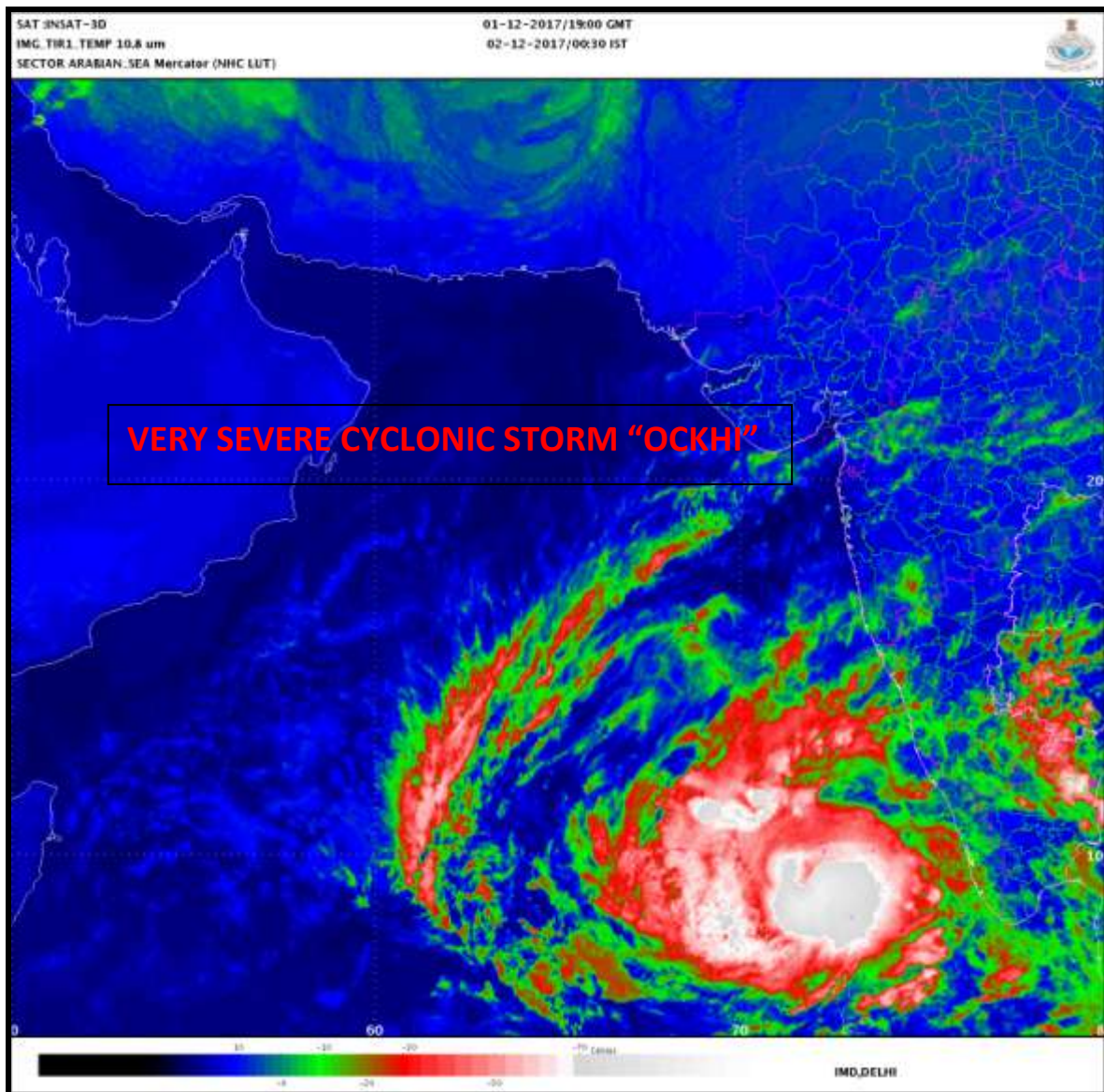
- **Heavy Rainfall warning:**
 - Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
 - Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- **Wind warning:**
 - Gale winds speed reaching 120-130 kmph gusting to 145 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.
- **Sea condition:**
 - Sea conditions would be phenomenal over and around Lakshadweep Islands during next 24 hours and very high during subsequent 24 hours.
 - Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.
- **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 0530 hrs IST of 02nd December 2017.

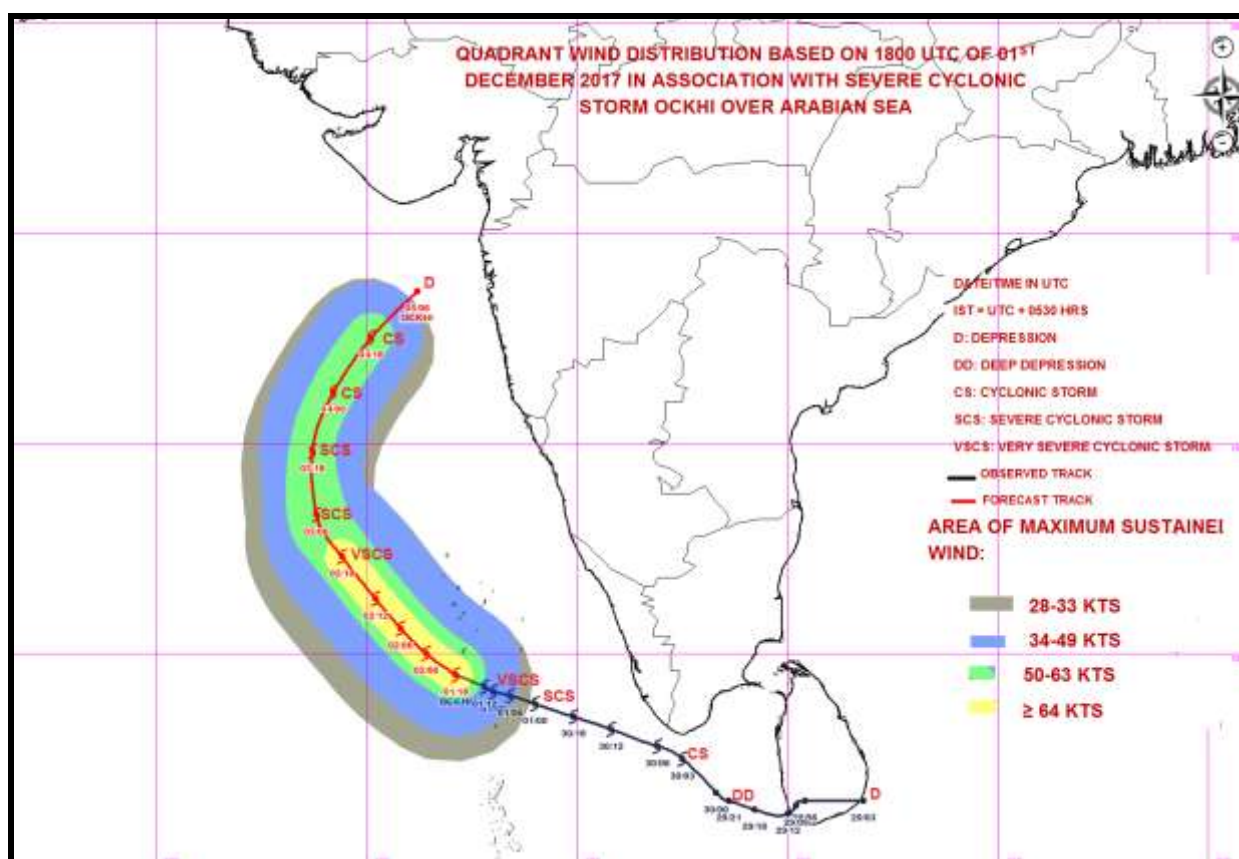
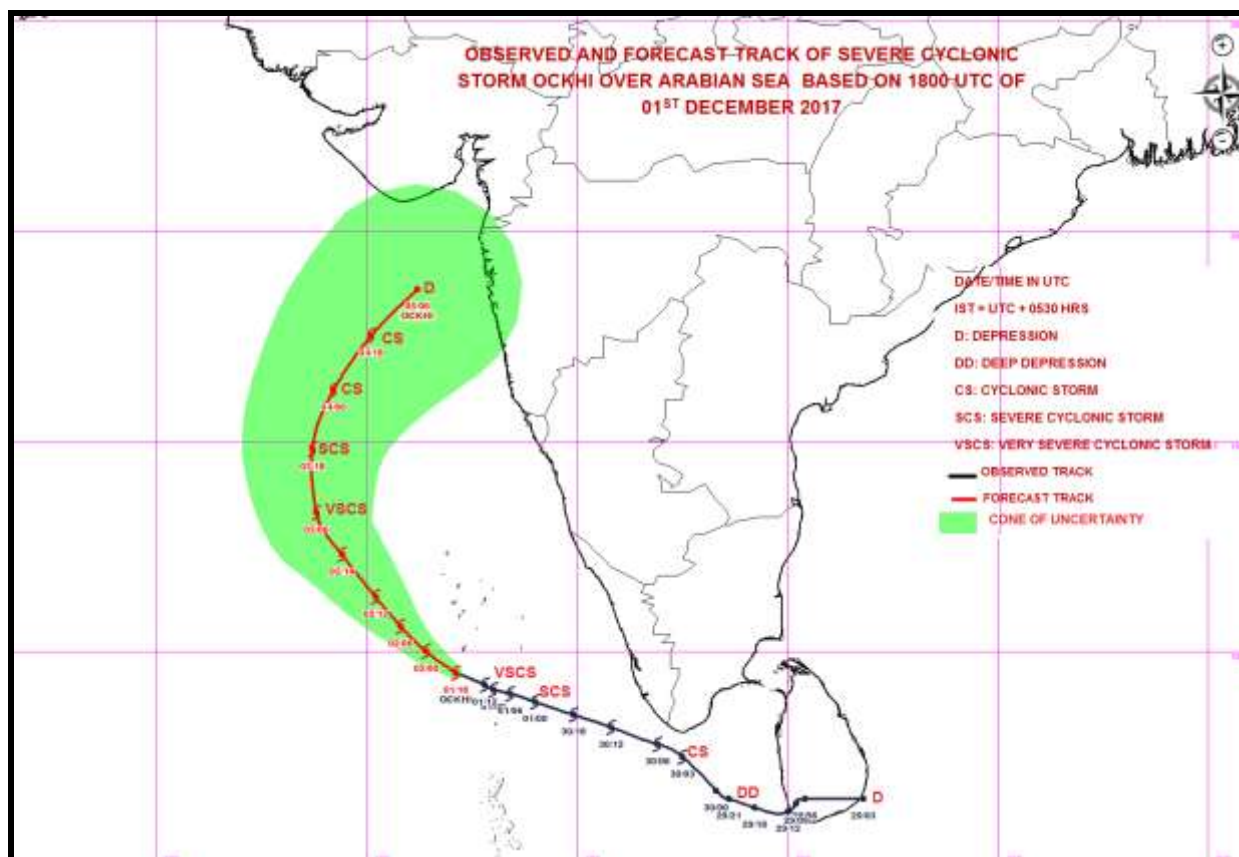
(SHIBIN B)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 21 (BOB 07/2017)

TIME OF ISSUE: 0430 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved further west-northwestwards with a speed of 19 kmph during past 06 hours and lay centred at 0230 hrs IST of today, the 02nd December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.5° N and Longitude 71.8° E, about 200 km north-northwest of Minicoy and 205 km south of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0230	9.5/71.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0530	10.0/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/1130	10.6/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1730	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/2330	12.3/69.4	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1130	13.3/68.8	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
03/2330	14.8/68.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1130	16.2/69.2	80-90 GUSTING TO 100	CYCLONIC STORM
04/2330	17.5/70.1	60-70 GUSTING TO 80	CYCLONIC STORM
05/1130	18.6/71.2	40-50 GUSTING TO 60	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

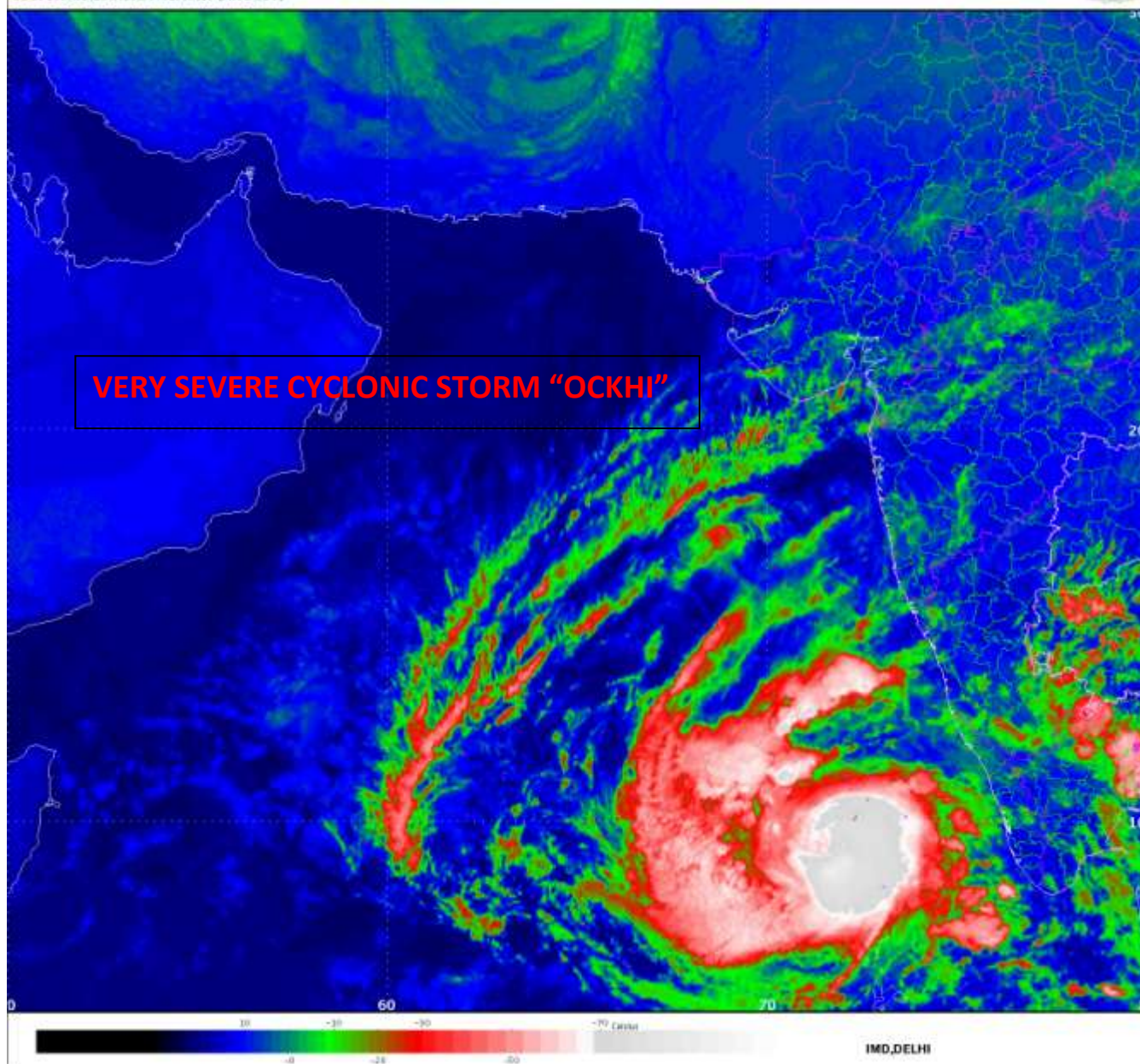
- **Heavy Rainfall warning:**
 - Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
 - Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- **Wind warning:**
 - Gale winds speed reaching 120-130 kmph gusting to 145 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 24 hours.
- **Sea condition:**
 - Sea conditions would be phenomenal over and around Lakshadweep Islands during next 24 hours and very high during subsequent 24 hours.
 - Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.
- **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.
- **Storm surge:**
 - Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
 - **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 0830 hrs IST of 02nd December 2017.

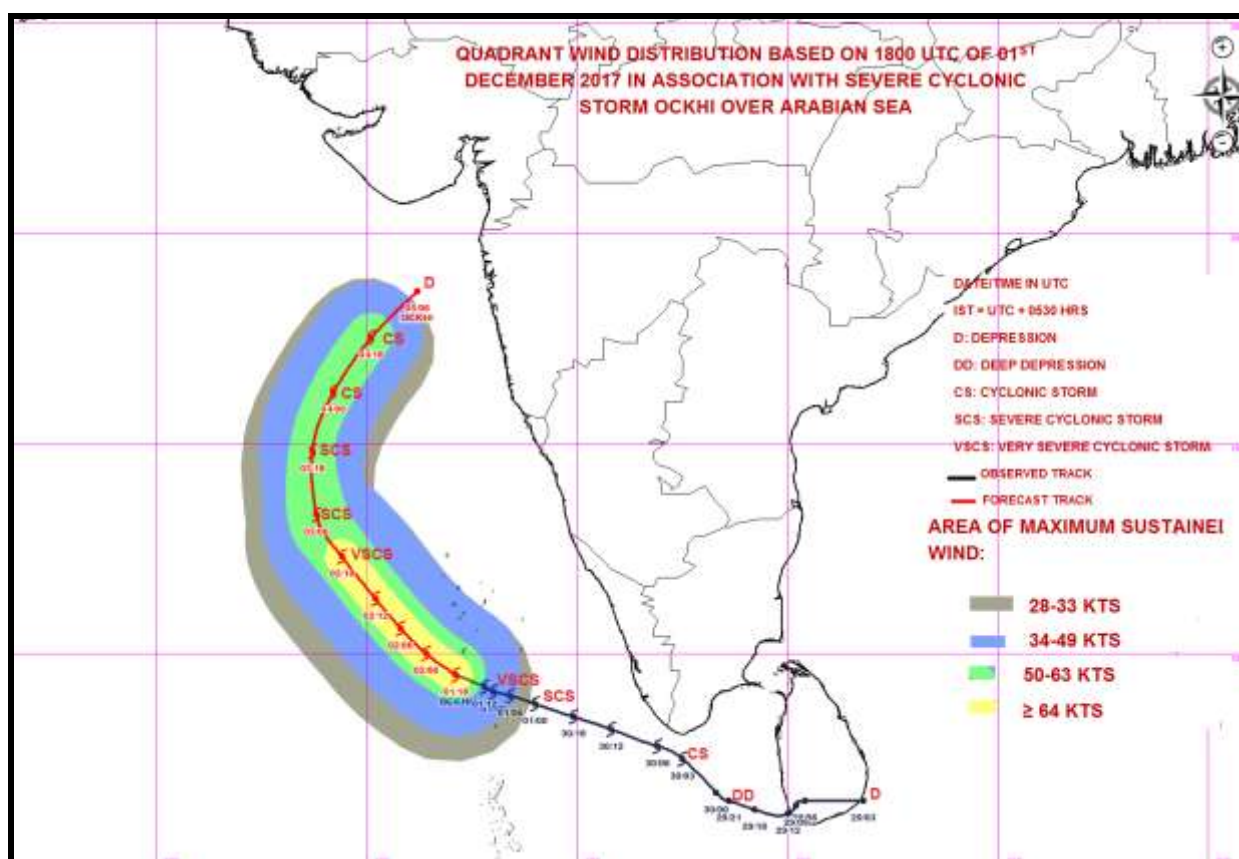
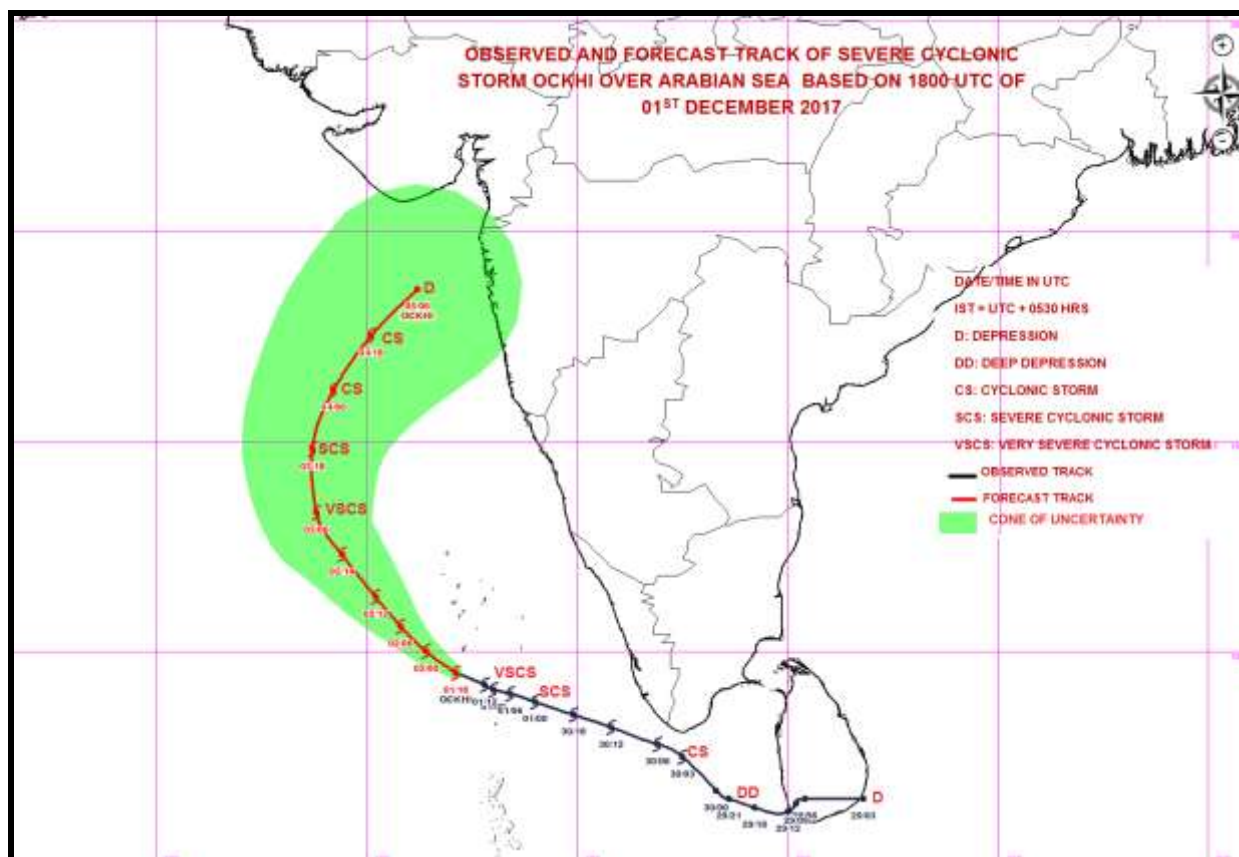
(SHIBIN B)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 22 (BOB 07/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

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CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

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DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved further west-northwestwards with a speed of 11 kmph during past 06 hours and lay centred at 0530 hrs IST of today, the 02nd December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.6° N and Longitude 71.5° E, about 230 km west-northwest of Minicoy and 215 km south-southwest of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0530	9.6/71.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1130	10.0/71.0	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02/1730	10.5/70.4	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
02/2330	11.1/69.8	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/0530	11.8/69.5	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/1730	13.5/68.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
04/0530	14.9/69.1	115-125 GUSTING TO 140	SEVERE CYCLONIC STORM
04/1730	16.3/69.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0530	18.2/70.8	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.9/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0530	21.3/72.4	30-40 GUSTING TO 60	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over Lakshadweep area during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours.
- Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.

➤ **Wind warning:**

- Gale winds speed reaching 120-130 kmph gusting to 145 kmph very likely over & around Lakshadweep Islands during next 24 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala during next 24 hours and along & off Karnataka coast during next 48 hours.

➤ **Sea condition:**

- Sea conditions would be phenomenal over and around Lakshadweep Islands during next 24 hours and very high during subsequent 24 hours.
- Sea conditions would be high to very high along & off Kerala coast during next 24 hours and along & off Karnataka coast during subsequent 24 hours.

➤ **Damage Expected over Lakshadweep Islands:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.

➤ **Storm surge:**

- Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of Lakshadweep Islands.

➤ **Action suggested**

- **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala & Karnataka coast during next 48 hrs.

The next bulletin will be issued at 1130 hrs IST of 02nd December 2017.

(SHIBIN B)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

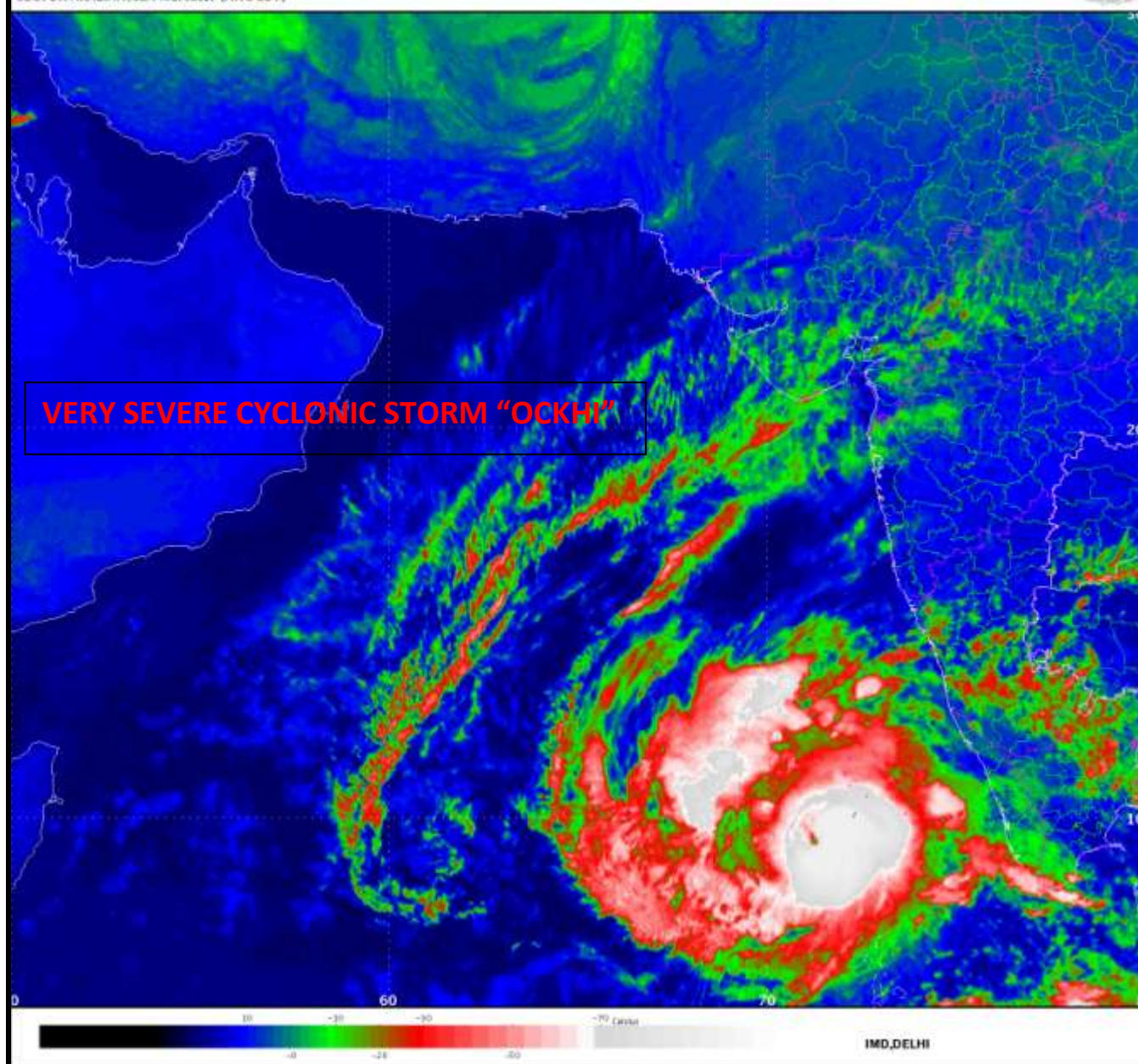
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

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IMG_TIR1_TEMP 10.8 um
SECTOR ARABIAN_SEA Mercator (NHC LUT)

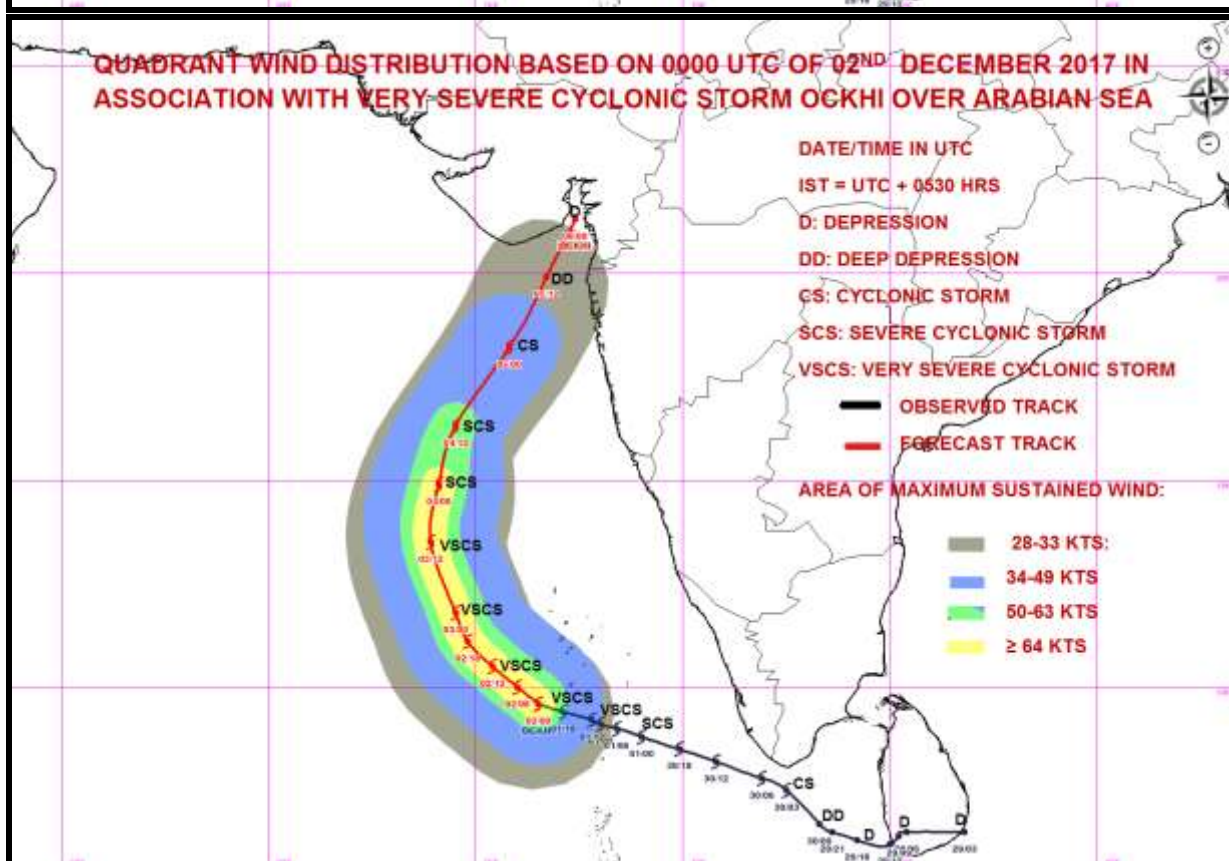
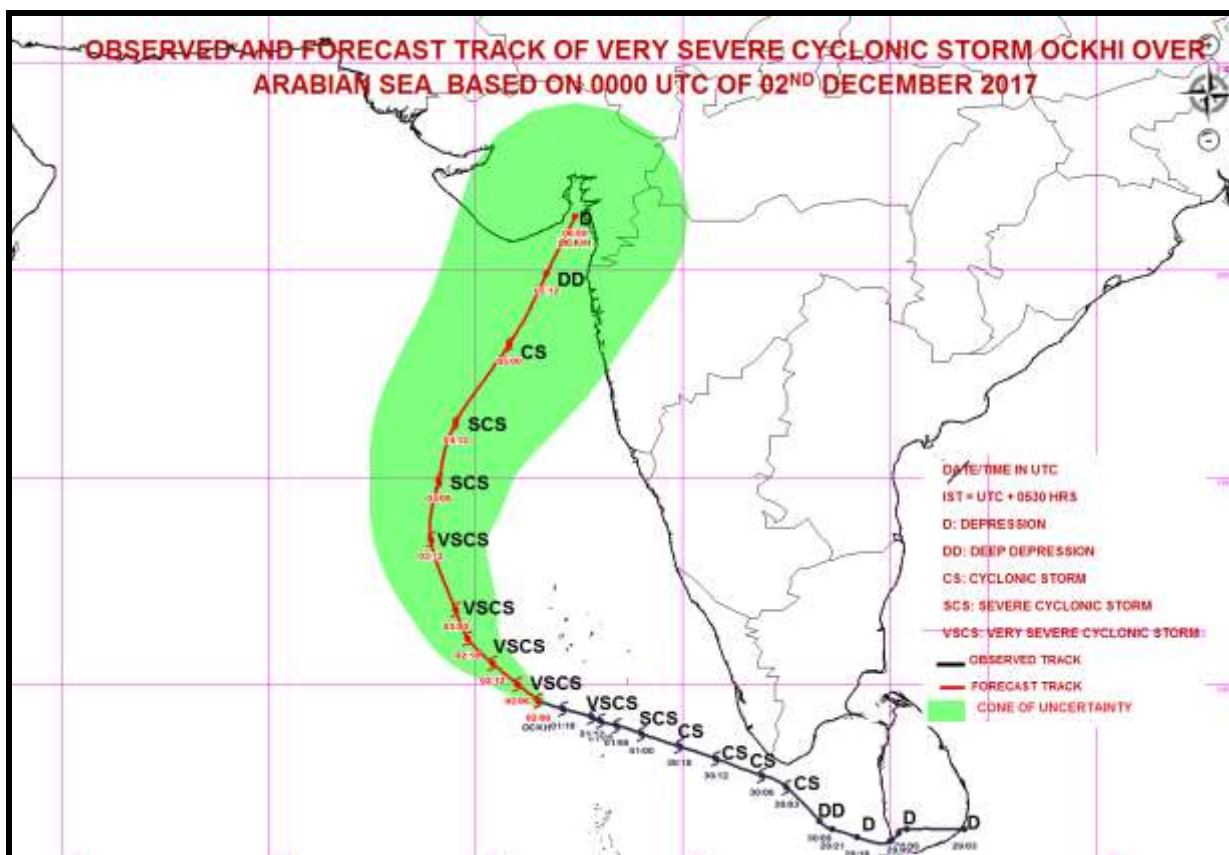
02-12-2017/01:30 GMT
02-12-2017/07:00 IST



VERY SEVERE CYCLONIC STORM "OCKHI"



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 23 (BOB 07/2017)

TIME OF ISSUE: 1130 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved further west-northwestwards with a speed of 12 kmph during past 06 hours and lay centred at 0830 hrs IST of today, the 02nd December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.7° N and Longitude 71.2° E, about 260 km west-northwest of Minicoy and 230 km southwest of Amini Divi. The system is very likely to intensify further during next 24 hours. It is very likely to continue to move west-northwestwards across Lakshadweep Islands during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0830	9.7/71.2	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02/1130	10.0/71.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
02/1730	10.5/70.4	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
02/2330	11.1/69.8	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/0530	11.8/69.5	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/1730	13.5/68.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
04/0530	14.9/69.1	115-125 GUSTING TO 140	SEVERE CYCLONIC STORM
04/1730	16.3/69.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0530	18.2/70.8	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.9/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0530	21.3/72.4	30-40 GUSTING TO 60	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over north Lakshadweep Islands during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. Isolated heavy to very rainfall is very likely over south Lakshadweep Islands during next 24 hours.
- Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.

➤ **Wind warning:**

- Gale winds speed reaching 100-110 kmph gusting to 120 kmph very likely over & around north Lakshadweep Islands during next 24 hours and gradual decrease thereafter. Gale winds speed reaching 70-80 kmph gusting to 90 kmph very likely south Lakshadweep Islands during next 12 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala coast during next 24 hours and along & off Karnataka coast during next 48 hours.

➤ **Sea condition:**

- Sea conditions would be phenomenal over and around north Lakshadweep Islands during next 24 hours and very high during subsequent 24 hours. It is very likely to be high to very high over and around south Lakshadweep Islands during next 12 hours and very rough to high during subsequent 24 hrs.
- Sea conditions would be rough to very rough along & off Kerala coast during next 24 hours and along & off Karnataka coast during next 48 hours.

➤ **Storm surge:**

Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of north Lakshadweep Islands during next 24 hrs and storm surge of about 0.5 metre above astronomical tides very likely to inundate low lying areas of south Lakshadweep Islands during next 12 hrs.

➤ **Damage Expected over North Lakshadweep Islands during next 24 hours:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.

Damage Expected over South Lakshadweep Islands during next 12 hours: Minor damage to power and communication lines due to breaking of tree branches. Major damage to thatched houses/huts. Major damage to kutcha houses, minor damage to pucca roads. Some damage to banana & Papaya trees, orchards and standing crops.

➤ **Action suggested**

- **Lakshadweep Islands:** Fishermen along & off Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala coast during next 24 hrs and along and off Karnataka coast during next 48 hrs.

The next bulletin will be issued at 1430 hrs IST of 02nd December 2017.

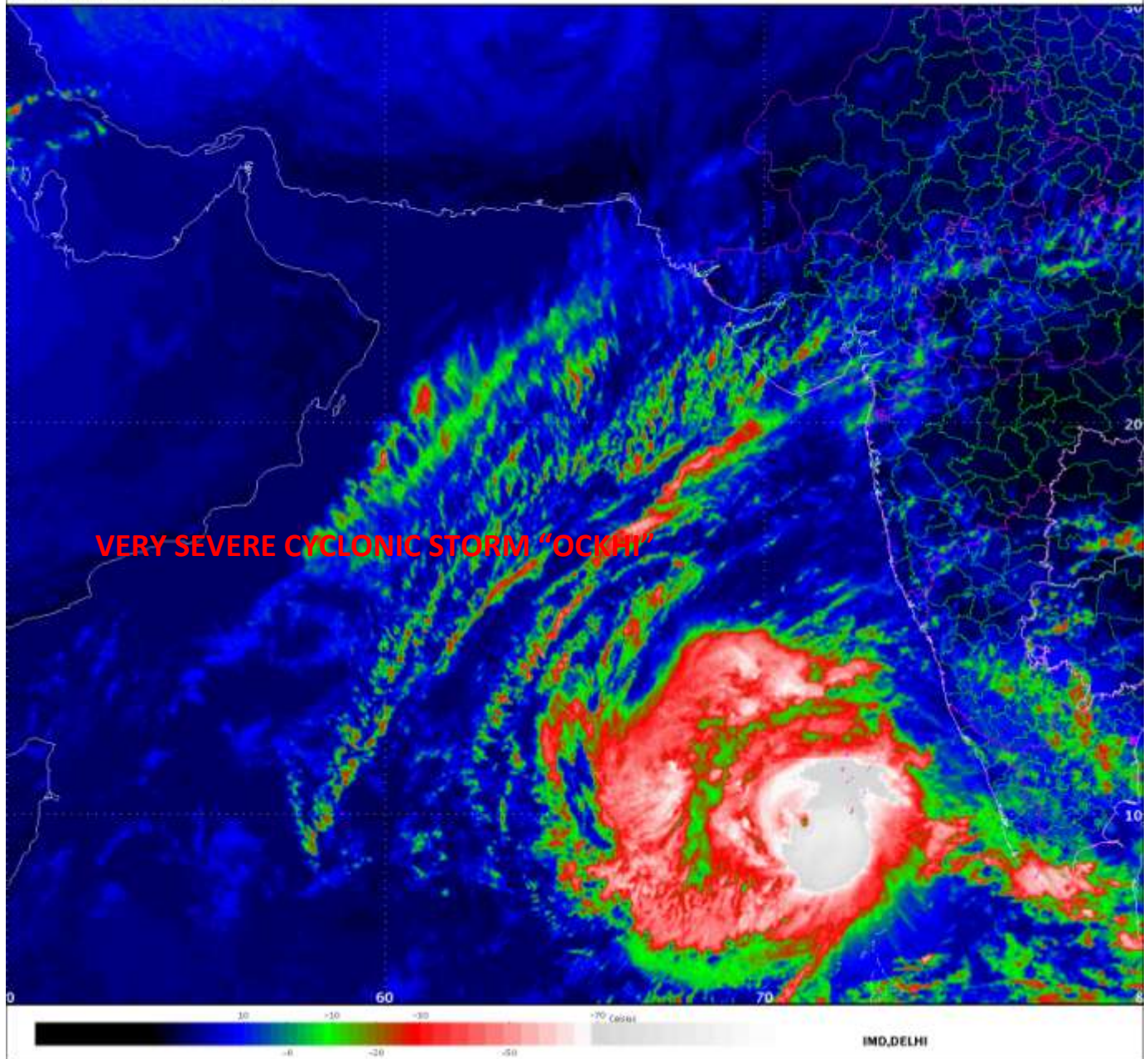
(Neetha K. Gopal)
Scientist-E, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

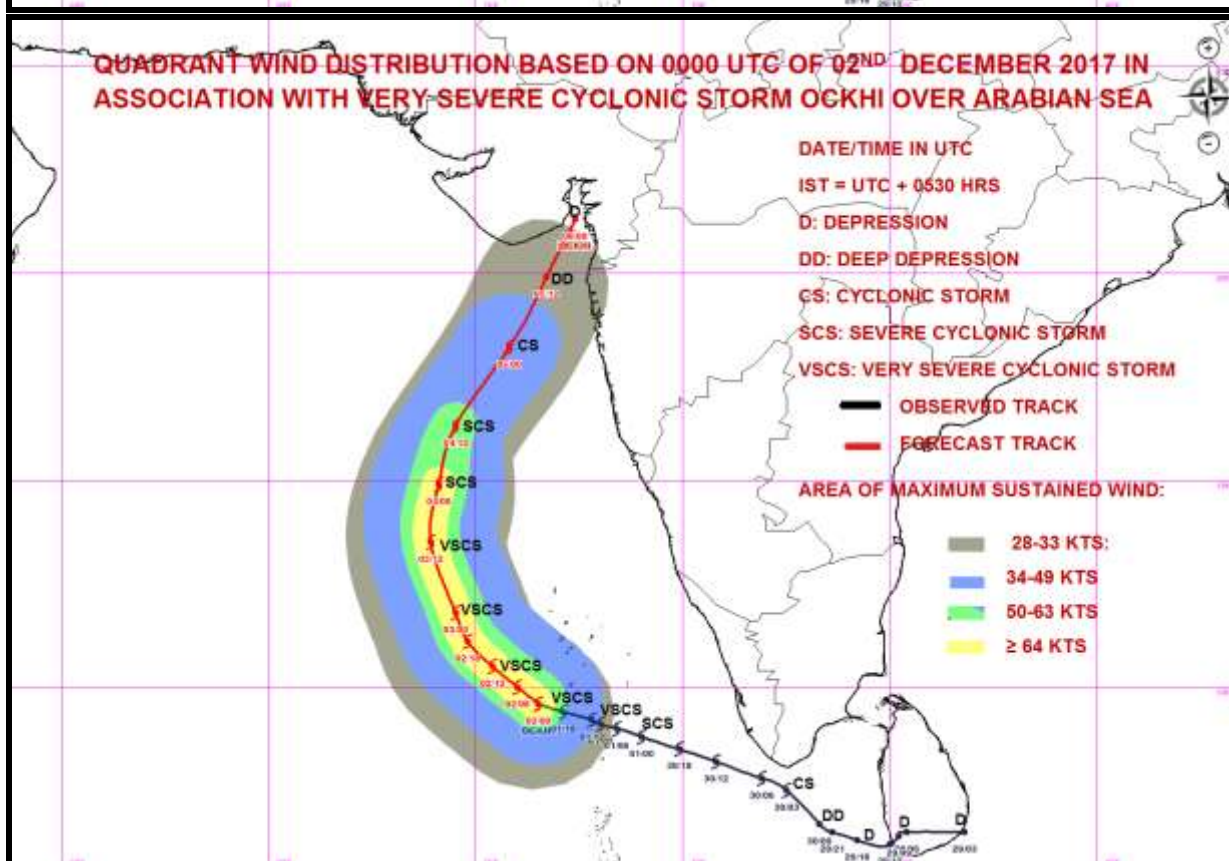
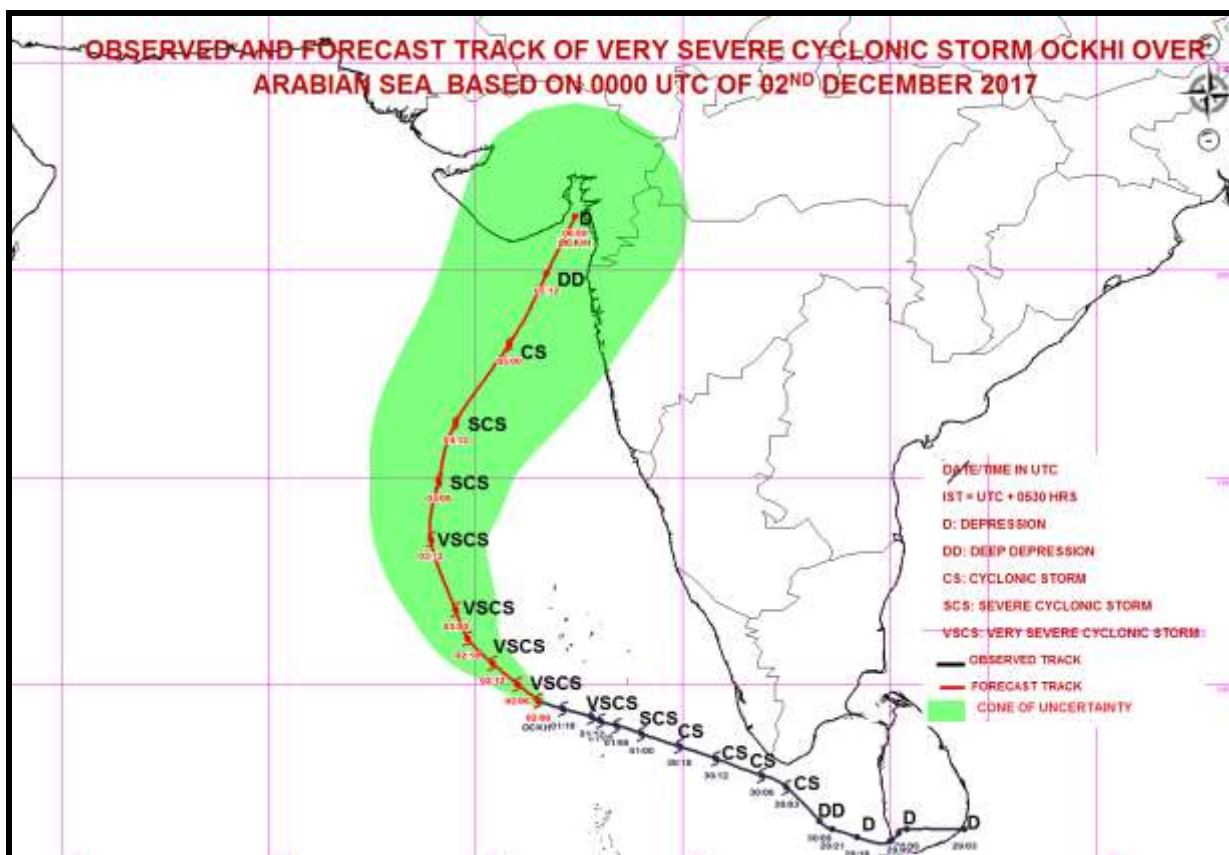
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

SAT:INSAT-3D
IMG.TIR1_TEMP 10.8 um
SECTOR ARABIAN_SEA Mercator (NHC LUT)

02-12-2017/05:00 GMT
02-12-2017/10:30 IST



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 24 (BOB 07/2017)

TIME OF ISSUE: 1430 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Lakshadweep area and adjoining Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved further west-northwestwards with a speed of 10 kmph during past 06 hours and lay centred at 1130 hrs IST of today, the 02nd December, 2017 over Lakshadweep area and adjoining southeast Arabian Sea near Latitude 9.8° N and Longitude 71.0° E, about 280 km northwest of Minicoy and 240 km southwest of Amini Divi. The system is very likely to weaken gradually from tonight. It is very likely to continue to move northwestwards during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/1130	9.8/71.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
02/1730	10.4/70.3	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02/2330	11.1/69.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/0530	11.7/69.4	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1130	12.5/69.0	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/2330	13.7/68.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/2330	16.9/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/1130	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	20.6/72.1	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	21.9/72.9	35-45 GUSTING TO 55	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over north Lakshadweep Islands during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. Isolated heavy to very rainfall is very likely over south Lakshadweep Islands during next 24 hours.
- Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.

➤ **Wind warning:**

- Gale winds speed reaching 100-110 kmph gusting to 120 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter and becoming 65-75 kmph gusting to 85 kmph by tomorrow, the 3rd December morning. Gale winds speed reaching 70-80 kmph gusting to 90 kmph very likely over and around south Lakshadweep Islands during next 12 hours and gradual decrease thereafter becoming 40-50 kmph gusting to 60 kmph by tomorrow, the 3rd December morning.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala coast during next 24 hours and along & off Karnataka coasts during next 48 hours.

➤ **Sea condition:**

- Sea conditions would be phenomenal over and around north Lakshadweep Islands during next 12 hours and gradually becoming high by tomorrow, the 3rd December morning. It is very likely to be high to very high over and around south Lakshadweep Islands during next 12 hours and gradually becoming rough to very rough by tomorrow, the 3rd December morning.
- Sea conditions would be rough to very rough along & off Kerala coast during next 24 hours and along & off Karnataka coast during next 48 hours.

➤ **Storm surge:**

Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of north Lakshadweep Islands during next 24 hrs and storm surge of about 0.5 metre above astronomical tides very likely to inundate low lying areas of south Lakshadweep Islands during next 12 hrs.

➤ **Damage Expected over North Lakshadweep Islands during next 24 hours:** Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.

Damage Expected over South Lakshadweep Islands during next 12 hours: Minor damage to power and communication lines due to breaking of tree branches. Major damage to thatched houses/huts. Major damage to kutcha houses, minor damage to pucca roads. Some damage to banana & Papaya trees, orchards and standing crops.

➤ **Action suggested**

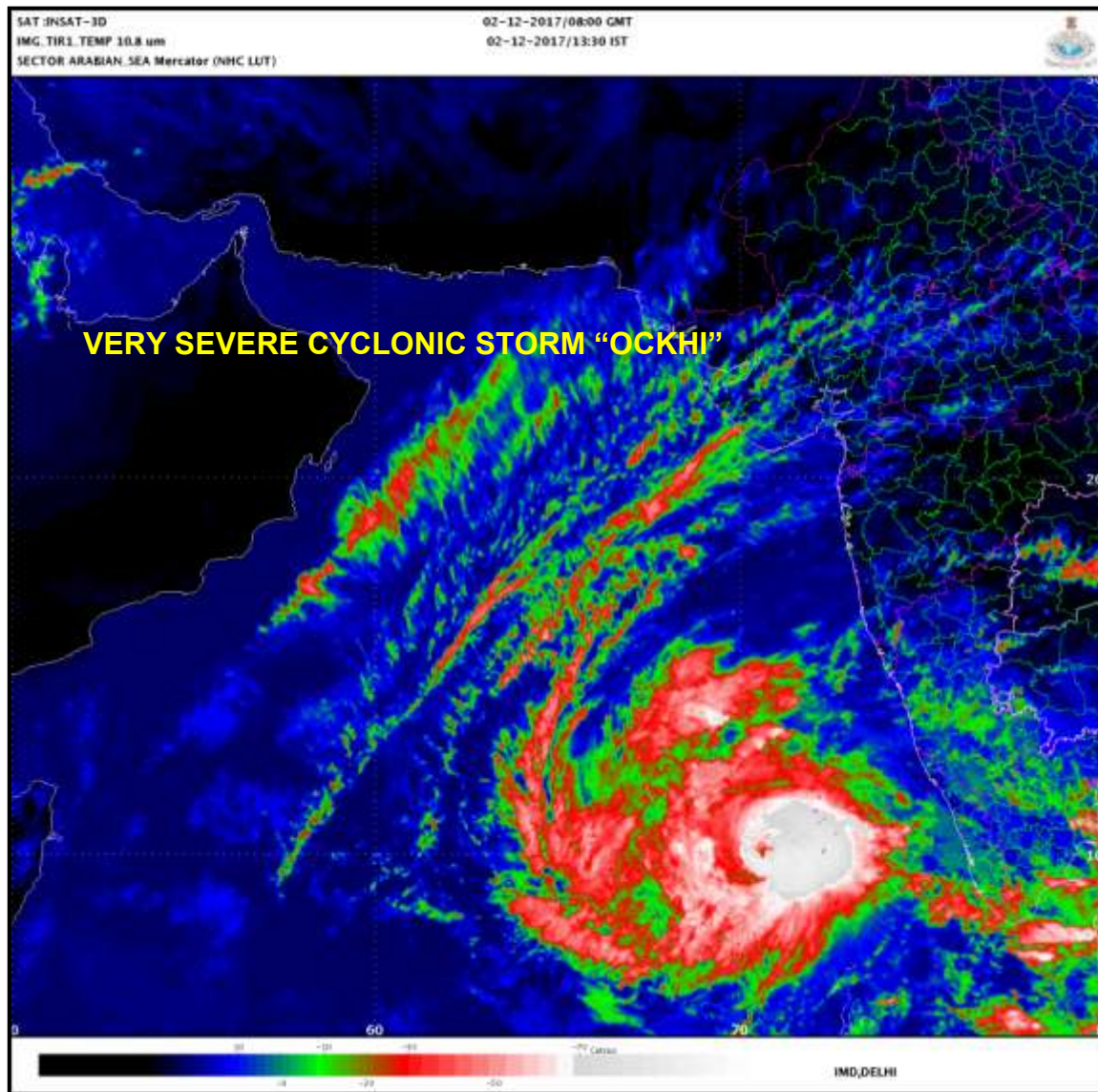
- **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 48 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala coast during next 24 hrs and along and off Karnataka coast during next 48 hrs.

The next bulletin will be issued at 1430 hrs IST of 02nd December 2017.

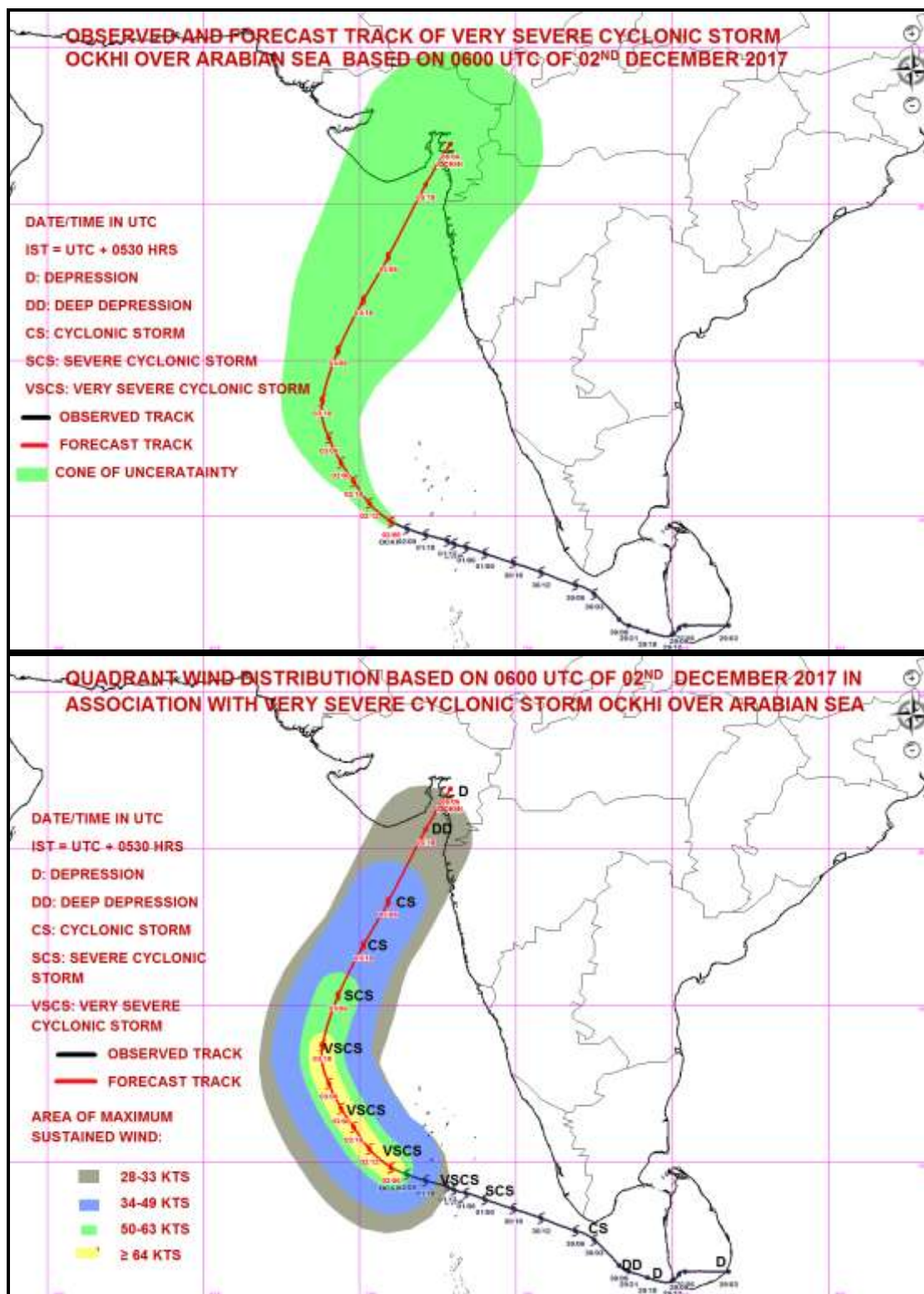
(Neetha K. Gopal)
Scientist-E, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 25 (BOB 07/2017)

TIME OF ISSUE: 1700 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and adjoining Lakshadweep Area and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea moved northwestwards with a speed of 20 kmph during past 03 hours and lay centred at 1430 hrs IST of today, the 02nd December, 2017 over southeast Arabian Sea and adjoining Lakshadweep area near Latitude 10.2° N and Longitude 70.6° E, about 250 km west-southwest of Amini Divi. The system is very likely to weaken gradually from tomorrow, the 03rd December, 2017 morning. It is very likely to continue to move northwestwards during next 24 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/1430	10.2/70.6	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
02/1730	10.4/70.3	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
02/2330	11.1/69.8	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
03/0530	11.7/69.4	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
03/1130	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/2330	13.7/68.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/2330	16.9/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/1130	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	20.6/72.1	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	21.9/72.9	35-45 GUSTING TO 55	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ Heavy Rainfall warning:

- Rainfall at most places with heavy to very heavy rainfall at a few places and isolated extremely heavy falls (>20 cm) very likely over north Lakshadweep Islands during next 24 hours and isolated heavy to very heavy falls during subsequent 24 hours. Isolated heavy to very rainfall is very likely over south Lakshadweep Islands during next 24 hours.
- Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 24 hours.
- Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.

➤ Wind warning:

- Gale winds speed reaching 100-110 kmph gusting to 120 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter and becoming 65-75 kmph gusting to 85 kmph by tomorrow, the 3rd December morning. Gale winds speed reaching 70-80 kmph gusting to 90 kmph very likely over and around south Lakshadweep Islands during next 12 hours and gradual decrease thereafter becoming 40-50 kmph gusting to 60 kmph by tomorrow, the 3rd December morning.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off Kerala coast during next 24 hours and along & off Karnataka coasts during next 48 hours.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off South Gujarat coast on 4th and 5th December 2017.

➤ Sea condition:

- Sea conditions would be phenomenal over and around north Lakshadweep Islands during next 12 hours and gradually becoming high by tomorrow, the 3rd December morning. It is very likely to be high to very high over and around south Lakshadweep Islands during next 12 hours and gradually becoming rough to very rough by tomorrow, the 3rd December morning.
- Sea conditions would be rough to very rough along & off Kerala coast during next 24 hours and along & off Karnataka coast during next 48 hours.
- Sea conditions would be rough to very rough along & off South Gujarat coast on 4th and 5th December 2017.

➤ Storm surge:

Storm surge of about 1 meter above astronomical tides very likely to inundate low lying areas of north Lakshadweep Islands during next 24 hrs and storm surge of about 0.5 metre above astronomical tides very likely to inundate low lying areas of south Lakshadweep Islands during next 12 hrs.

- ### **➤ Damage Expected over North Lakshadweep Islands during next 24 hours:**
- Damage to power and communication lines due to breaking of tree branches and uprooting of large avenue trees. Major damage to thatched houses/huts: Major damage to kutcha houses, some damage to pucca roads and flooding of escape routes. Damage to banana & Papaya trees and standing crops.

Damage Expected over South Lakshadweep Islands during next 12 hours: Minor damage to power and communication lines due to breaking of tree branches. Major damage to thatched houses/huts. Major damage to kutcha houses, minor damage to pucca roads. Some damage to banana & Papaya trees, orchards and standing crops.

➤ Action suggested

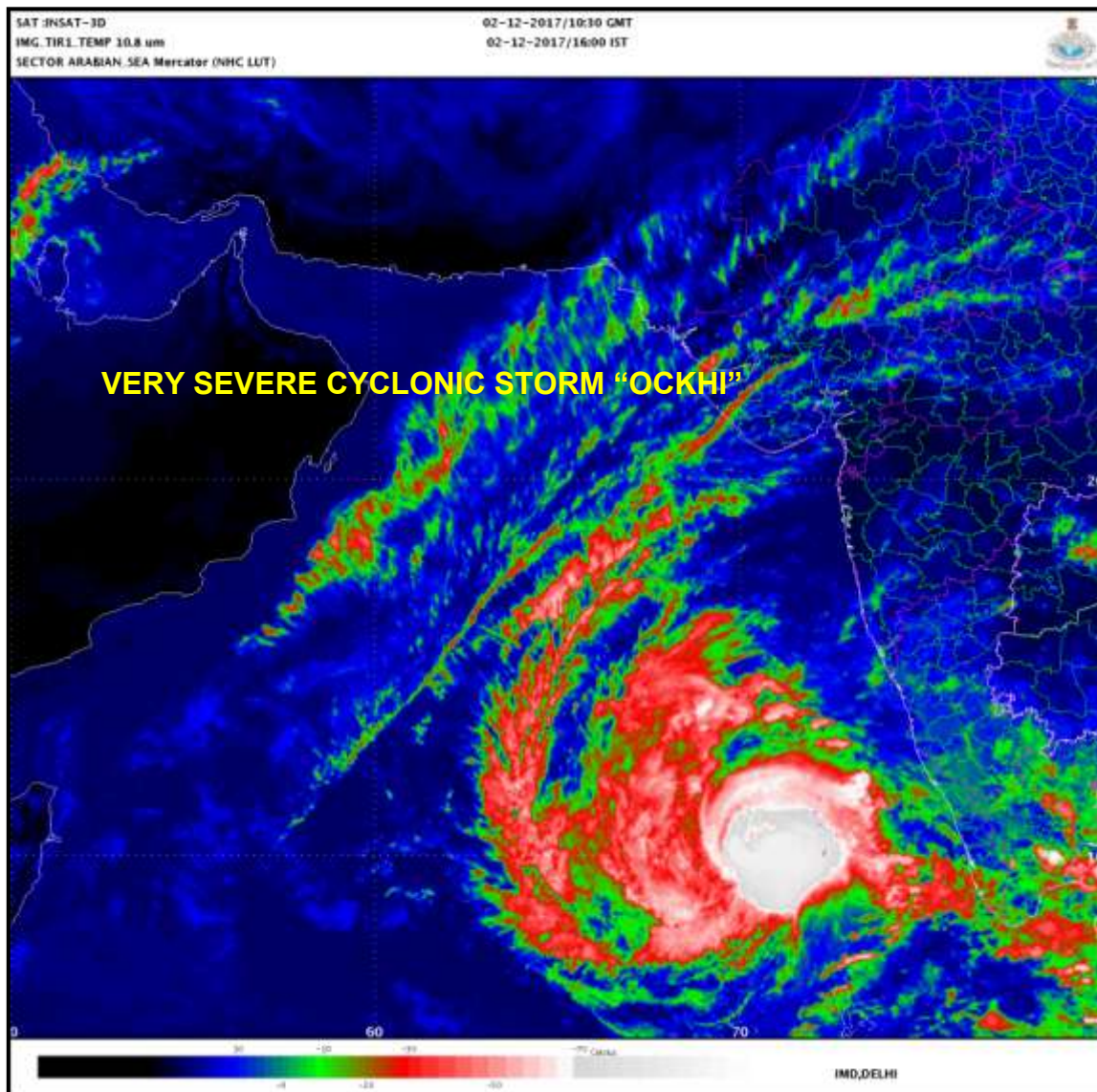
- **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into the sea along & off Kerala coast during next 24 hrs and along and off Karnataka coast during next 48 hrs.
- **South Gujarat coast:** Fishermen are advised not to venture into the sea along & off South Gujarat coast on 4th and 5th December 2017

The next bulletin will be issued at 2030 hrs IST of 02nd December 2017.

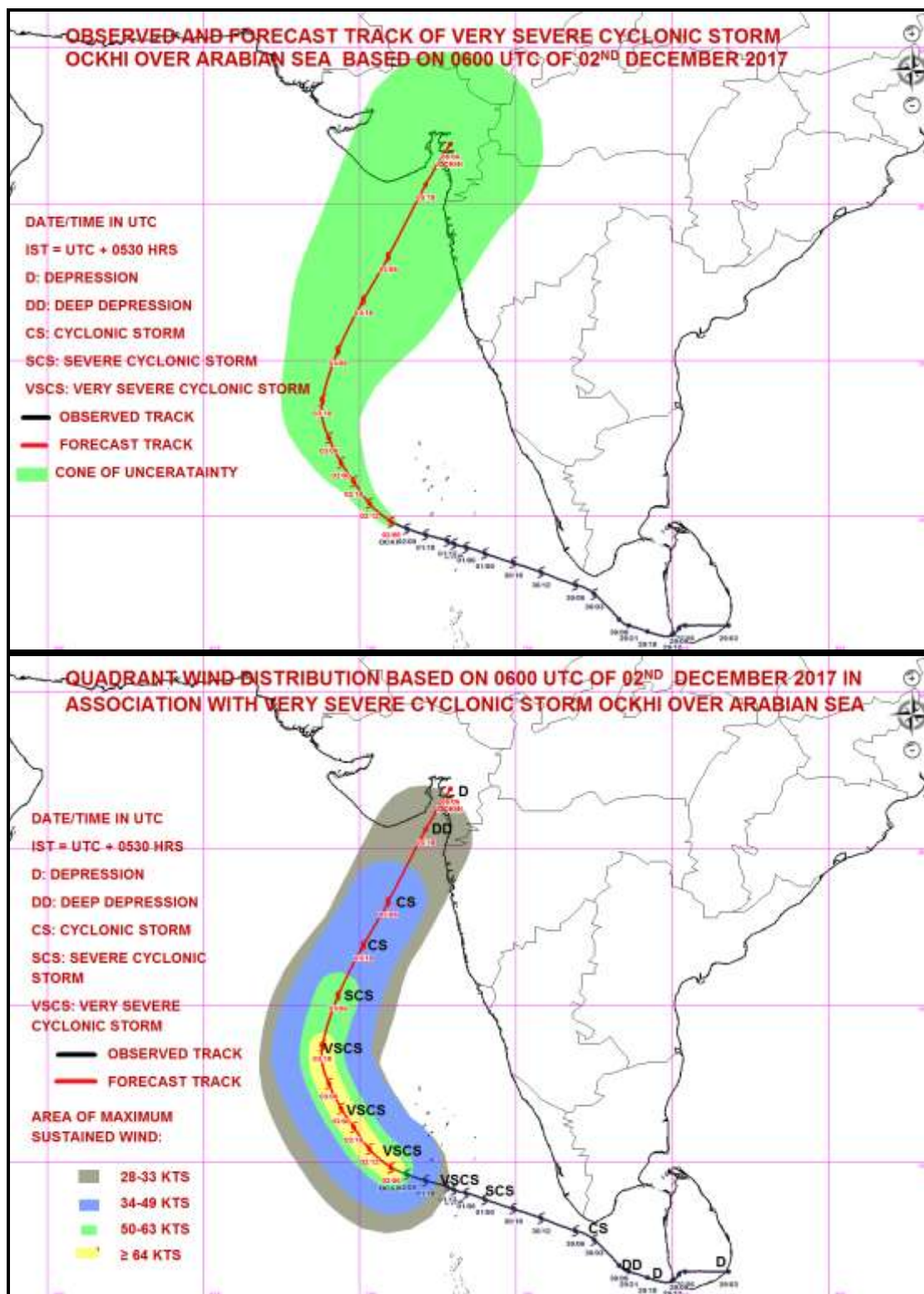
(Neetha K. Gopal)
Scientist-E, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 26 (BOB 07/2017)

TIME OF ISSUE: 1930 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

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DIRECTOR GENERAL, AIR

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CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea further moved northwestwards with a speed of 18 kmph during past 06 hours and lay centred at 1730 hrs IST of today, the 02nd December, 2017 over southeast Arabian Sea near Latitude 10.5° N and Longitude 70.3° E, about 275 km west-southwest of Amini Divi. The system is very likely to weaken gradually from tomorrow, the 03rd December, 2017 morning. It is very likely to continue to move northwestwards during next 12 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/1730	10.5/70.3	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
02/2330	11.1/69.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0530	11.7/69.4	145-155 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/1130	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1730	13.1/68.9	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0530	14.5/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
04/1730	16.1/69.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0530	17.6/70.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.5/71.5	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0530	21.3/72.5	45-55 GUSTING TO 65	DEPRESSION
06/1730	23.1/73.5	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over north Lakshadweep Islands during next 24 hours.
- Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 12 hours.
- Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.

➤ **Wind warning:**

- Gale winds speed reaching 70-80 kmph gusting to 90 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter and becoming squally winds speed reaching 55-65 kmph gusting to 75 kmph by tomorrow, the 3rd December morning for the subsequent 12 hours. Squally winds speed reaching 55-65 kmph gusting to 75 kmph very likely over and around south Lakshadweep Islands during next 12 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Sea condition:**

- Sea conditions would be high over and around north Lakshadweep Islands during next 12 hours and gradually becoming very rough by tomorrow, the 3rd December morning for subsequent 12 hours. It is very likely to be rough to very rough over and around south Lakshadweep Islands during next 12 hours and moderate to rough during the subsequent 12 hours.
- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Storm surge:**

Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of north Lakshadweep Islands during next 12 hours.

Damage Expected over North Lakshadweep Islands during next 12 hours: Minor damage to power and communication lines due to breaking of tree branches. Major damage to thatched houses/huts. Major damage to kutcha houses, minor damage to pucca roads. Some damage to banana & Papaya trees, orchards and standing crops.

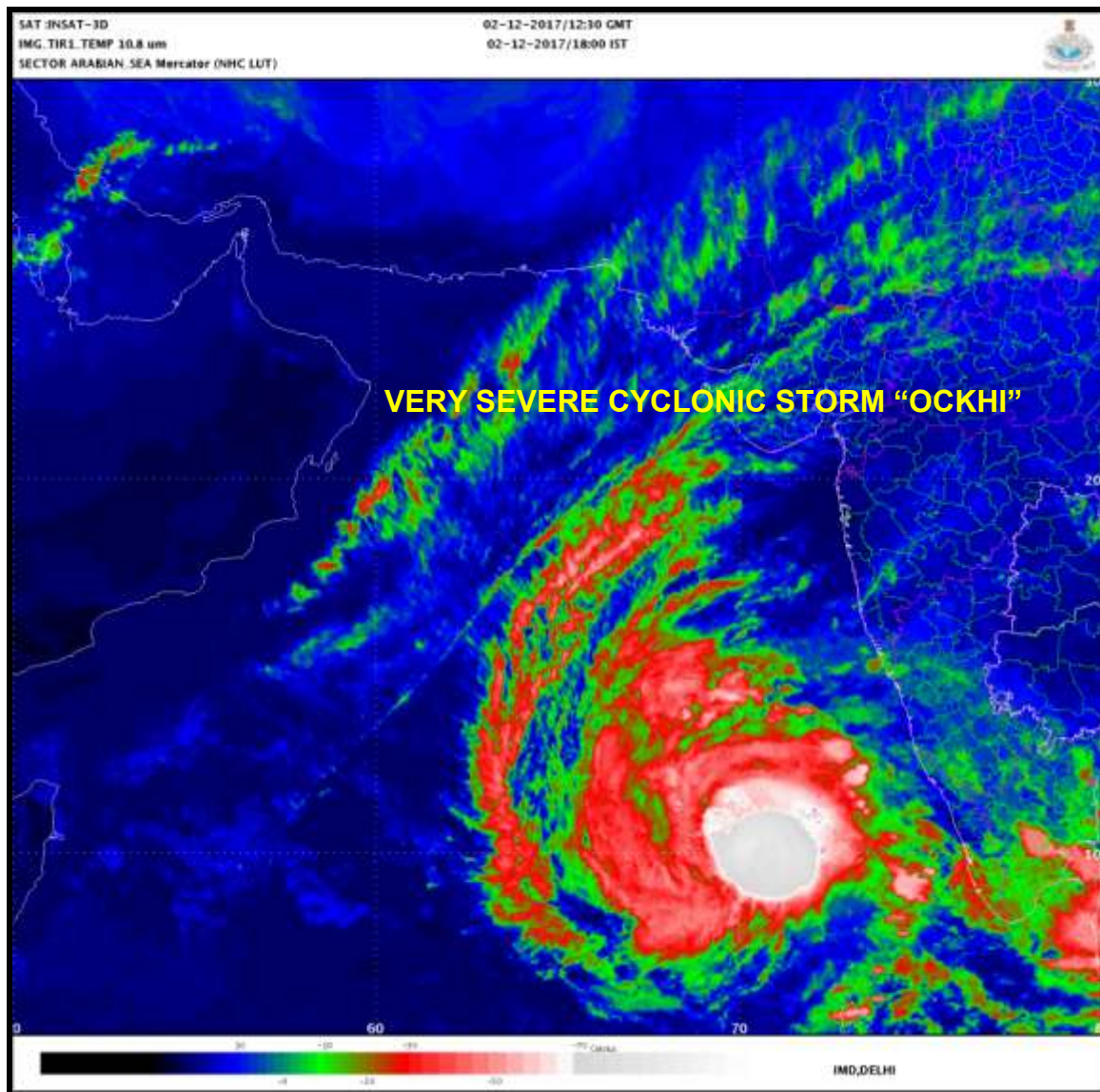
➤ **Action suggested**

- **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into deep Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th night for the subsequent 48 hours.

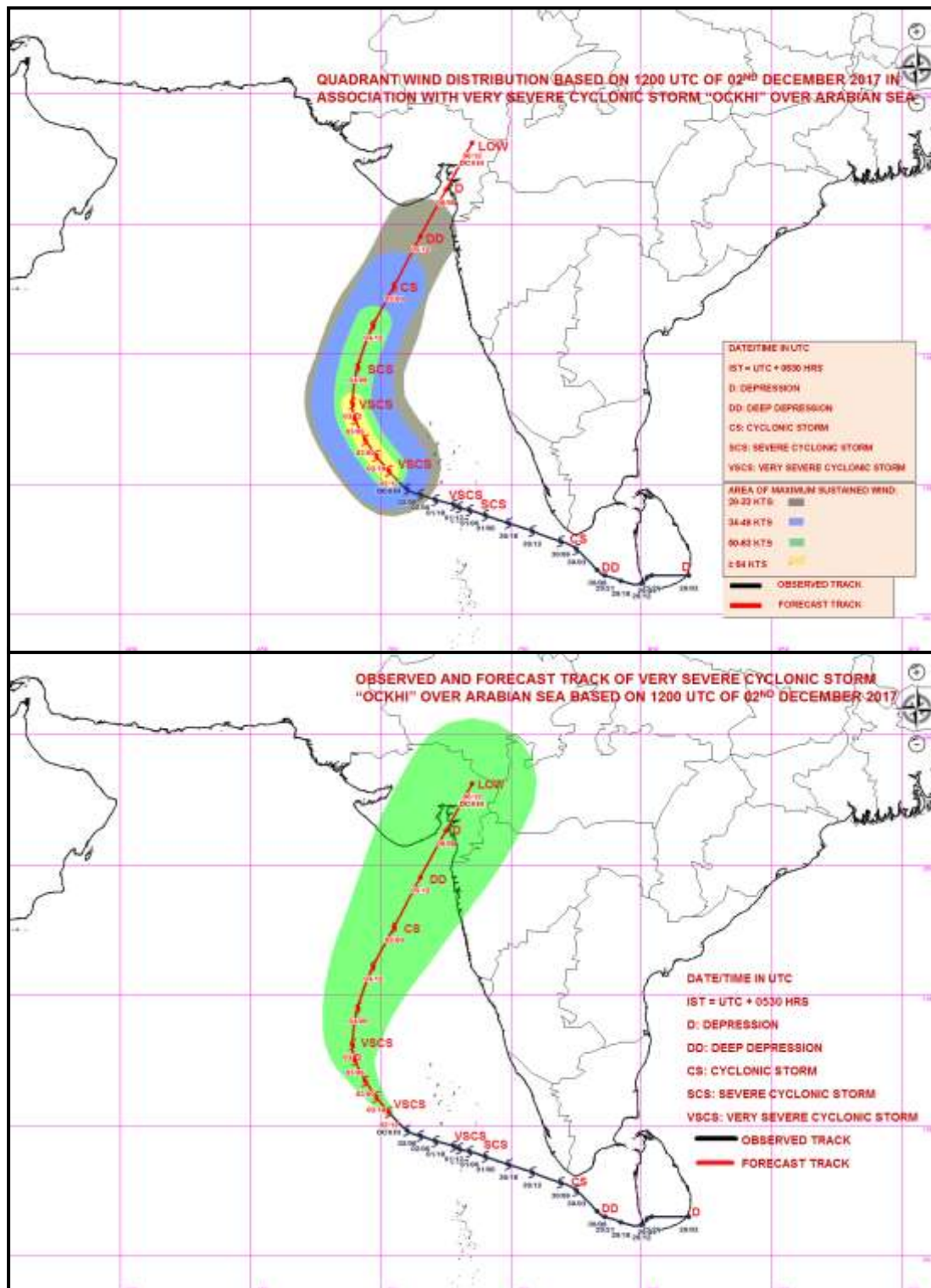
The next bulletin will be issued at 2330 hrs IST of 02nd December 2017.

(Shobhit Katiyar)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 27 (BOB 07/2017)

TIME OF ISSUE: 2215 HOURS IST

DATED: 02.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea further moved northwestwards with a speed of 15 kmph during past 06 hours and lay centred at 2030 hrs IST of today, the 02nd December, 2017 over southeast Arabian Sea near Latitude 10.8° N and Longitude 70.0° E, about 300 km west-southwest of Amini Divi. The system is very likely to weaken gradually from tomorrow, the 03rd December, 2017 morning. It is very likely to continue to move northwestwards during next 12 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/2030	10.8/70.0	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
02/2330	11.1/69.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0530	11.7/69.4	145-155 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/1130	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1730	13.1/68.9	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0530	14.5/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
04/1730	16.1/69.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0530	17.6/70.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.5/71.5	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0530	21.3/72.5	45-55 GUSTING TO 65	DEPRESSION
06/1730	23.1/73.5	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over north Lakshadweep Islands during next 24 hours.
- Rainfall at many places with heavy rainfall at isolated places very likely over Kerala during next 12 hours.
- Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.

➤ **Wind warning:**

- Gale winds speed reaching 70-80 kmph gusting to 90 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter and becoming squally winds speed reaching 55-65 kmph gusting to 75 kmph by tomorrow, the 3rd December morning for the subsequent 12 hours. Squally winds speed reaching 55-65 kmph gusting to 75 kmph very likely over and around south Lakshadweep Islands during next 12 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Sea condition:**

- Sea conditions would be high over and around north Lakshadweep Islands during next 12 hours and gradually becoming very rough by tomorrow, the 3rd December morning for subsequent 12 hours. It is very likely to be rough to very rough over and around south Lakshadweep Islands during next 12 hours and moderate to rough during the subsequent 12 hours.
- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Storm surge:**

Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of north Lakshadweep Islands during next 12 hours.

Damage Expected over North Lakshadweep Islands during next 12 hours: Minor damage to power and communication lines due to breaking of tree branches. Major damage to thatched houses/huts. Major damage to kutcha houses, minor damage to pucca roads. Some damage to banana & Papaya trees, orchards and standing crops.

➤ **Action suggested**

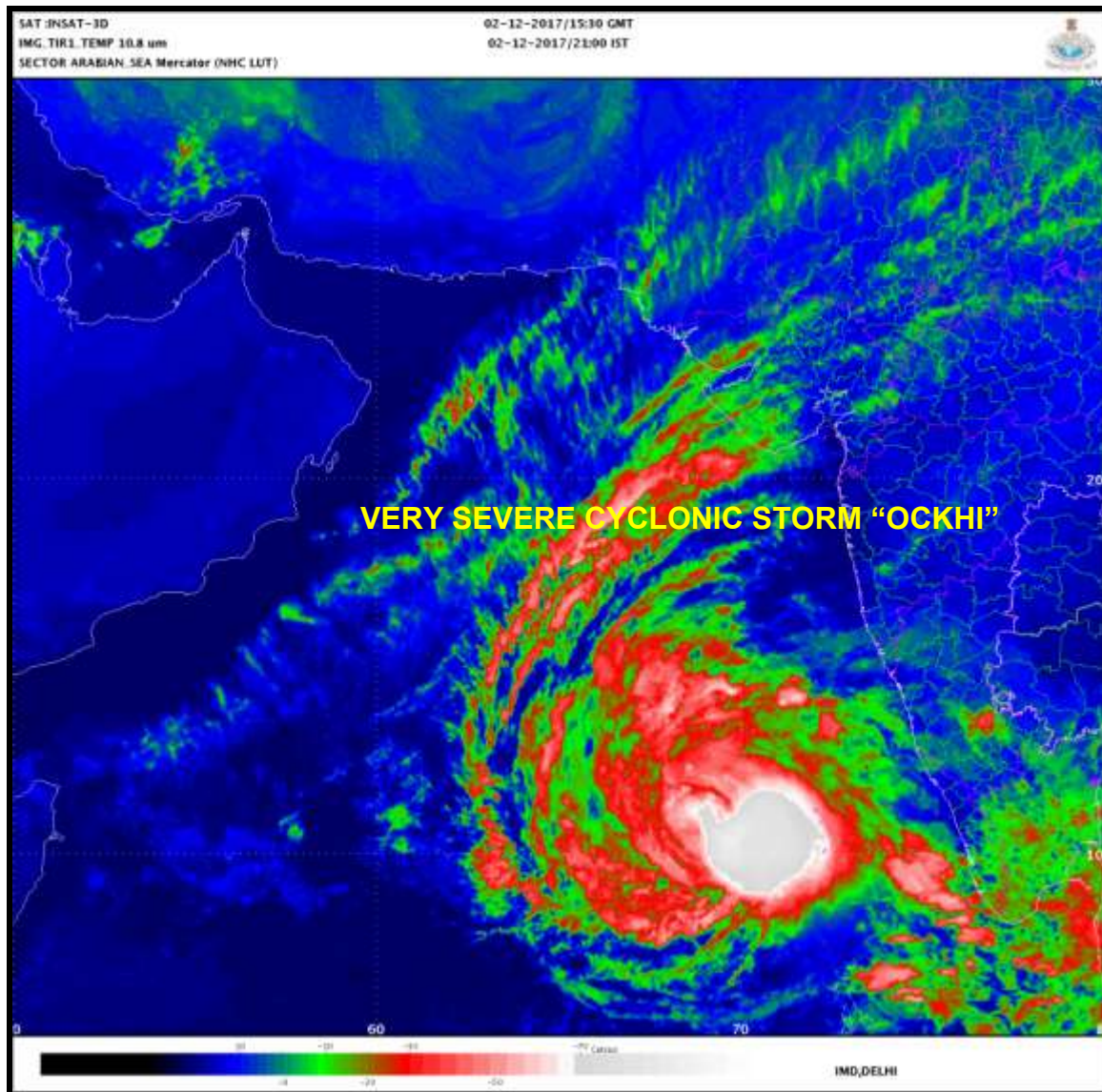
- **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into deep Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th night for the subsequent 48 hours.

The next bulletin will be issued at 0230 hrs IST of 03rd December 2017.

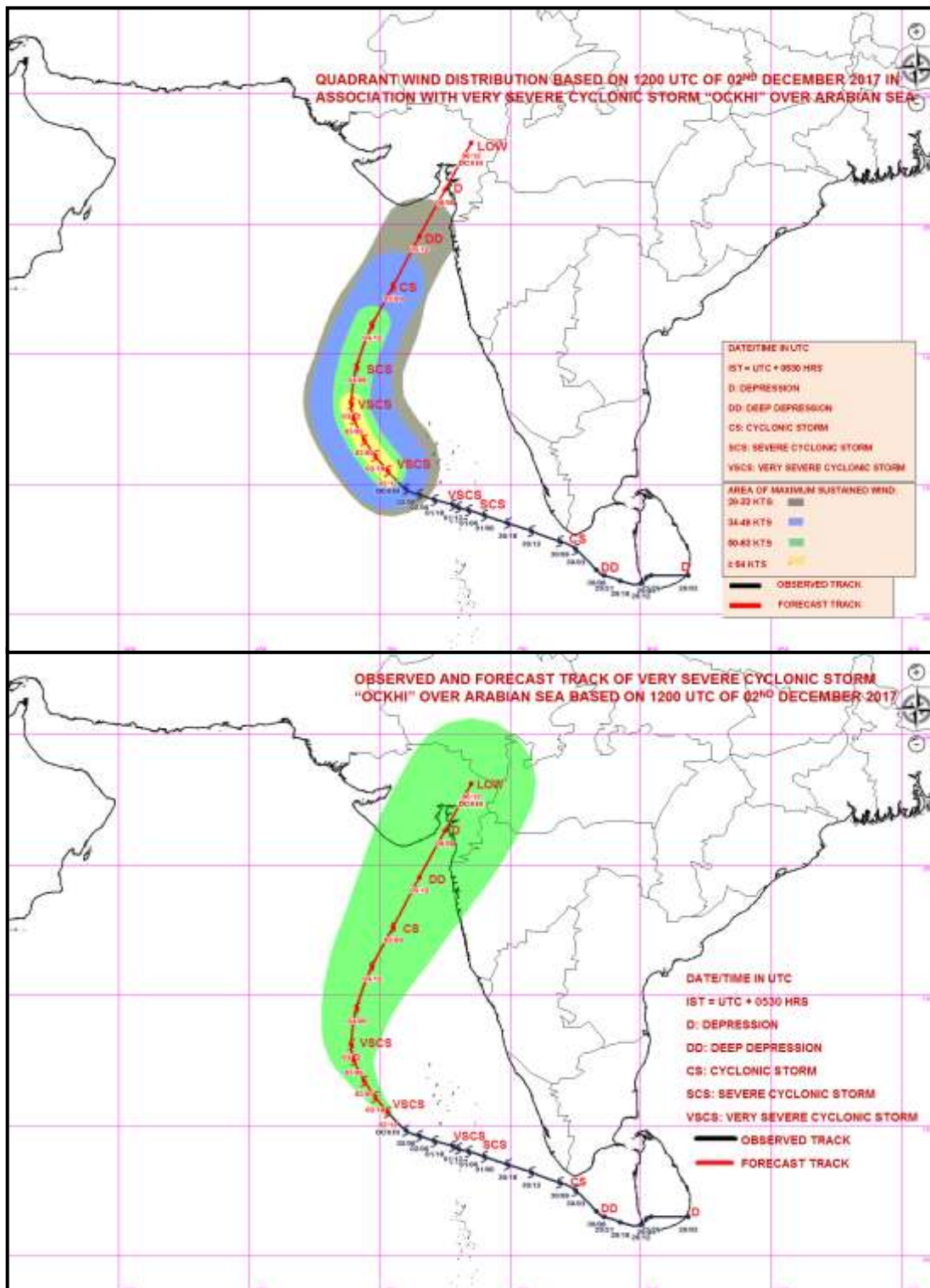
(Shobhit Katiyar)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 28 (BOB 07/2017)

TIME OF ISSUE: 0145 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea further moved northwestwards with a speed of 15 kmph during past 06 hours and lay centred at 2330 hrs IST of 02nd December, 2017 over southeast Arabian Sea near Latitude 11.1° N and Longitude 69.7° E, about 330 km west of Amini Divi. The system is very likely to weaken gradually from today the 03rd December, 2017 morning. It is very likely to continue to move northwestwards during next 12 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/2330	11.1/69.7	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0530	11.7/69.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/1130	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1730	13.1/68.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/2330	13.8/69.0	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/2330	16.8/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/1130	18.5/71.0	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	20.4/72.0	40-50 GUSTING TO 60	DEPRESSION
06/1130	22.2/73.0	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over north Lakshadweep Islands during next 12 hours.
- Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.

➤ **Wind warning:**

- Gale winds speed reaching 60-70 kmph gusting to 80 kmph very likely over & around north Lakshadweep Islands during next 06 hours and gradual decrease thereafter and becoming squally winds speed reaching 50-60 kmph gusting to 70 kmph during the subsequent 12 hours. Squally winds speed reaching 45-55 kmph gusting to 65 kmph very likely over and around south Lakshadweep Islands during next 06 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Sea condition:**

- Sea conditions would be high over and around north Lakshadweep Islands during next 06 hours and gradually becoming very rough to rough during the subsequent 12 hours. It is very likely to be rough to very rough over and around south Lakshadweep Islands during next 06 hours and rough to moderate during the subsequent 12 hours.
- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Storm surge:**

Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of north Lakshadweep Islands during next 12 hours.

Damage Expected over North Lakshadweep Islands during next 06 hours: Minor damage to power and communication lines due to breaking of tree branches. Major damage to thatched houses/huts. Major damage to kutcha houses, minor damage to pucca roads. Some damage to banana & Papaya trees, orchards and standing crops.

➤ **Action suggested**

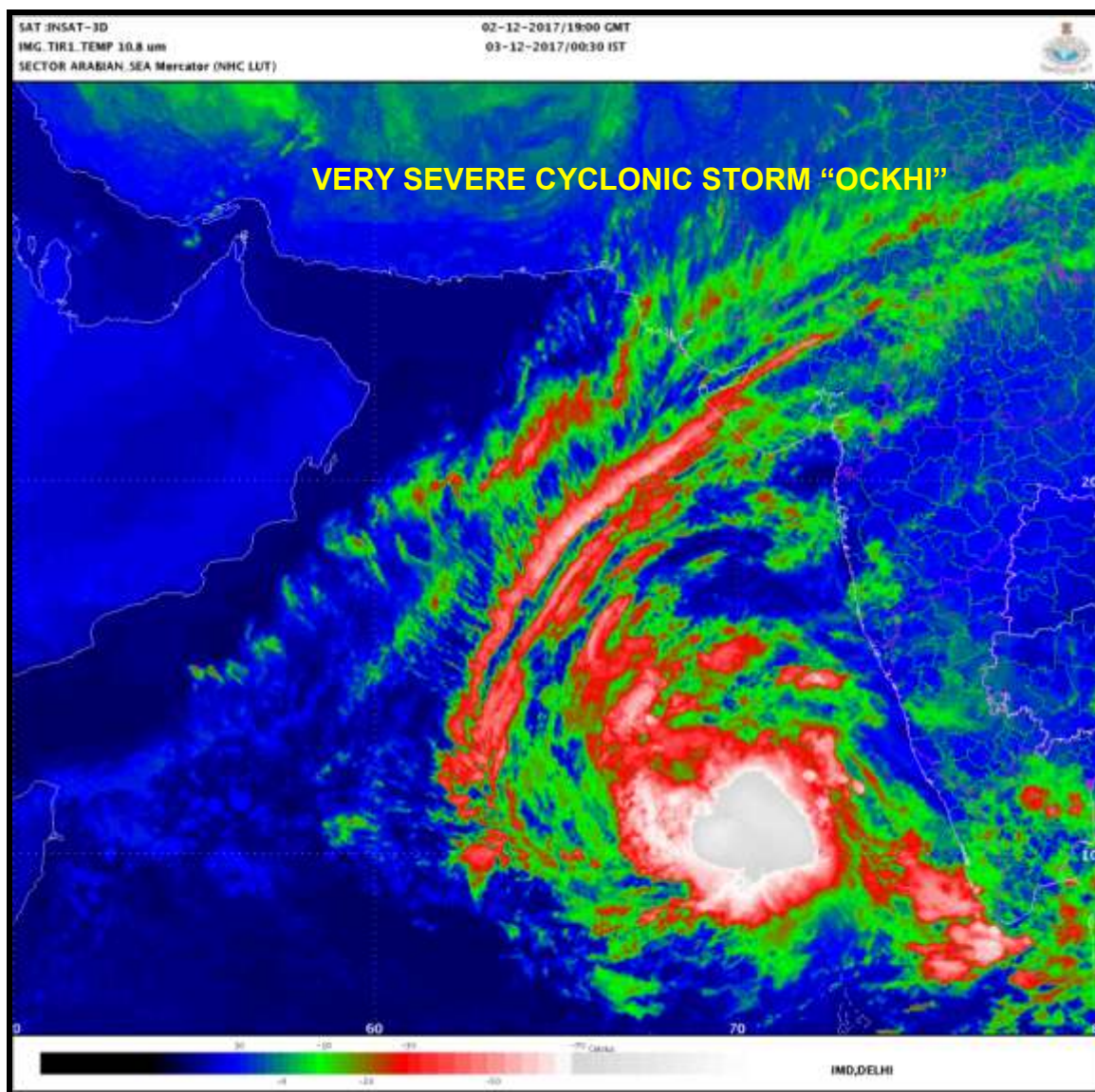
- **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into deep Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th night for the subsequent 48 hours.

The next bulletin will be issued at 0430 hrs IST of 03rd December 2017.

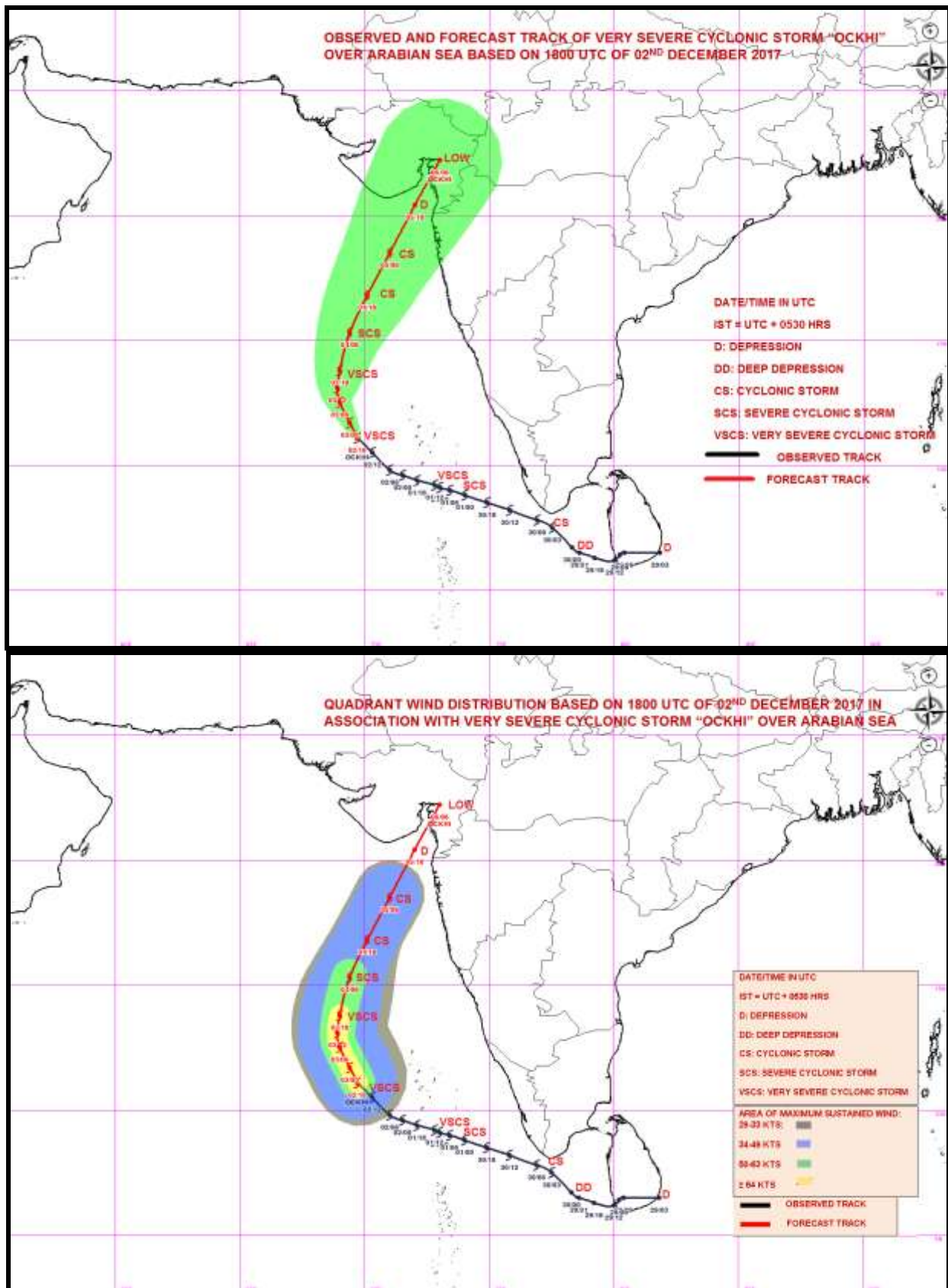
(Shobhit Katiyar)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 29 (BOB 07/2017)

TIME OF ISSUE: 0430 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

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UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF SECRETARY, GOVT.OF KERALA

CHIEF SECRETARY, GOVT.OF TAMIL NADU

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

CHIEF SECRETARY, GOVT.OF PUDUCHERRY

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT.OF GOA

CHIEF SECRETARY, GOVT.OF MAHARASHTRA

CHIEF SECRETARY, GOVT.OF GUJRAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over Southeast Arabian Sea and Cyclone Warning for Lakshadweep Islands- RED message

The **very severe cyclonic storm 'OCKHI'** over Lakshadweep area and adjoining Southeast Arabian Sea further moved northwestwards with a speed of 13 kmph during past 06 hours and lay centred at 0230 hrs IST of 03rd December, 2017 over southeast Arabian Sea near Latitude 11.3° N and Longitude 69.5° E, about 350 km west-northwest of Amini Divi. The system is very likely to weaken gradually from today the 03rd December, 2017 morning. It is very likely to continue to move northwestwards during next 12 hours and then recurve northeastwards during the subsequent 48 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0230	11.3/69.5	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0530	11.7/69.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/1130	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1730	13.1/68.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/2330	13.8/69.0	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/2330	16.8/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/1130	18.5/71.0	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	20.4/72.0	40-50 GUSTING TO 60	DEPRESSION
06/1130	22.2/73.0	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy to very heavy rainfall at isolated places very likely over north Lakshadweep Islands during next 12 hours.
- Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.

➤ **Wind warning:**

- Gale winds speed reaching 60-70 kmph gusting to 80 kmph very likely over & around north Lakshadweep Islands during next 06 hours and gradual decrease thereafter and becoming squally winds speed reaching 50-60 kmph gusting to 70 kmph during the subsequent 12 hours. Squally winds speed reaching 45-55 kmph gusting to 65 kmph very likely over and around south Lakshadweep Islands during next 06 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Sea condition:**

- Sea conditions would be high over and around north Lakshadweep Islands during next 06 hours and gradually becoming very rough to rough during the subsequent 12 hours. It is very likely to be rough to very rough over and around south Lakshadweep Islands during next 06 hours and rough to moderate during the subsequent 12 hours.
- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Storm surge:**

Storm surge of about 0.5 meter above astronomical tides very likely to inundate low lying areas of north Lakshadweep Islands during next 12 hours.

Damage Expected over North Lakshadweep Islands during next 06 hours: Minor damage to power and communication lines due to breaking of tree branches. Major damage to thatched houses/huts. Major damage to kutcha houses, minor damage to pucca roads. Some damage to banana & Papaya trees, orchards and standing crops.

➤ **Action suggested**

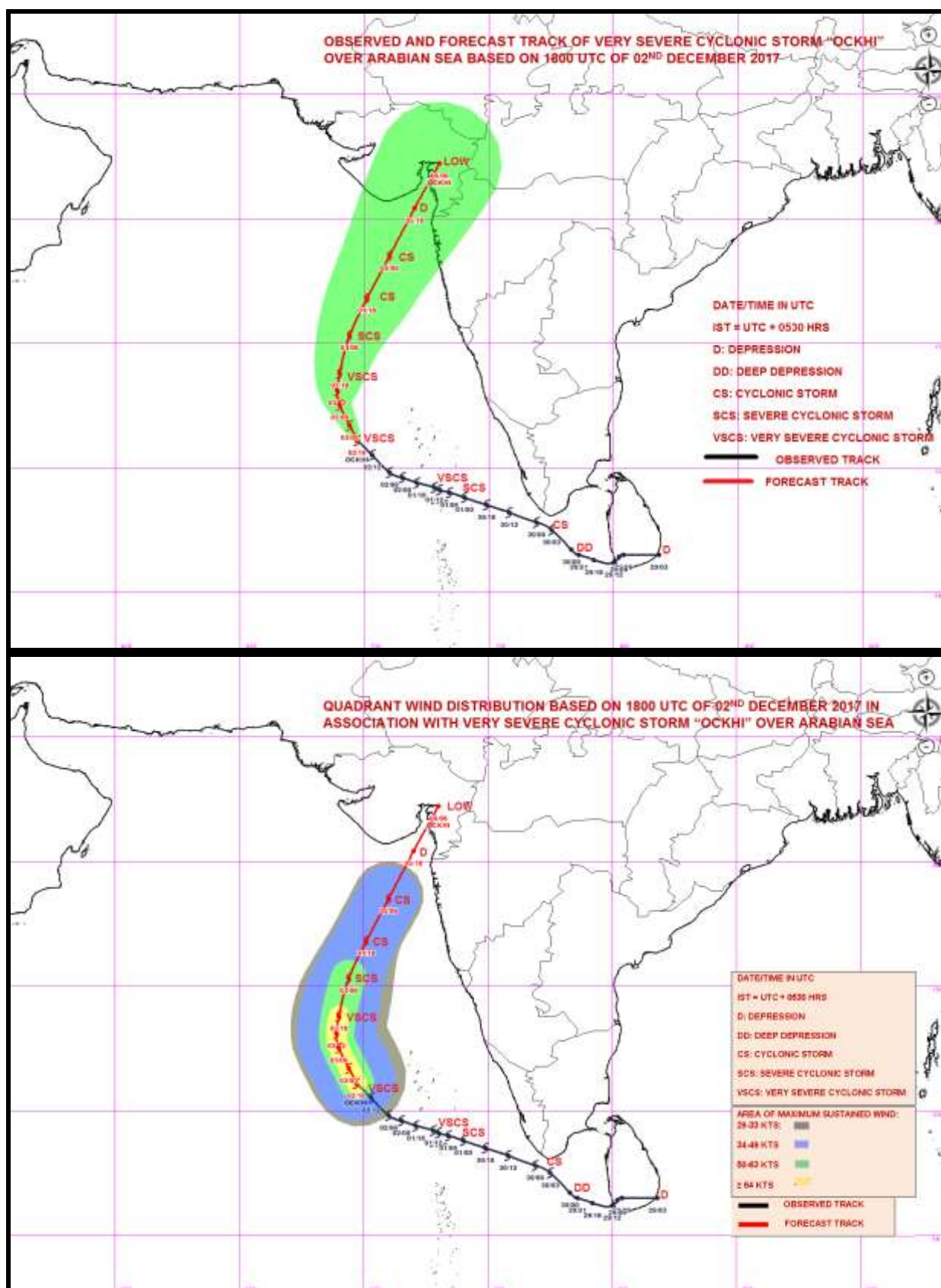
- **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
- **Kerala & Karnataka coast:** Fishermen are advised not to venture into deep Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th night for the subsequent 48 hours.

The next bulletin will be issued at 0830 hrs IST of 03rd December 2017.

(Shobhit Katiyar)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 30 (BOB 07/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
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UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJRAT**

Sub: Very Severe Cyclonic Storm 'OCKHI' over Southeast and adjoining eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over Southeast Arabian Sea further moved north-northwestwards with a speed of 14 kmph during past 06 hours and lay centred at 0530 hrs IST of 03rd December, 2017 over southeast and adjoining eastcentral Arabian Sea near Latitude 11.7° N and Longitude 69.2° E, about 390 km west-northwest of Amini Divi, 910 km south-southwest of Mumbai and 1120 km south-southwest of Surat. It is very likely to move north-northwestwards during next 12 hours and then recurve northeastwards during the subsequent 48 hours and weaken gradually.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/0530	11.7/69.2	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/1130	12.5/68.9	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/1730	13.3/68.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/2330	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0530	14.8/68.9	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1730	16.1/69.7	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
05/0530	17.7/70.6	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.7/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0530	21.2/72.8	40-50 GUSTING TO 60	DEPRESSION
06/1730	22.7/73.9	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- Rainfall at most places with heavy rainfall at isolated places very likely over north Lakshadweep Islands during next 12 hours.
- Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.

➤ **Wind warning:**

- Squally winds speed reaching 50-60 kmph gusting to 70 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter. Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around south Lakshadweep Islands during next 12 hours and gradual decrease thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Sea condition:**

- Sea conditions would be very high over and around north Lakshadweep Islands during next 12 hours and gradually becoming rough to moderate during the subsequent 12 hours. It is very likely to be rough to very rough over and around south Lakshadweep Islands during next 06 hours and rough to moderate during the subsequent 12 hours.
- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts on 4th night and 5th December 2017.

➤ **Action suggested**

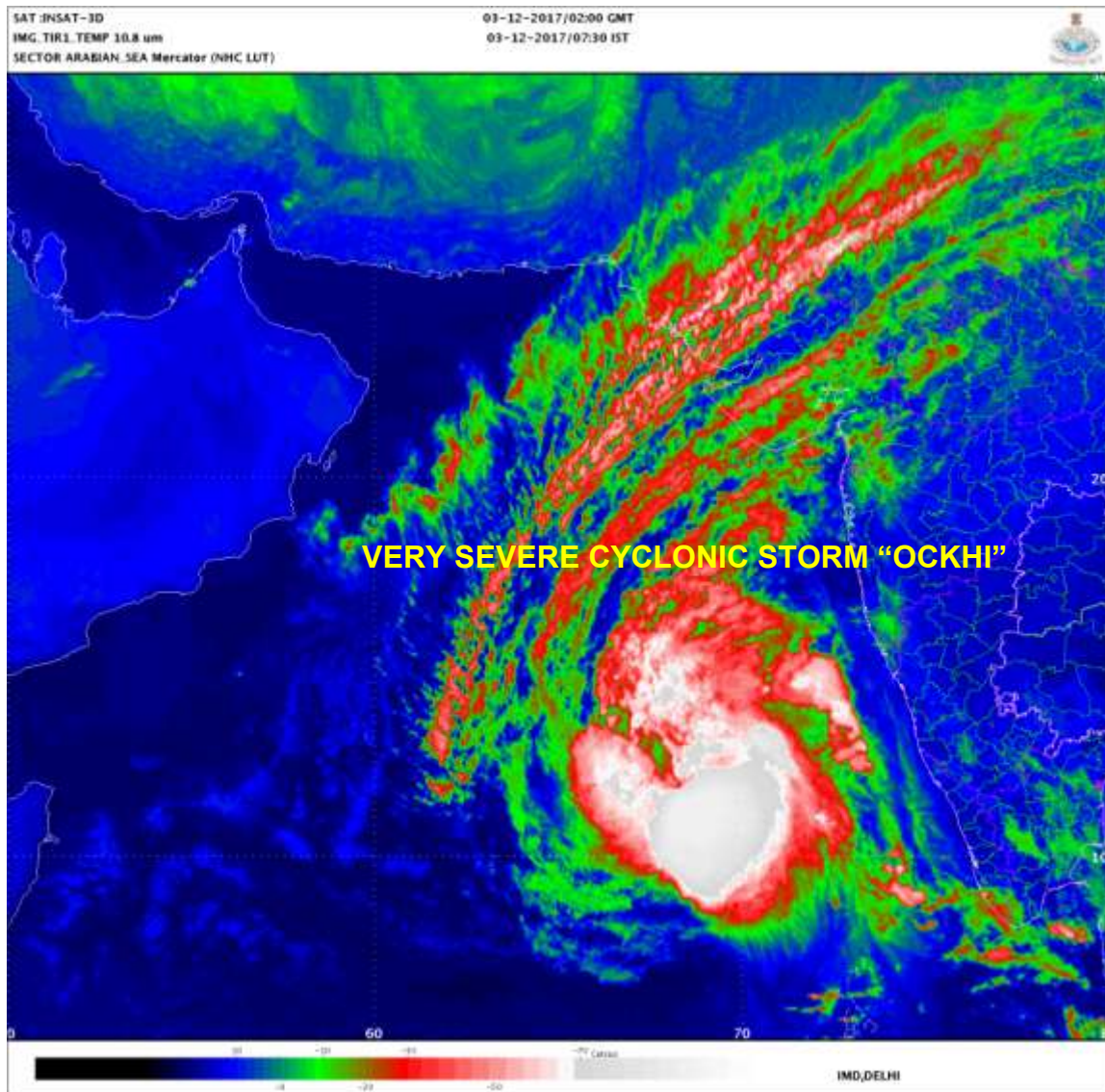
- **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
- **Goa, south Maharashtra & Karnataka coast:** Fishermen are advised not to venture into deep Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th night for the subsequent 48 hours.

The next bulletin will be issued at 1130 hrs IST of 03rd December 2017.

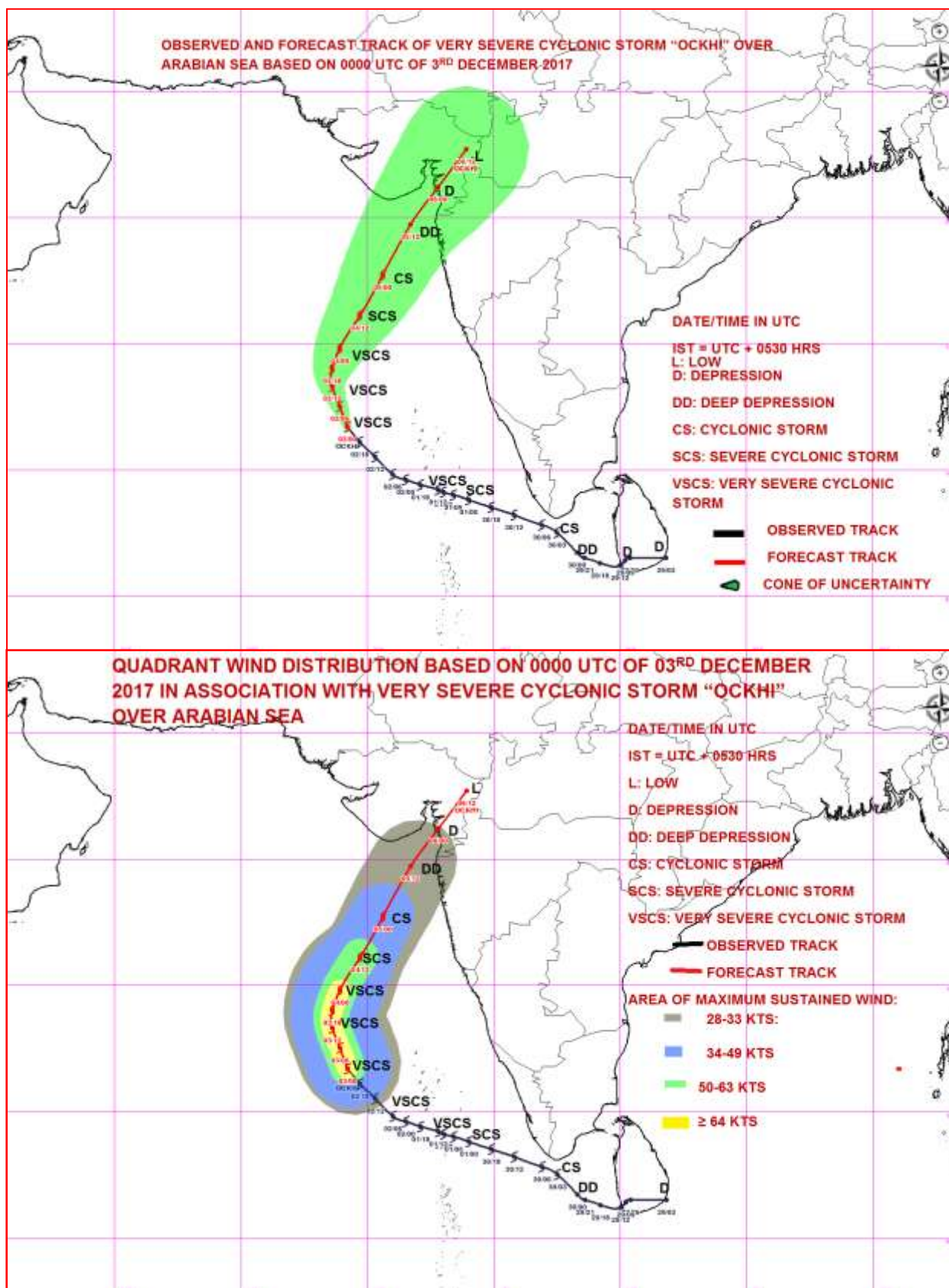
(Shobhit Katiyar)
Scientist-B, RSMC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 31 (BOB 07/2017)

TIME OF ISSUE: 1130 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJRAT**

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral and adjoining southeast Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over southeast and adjoining eastcentral Arabian Sea further moved north-northwestwards with a speed of 17 kmph during past 06 hours and lay centred at 0830 hrs IST of 03rd December, 2017 over eastcentral and adjoining southeast Arabian Sea near Latitude 12.1° N and Longitude 69.0° E, about 420 km west-northwest of Amini Divi, 880 km south-southwest of Mumbai and 1090 km south-southwest of Surat. It is very likely to move north-northwestwards during next 12 hours and then recurve northeastwards during the subsequent 48 hours and weaken gradually.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/0830	12.1/69.0	140-150 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/1130	12.5/68.9	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/1730	13.3/68.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/2330	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0530	14.8/68.9	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1730	16.1/69.7	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
05/0530	17.7/70.6	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.7/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0530	21.2/72.8	40-50 GUSTING TO 60	DEPRESSION
06/1730	22.7/73.9	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

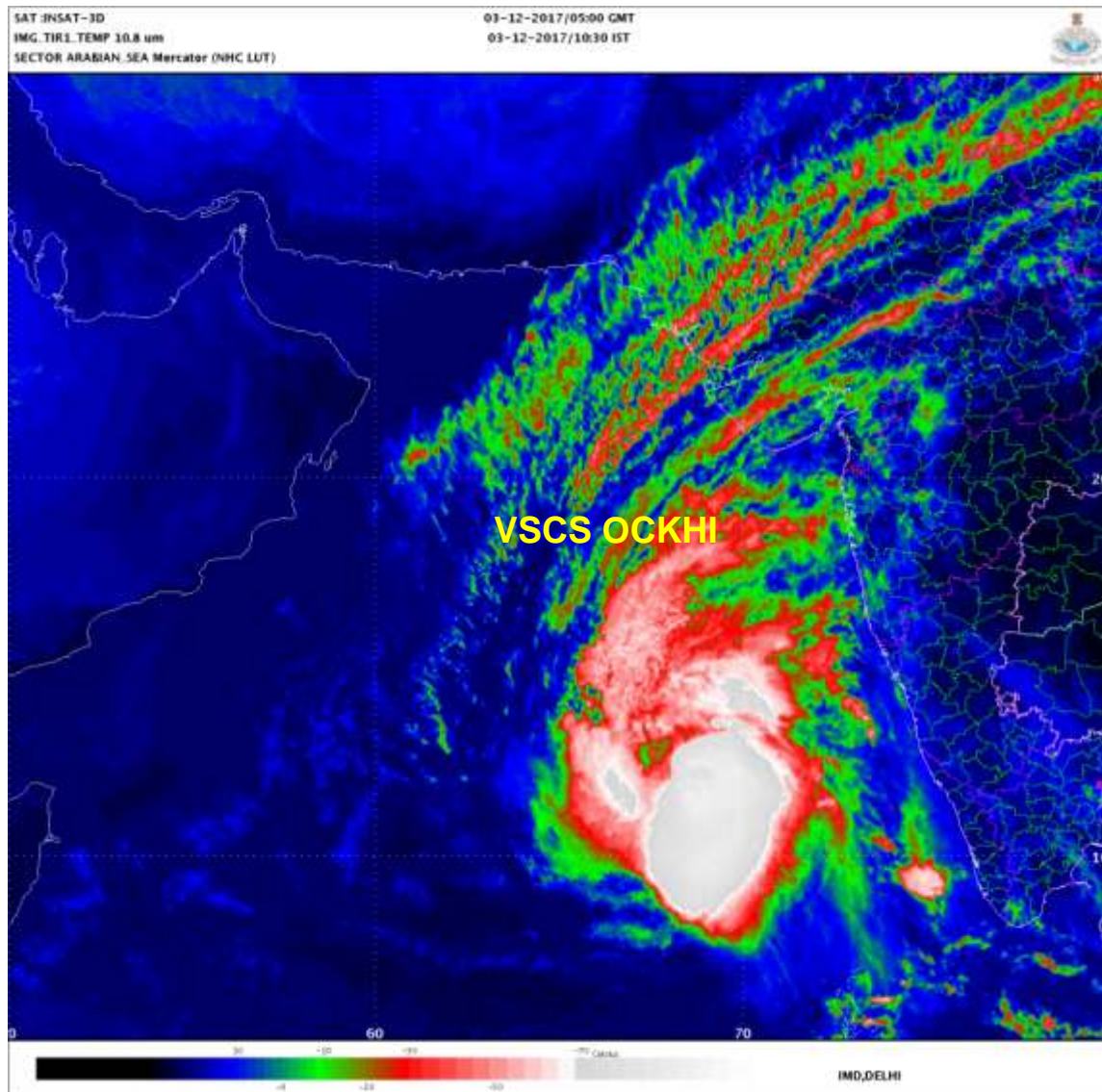
Warning:

- **Heavy Rainfall warning:**
Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.
- **Wind warning:**
 - Squally winds speed reaching 50-60 kmph gusting to 70 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea conditions would be very rough over and around north Lakshadweep Islands during next 12 hours and gradually becoming rough to moderate during the subsequent 12 hours.
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen around Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
 - **Goa, south Maharashtra & Karnataka coast:** Fishermen are advised not to venture into Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December for the subsequent 48 hours.

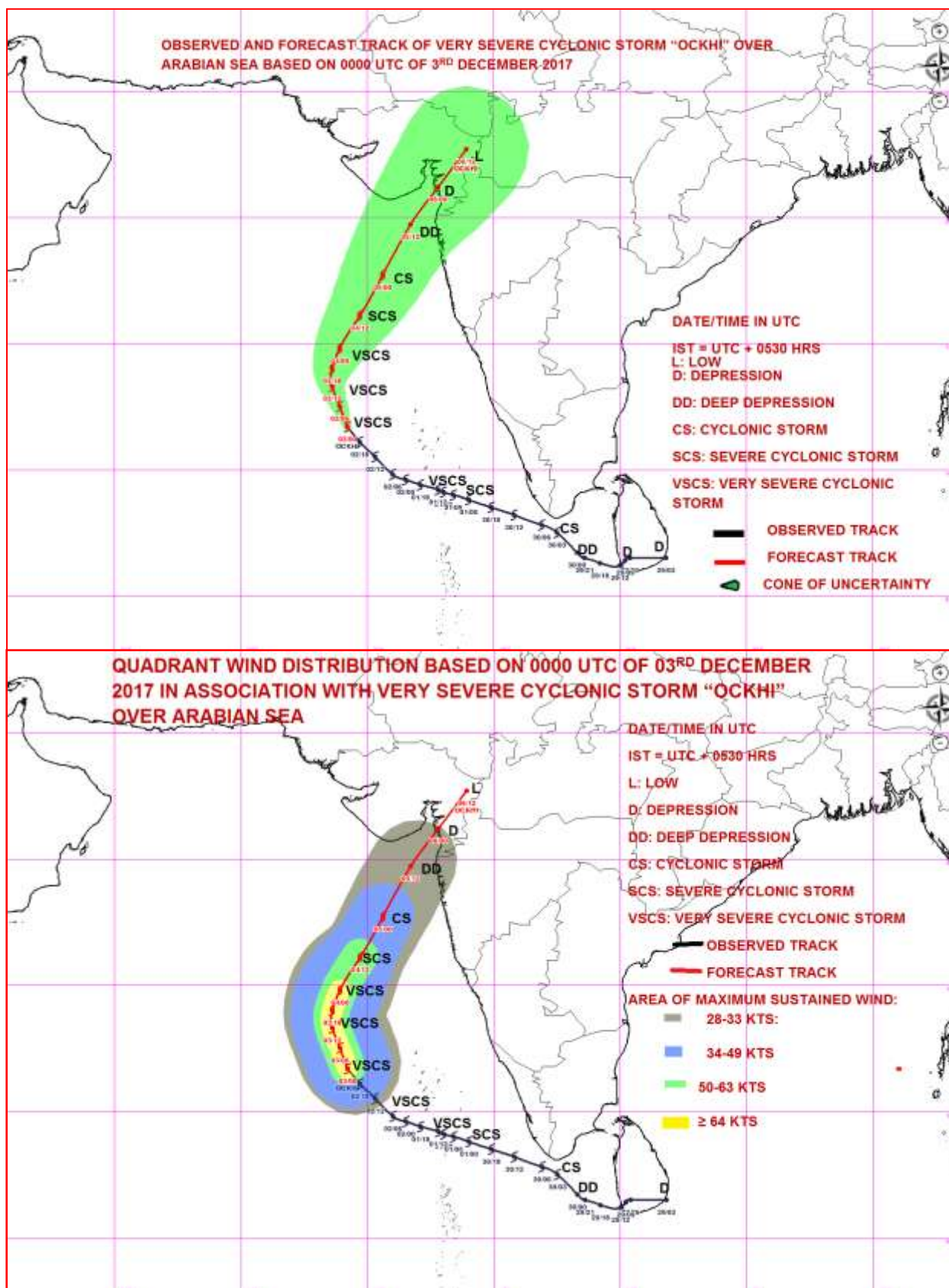
The next bulletin will be issued at 1430 hrs IST of 03rd December 2017.

(Charan Singh)
Scientist-E, NWFC, New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 32 (BOB 07/2017)

TIME OF ISSUE: 1430 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJRAT**

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral and adjoining southeast Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over southeast and adjoining eastcentral Arabian Sea moved further north-northwestwards with a speed of 12 kmph during past 06 hours and lay centred at 1130 hrs IST of 03rd December, 2017 over eastcentral and adjoining southeast Arabian Sea near Latitude 12.3° N and Longitude 68.9° E, about 440 km west-northwest of Amini Divi, 870 km south-southwest of Mumbai and 1070 km south-southwest of Surat. It is very likely to move north-northwestwards for some more time and then recurve northeastwards towards south Gujarat coast during next 72 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/1130	12.3/68.9	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/1730	13.2/68.7	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/2330	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0530	14.7/68.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1130	15.4/69.2	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
04/2330	16.9/70.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/1130	18.7/71.4	70-80 GUSTING TO 90	CYCLONIC STORM
05/2330	20.5/70.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.2/73.6	30-40 GUSTING TO 50	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

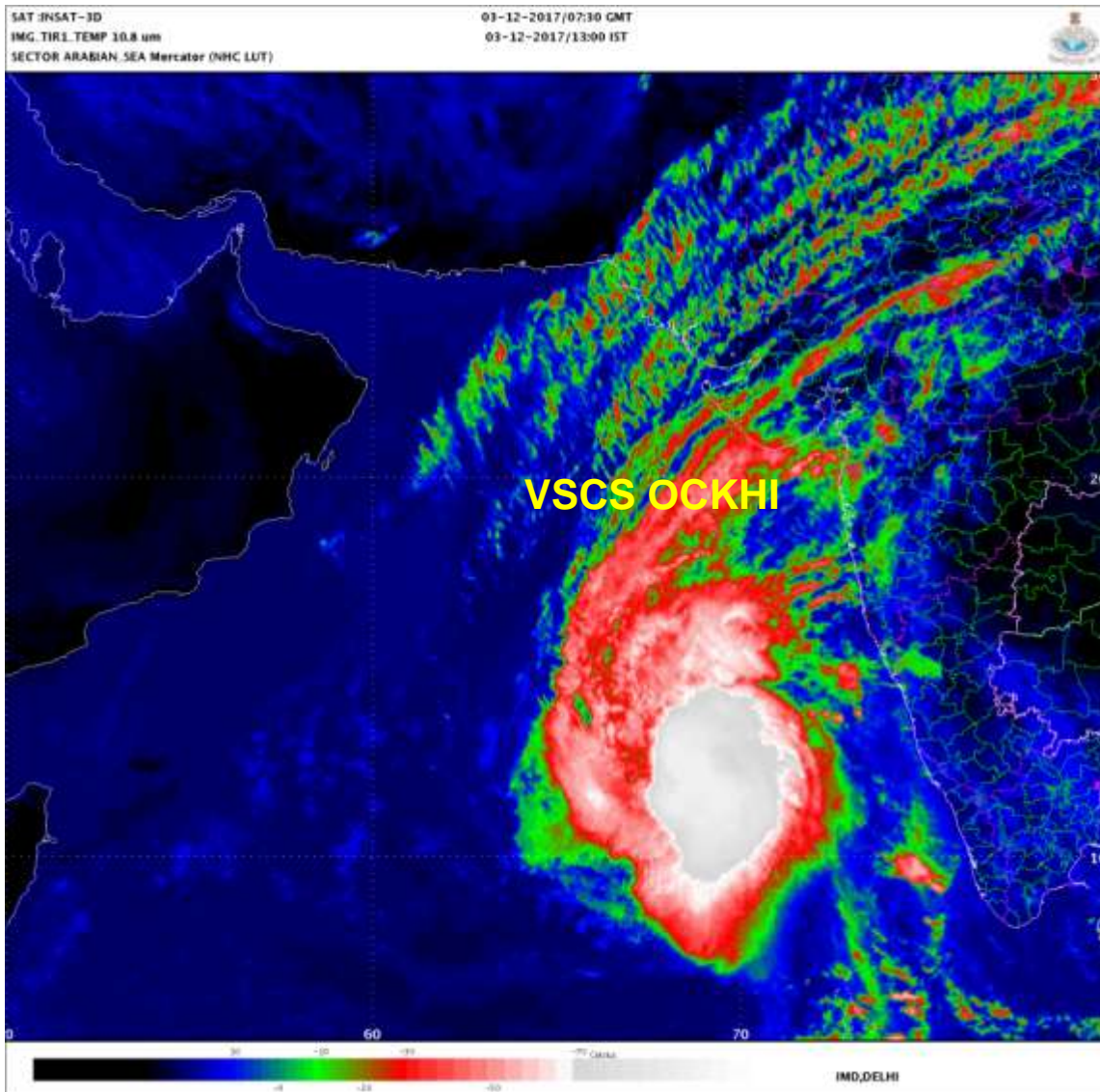
- **Heavy Rainfall warning:**
Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.
- **Wind warning:**
 - Squally winds speed reaching 50-60 kmph gusting to 70 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea conditions would be very rough over and around north Lakshadweep Islands during next 12 hours and gradually becoming rough to moderate during the subsequent 12 hours.
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen around north Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
 - **Goa, south Maharashtra & Karnataka coast:** Fishermen are advised not to venture into Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December for the subsequent 48 hours.

The next bulletin will be issued at 1730 hrs IST of 03rd December 2017.

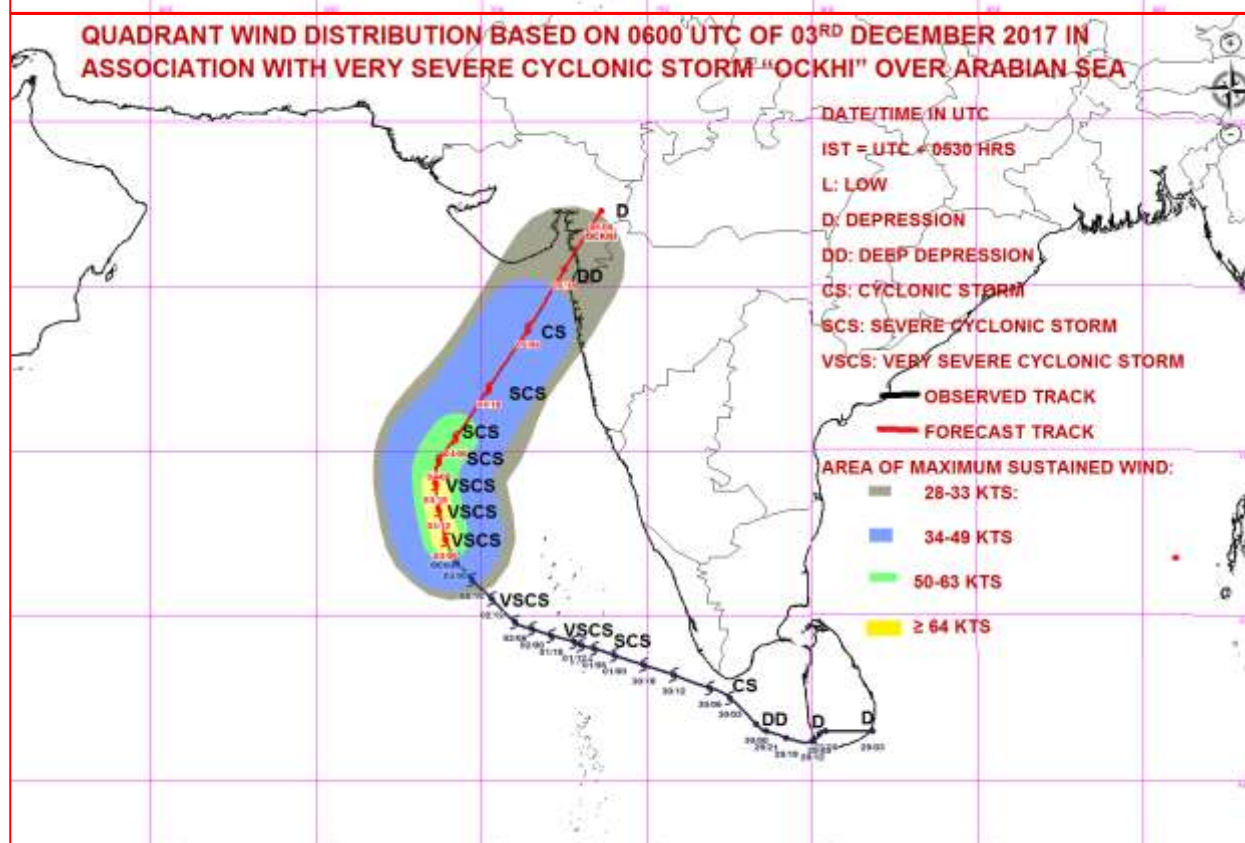
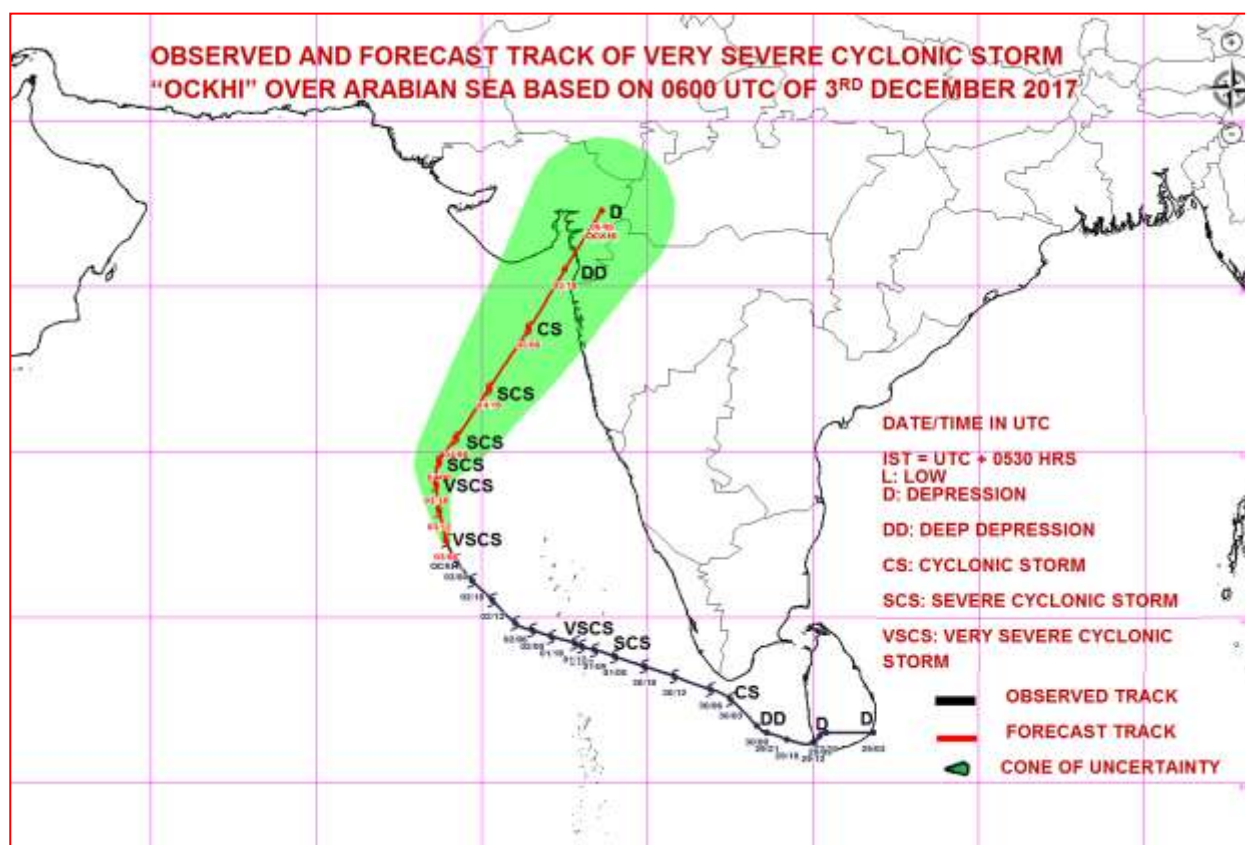
(M. Mohapatra)
Scientist-G (Services)
Head RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 33 (BOB 07/2017)

TIME OF ISSUE: 1715 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJRAT**

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral and adjoining southeast Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over east central and adjoining southeast Arabian Sea moved further north-northwestwards with a speed of 6 kmph during past 6 hours and lay centred at 1430 hrs IST of 03rd December, 2017 over eastcentral and adjoining southeast Arabian Sea near Latitude 12.4° N and Longitude 68.8° E, about 450 km west-northwest of Amini Divi, 860 km south-southwest of Mumbai and 1070 km south-southwest of Surat. It is very likely to move north-northwestwards for about 6 hours and then recurve northeastwards towards south Gujarat and adjoining north Maharashtra coasts during next 72 hours.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/1430	12.4/68.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/1730	13.2/68.7	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/2330	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0530	14.7/68.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1130	15.4/69.2	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
04/2330	16.9/70.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/1130	18.7/71.4	70-80 GUSTING TO 90	CYCLONIC STORM
05/2330	20.5/70.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.2/73.6	30-40 GUSTING TO 50	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

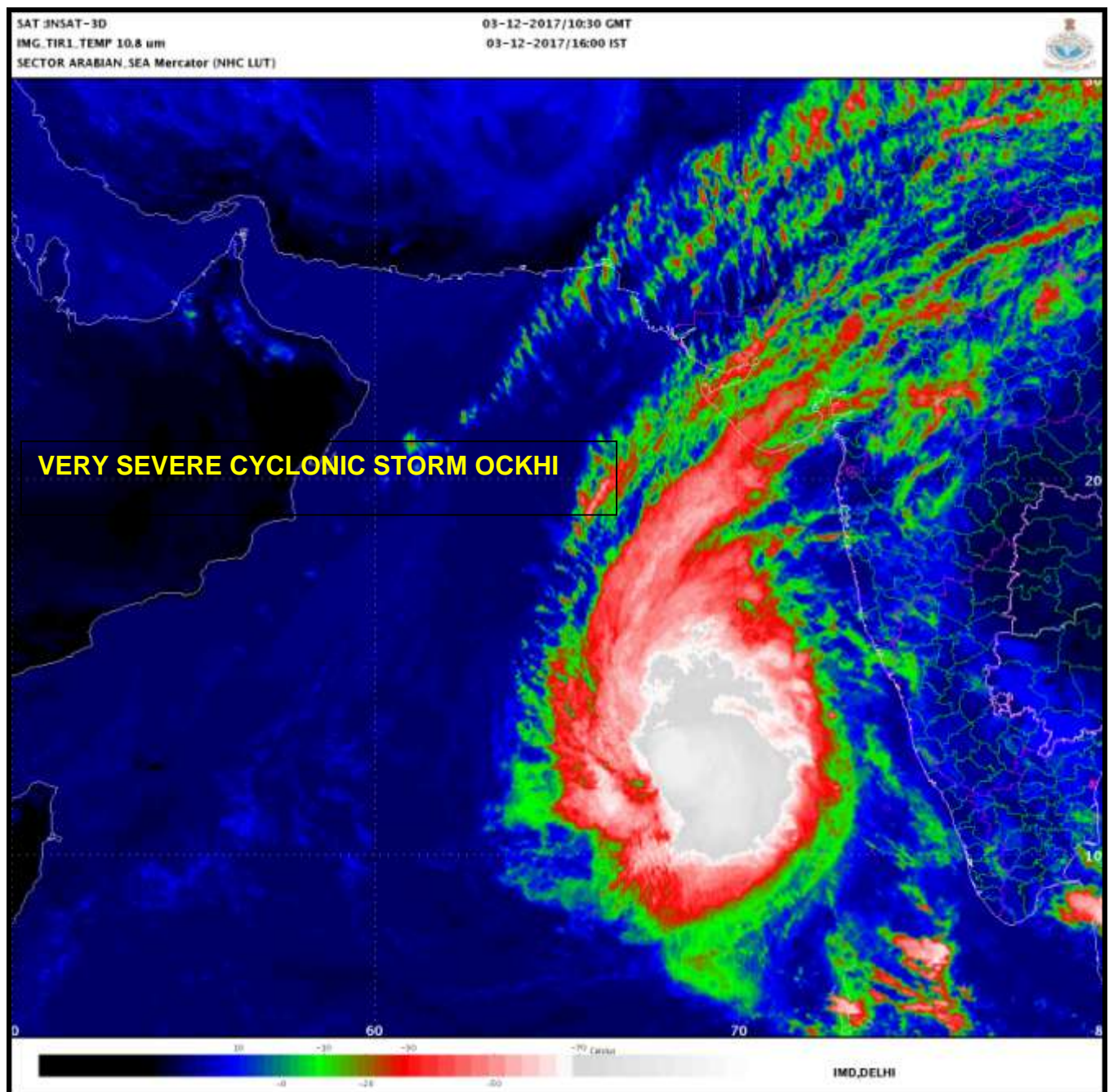
- **Heavy Rainfall warning:**
Rainfall at many places with heavy rainfall at isolated places is very likely over south Gujarat on 05th December.
- **Wind warning:**
 - Squally winds speed reaching 50-60 kmph gusting to 70 kmph very likely over & around north Lakshadweep Islands during next 12 hours and gradual decrease thereafter.
 - Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea conditions would be very rough over and around north Lakshadweep Islands during next 12 hours and gradually becoming rough to moderate during the subsequent 12 hours.
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Action suggested**
 - **Lakshadweep Islands:** Fishermen around north Lakshadweep Islands are advised not to venture into the sea during next 24 hours.
 - **Goa, south Maharashtra & Karnataka coast:** Fishermen are advised not to venture into Sea along & off Karnataka, Goa and south Maharashtra coasts during next 48 hours.
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December for the subsequent 48 hours.

The next bulletin will be issued at 2030 hrs IST of 03rd December 2017.

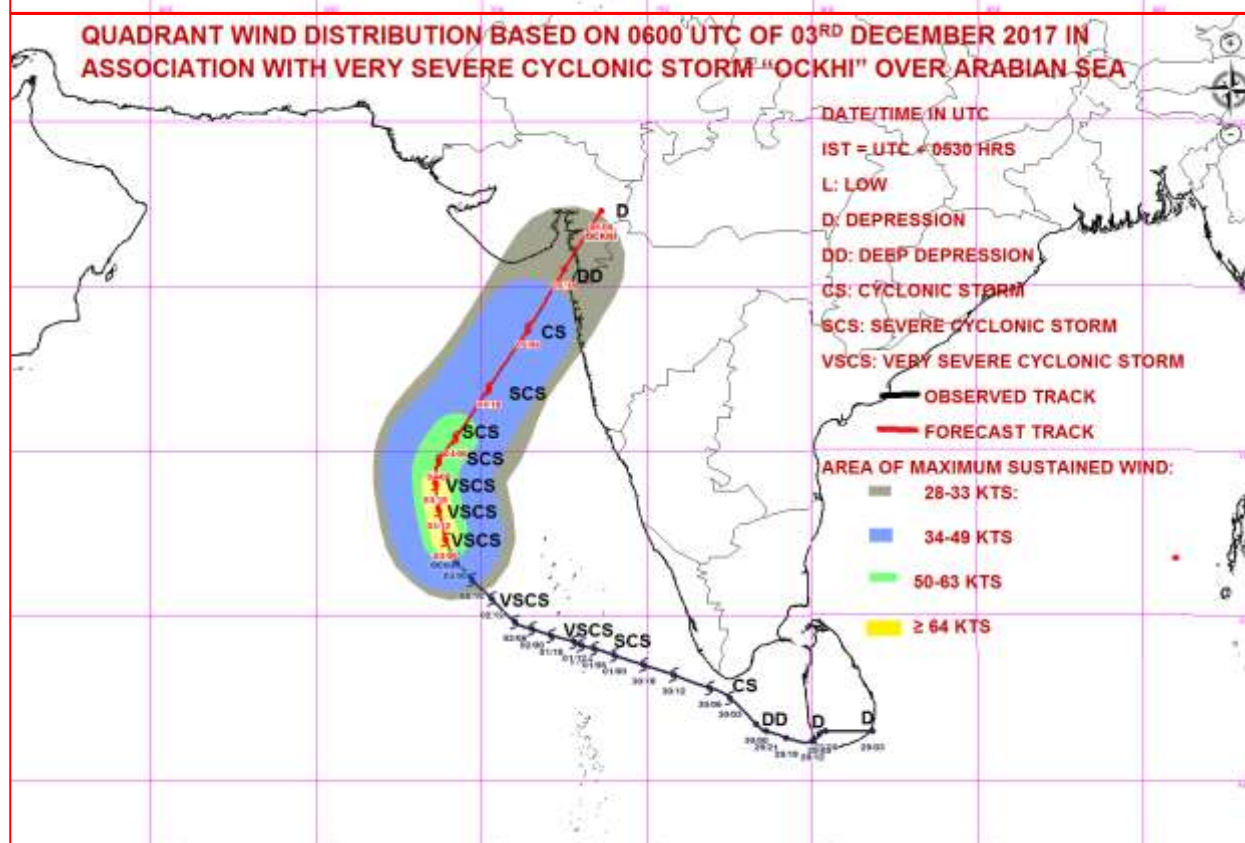
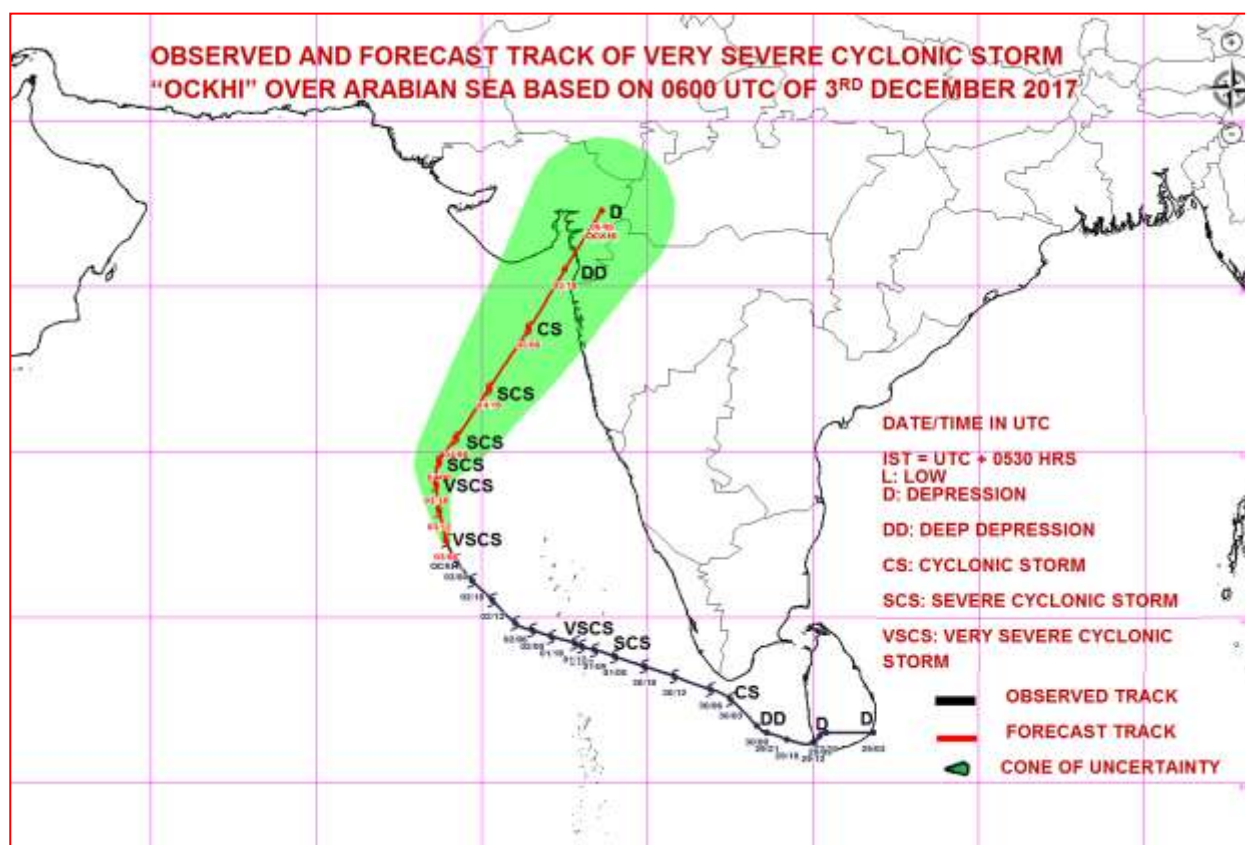
SHIBIN B
Scientist-B
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 34 (BOB 07/2017)

TIME OF ISSUE: 2030 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral and adjoining southeast Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over east central and adjoining southeast Arabian Sea moved further north-northwestwards with a speed of 12 kmph during past 6 hours and lay centred at 1730 hrs IST of 03rd December, 2017 over eastcentral and adjoining southeast Arabian Sea near Latitude 12.9° N and Longitude 68.7° E, about 480 km west-northwest of Amini Divi, 820 km south-southwest of Mumbai and 1020 km south-southwest of Surat. It is very likely to move north-northwestwards for about 6 hours and then recurve northeastwards towards south Gujarat and adjoining north Maharashtra coasts during next 72 hours. It is very likely to cross south Gujarat coast near Surat as a deep depression around mid night of 5th December 2017.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/1730	12.9/68.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/2330	14.0/68.6	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04/0530	14.7/68.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.4/69.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1730	16.1/69.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.8/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1730	19.6/71.9	65-75 GUSTING TO 85	CYCLONIC STORM
06/0530	21.3/73.0	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1730	23.0/74.1	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

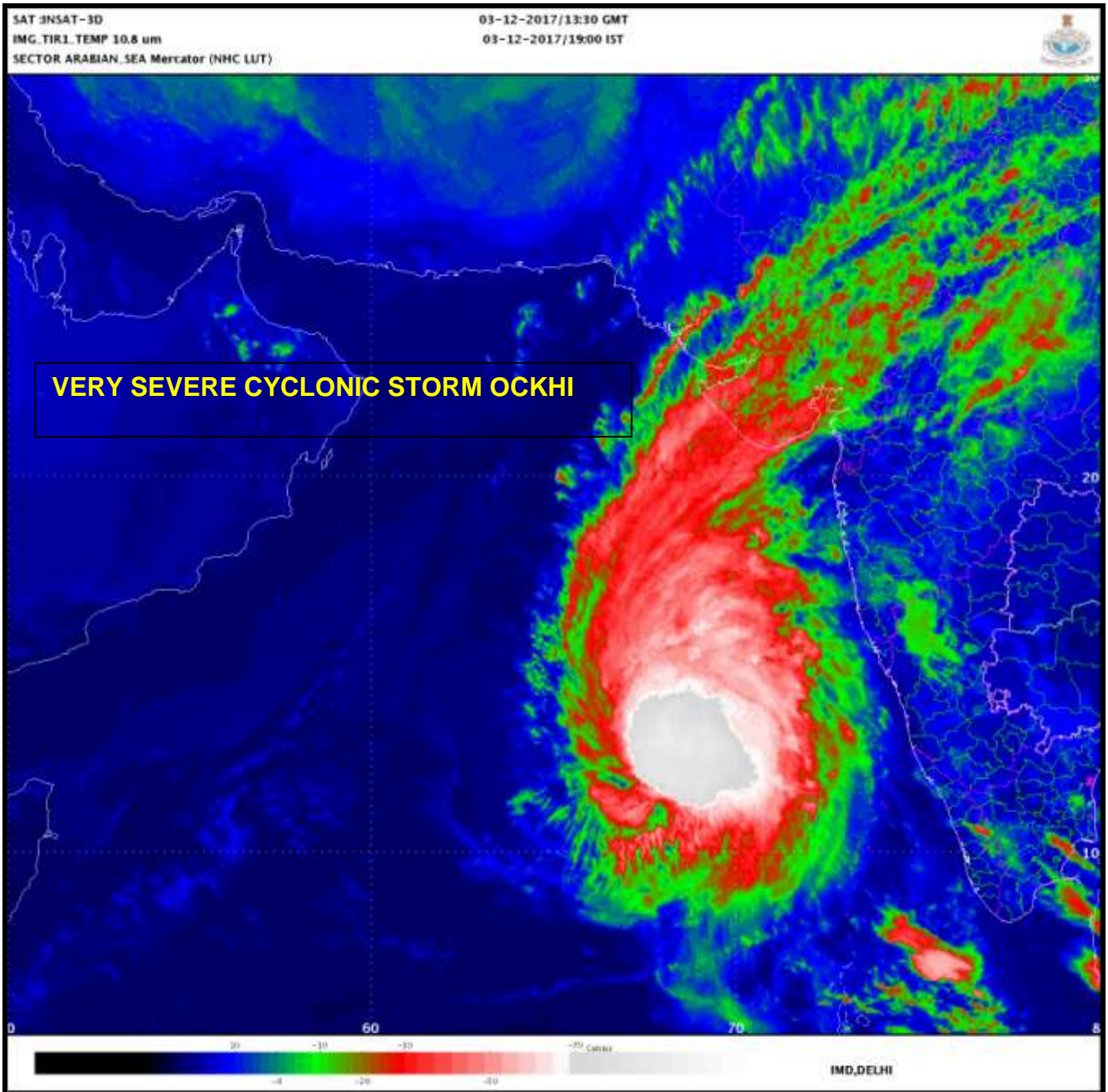
- **Heavy Rainfall warning:**
Light to moderate rainfall at many places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and over south and north Gujarat regions on 6th December (upto around noon). The weather will improve thereafter. Light to moderate rainfall at many places is also likely over north Konkan on 5th December.
- **Wind warning:**
 - Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Action suggested**
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

The next bulletin will be issued at 2330 hrs IST of 03rd December 2017.

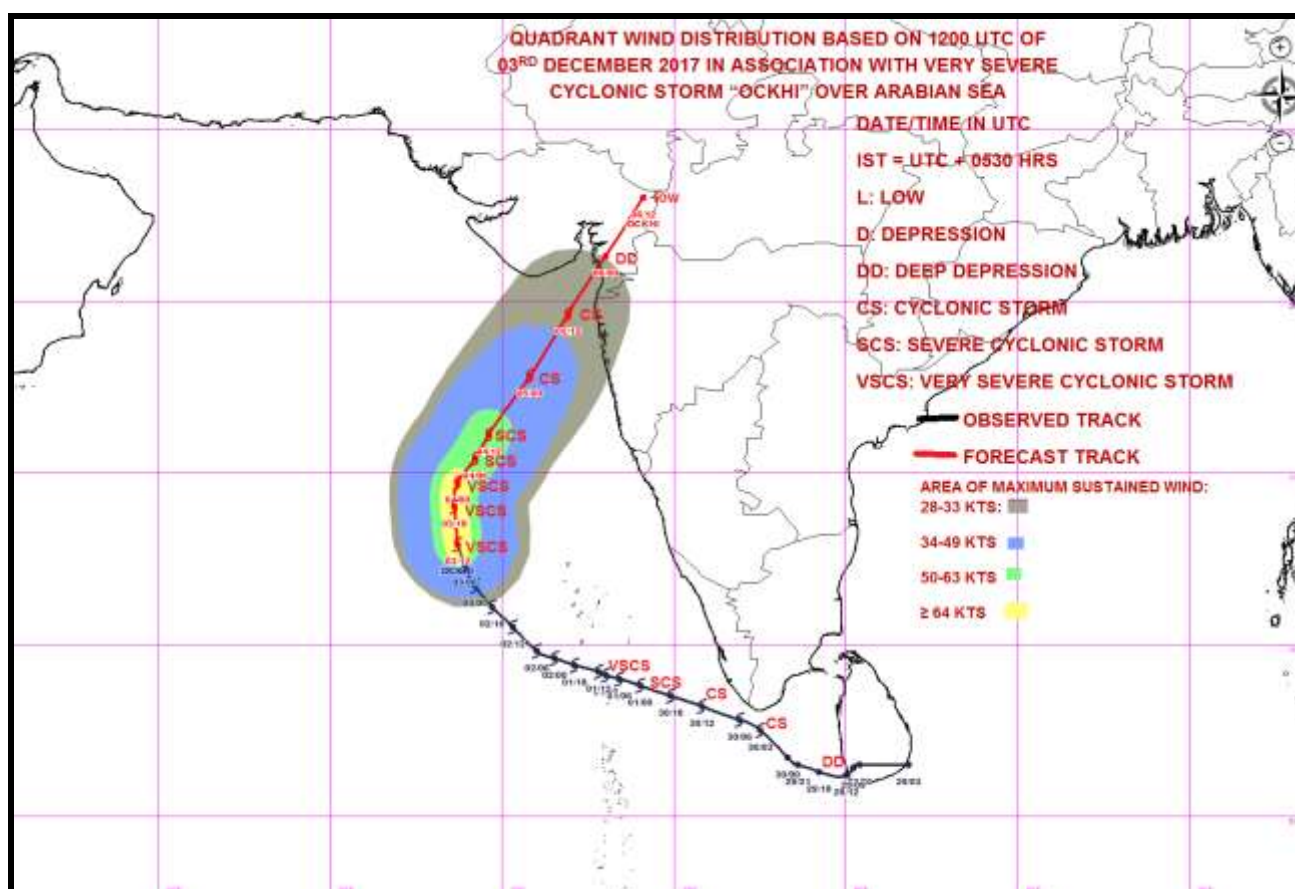
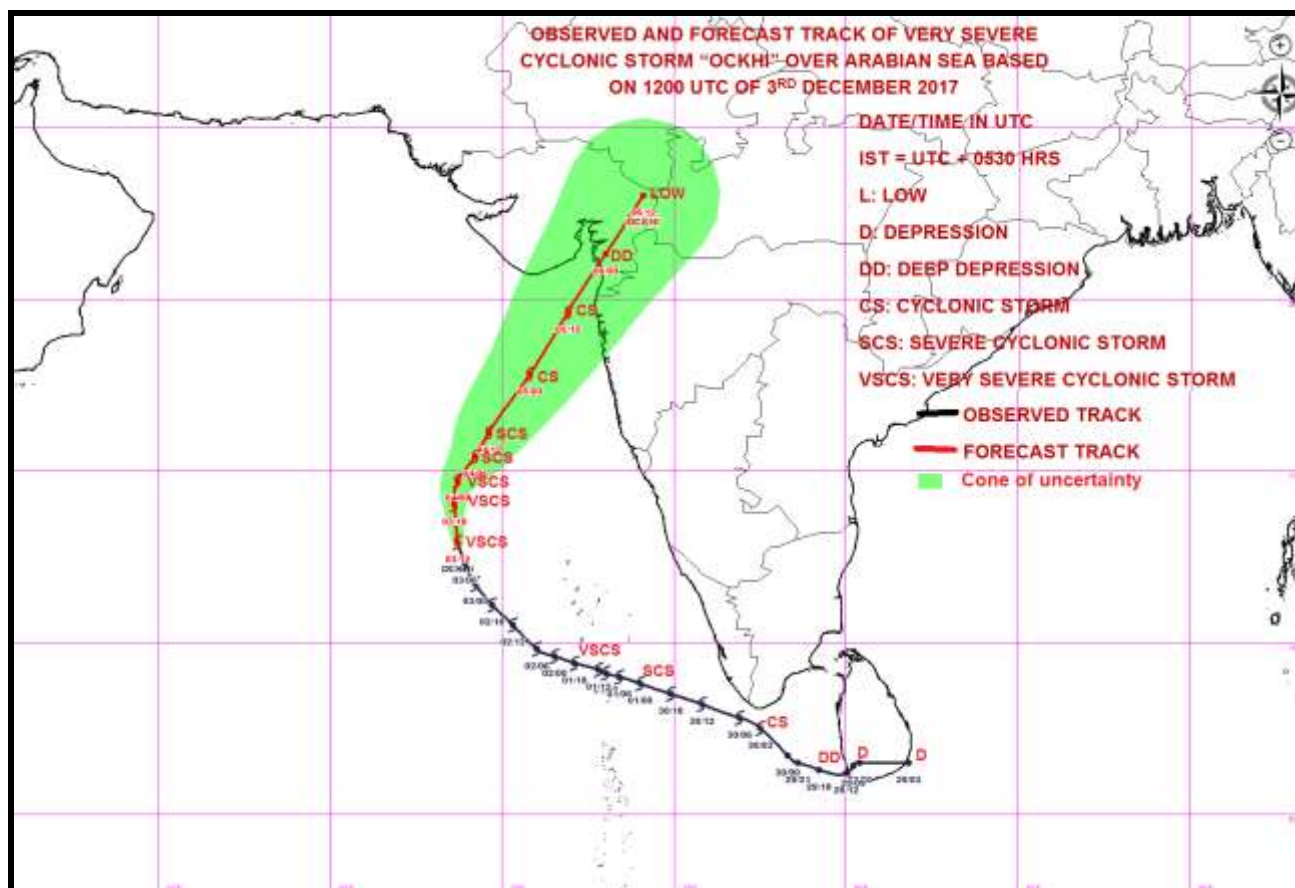
**M.MOHAPATRA
Scientist-G (Services)
Head, RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 35 (BOB 07/2017)

TIME OF ISSUE: 2315 HOURS IST

DATED: 03.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT**

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral and adjoining southeast Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over east central and adjoining southeast Arabian Sea moved further north-northwestwards with a speed of 13 kmph during past 6 hours and lay centred at 2030 hrs IST of 03rd December, 2017 over eastcentral and adjoining southeast Arabian Sea near Latitude 13.1° N and Longitude 68.6° E, about 500 km west-northwest of Amini Divi, 810 km south-southwest of Mumbai and 1005 km south-southwest of Surat. It is very likely to move north-northwestwards for about 6 hours and then recurve northeastwards towards south Gujarat and adjoining north Maharashtra coasts during next 72 hours. It is very likely to cross south Gujarat coast near Surat as a deep depression around mid night of 5th December 2017.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/2030	13.1/68.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/2330	13.5/68.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04/0530	14.7/68.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.4/69.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1730	16.1/69.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.8/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1730	19.6/71.9	65-75 GUSTING TO 85	CYCLONIC STORM
06/0530	21.3/73.0	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1730	23.0/74.1	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

- **Heavy Rainfall warning:**
Light to moderate rainfall at many places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and over south and north Gujarat regions on 6th December (upto around noon). The weather will improve thereafter. Light to moderate rainfall at many places is also likely over north Konkan on 5th December.
- **Wind warning:**
 - Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Action suggested**
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

The next bulletin will be issued at 0230 hrs IST of 04th December 2017.

SHIBIN B
Scientist-B
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

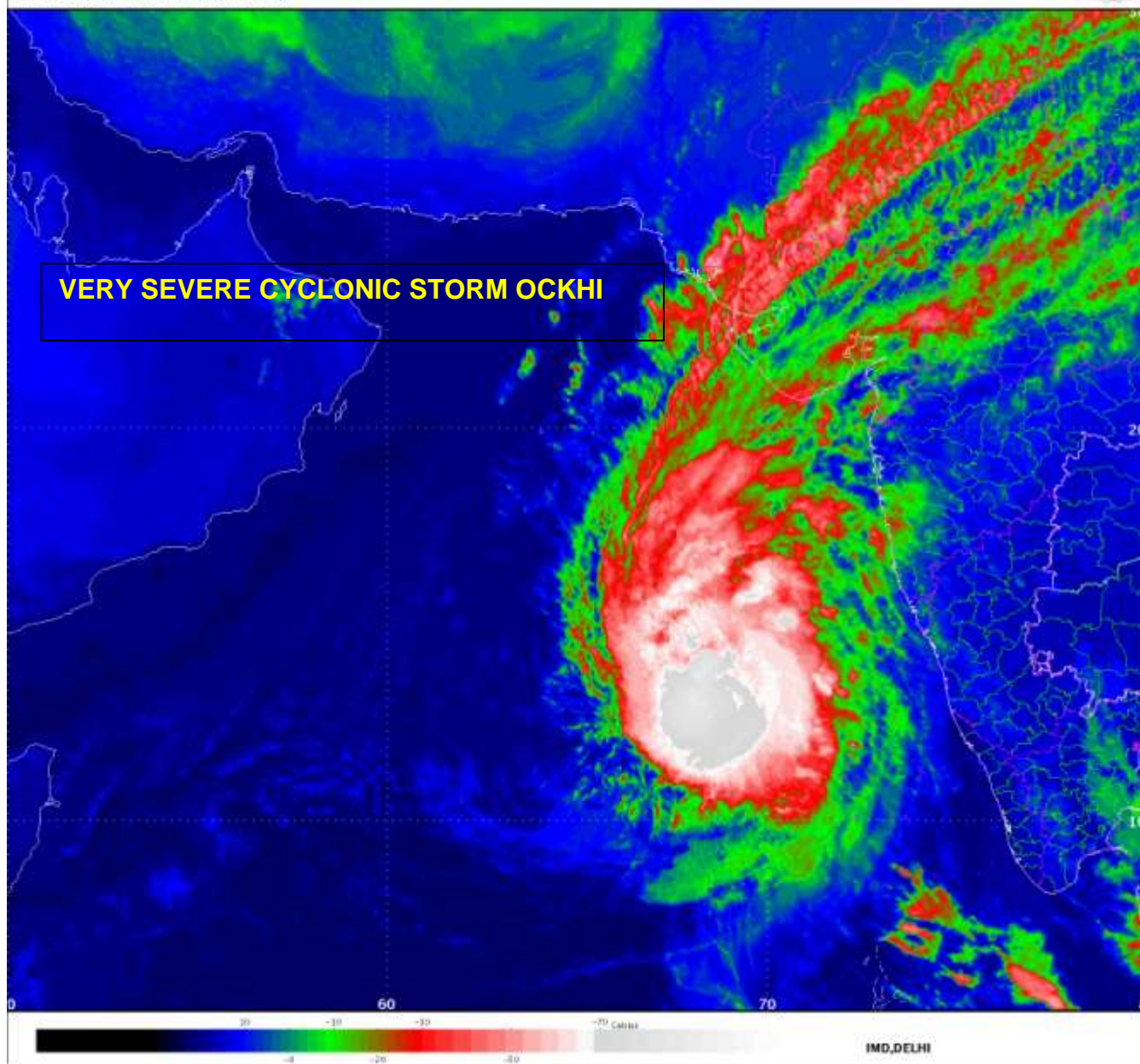
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

SAT INSAT-3D
IMG. TIR1_TEMP 10.8 um
SECTOR ARABIAN SEA Mercator (NHC LUT)

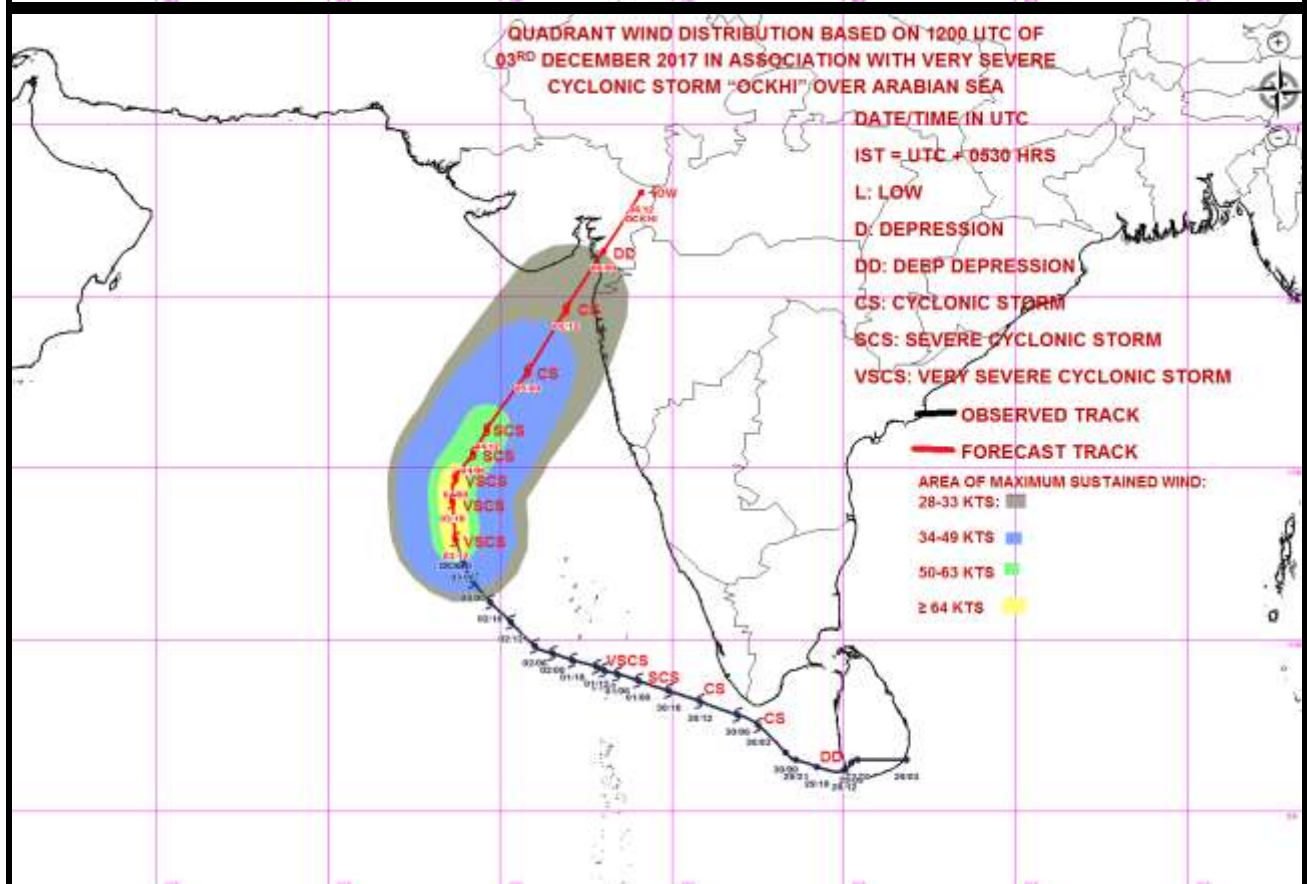
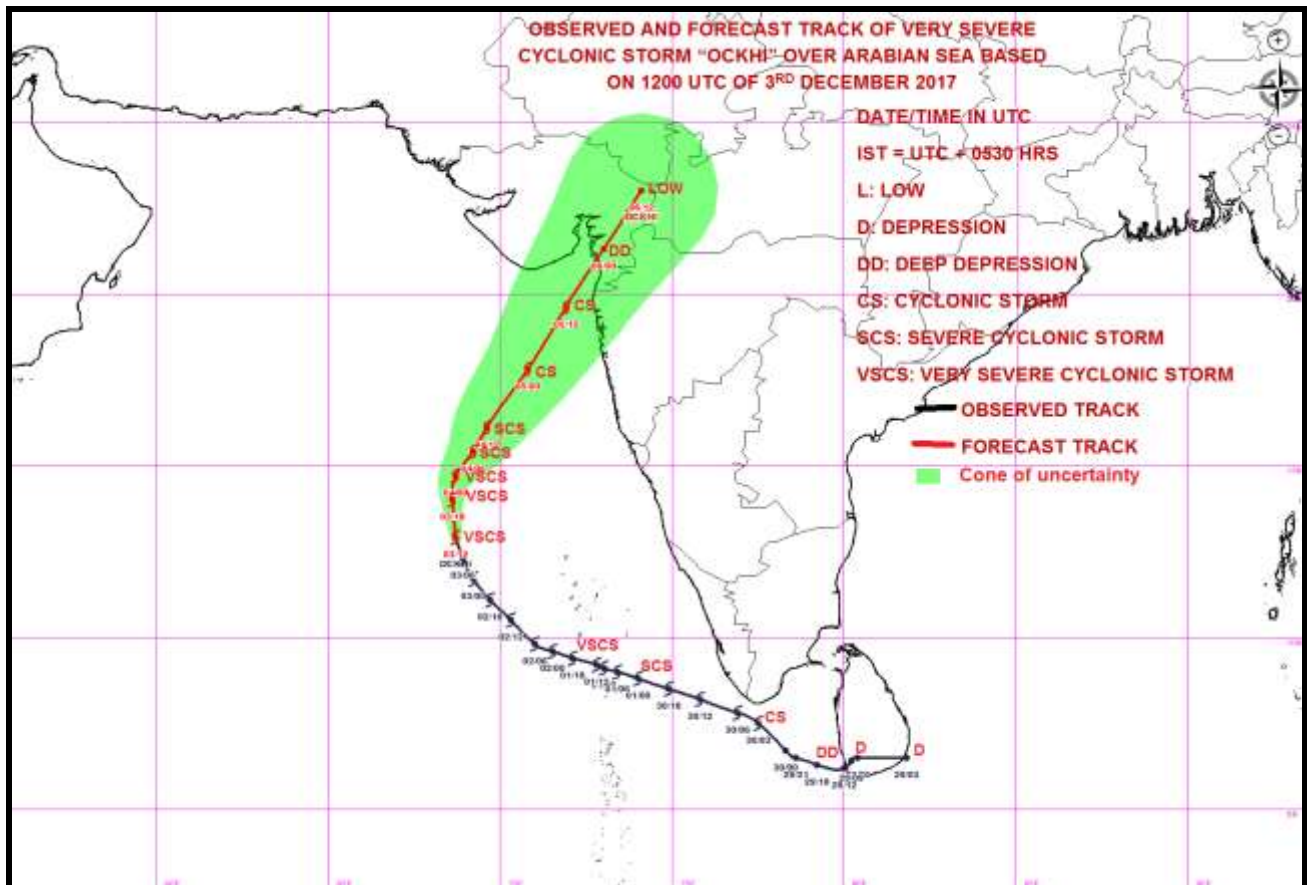
03-12-2017/16:30 GMT
03-12-2017/22:00 IST



VERY SEVERE CYCLONIC STORM OCKHI



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 36 (BOB 07/2017)

TIME OF ISSUE: 0130 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over east central and adjoining southeast Arabian Sea moved further north-northwestwards with a speed of 12 kmph during past 6 hours and lay centred at 2330 hrs IST of 03rd December, 2017 over eastcentral Arabian Sea near Latitude 13.5° N and Longitude 68.5° E, about 530 km west-northwest of Amini Divi, 770 km south-southwest of Mumbai and 970 km south-southwest of Surat. It is very likely to move nearly northwards during next 6 hours and then recurve north-northeastwards towards south Gujarat and adjoining north Maharashtra coasts. It is very likely to cross south Gujarat coast and adjoining north Maharashtra coasts near Surat as a deep depression by mid night of 5th December 2017.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/2330	13.5/68.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0530	14.5/68.5	125-135 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1730	16.1/69.6	100-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/1130	18.7/71.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/2330	20.5/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.1/73.5	25-35 GUSTING TO 45	WELL MARKED LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

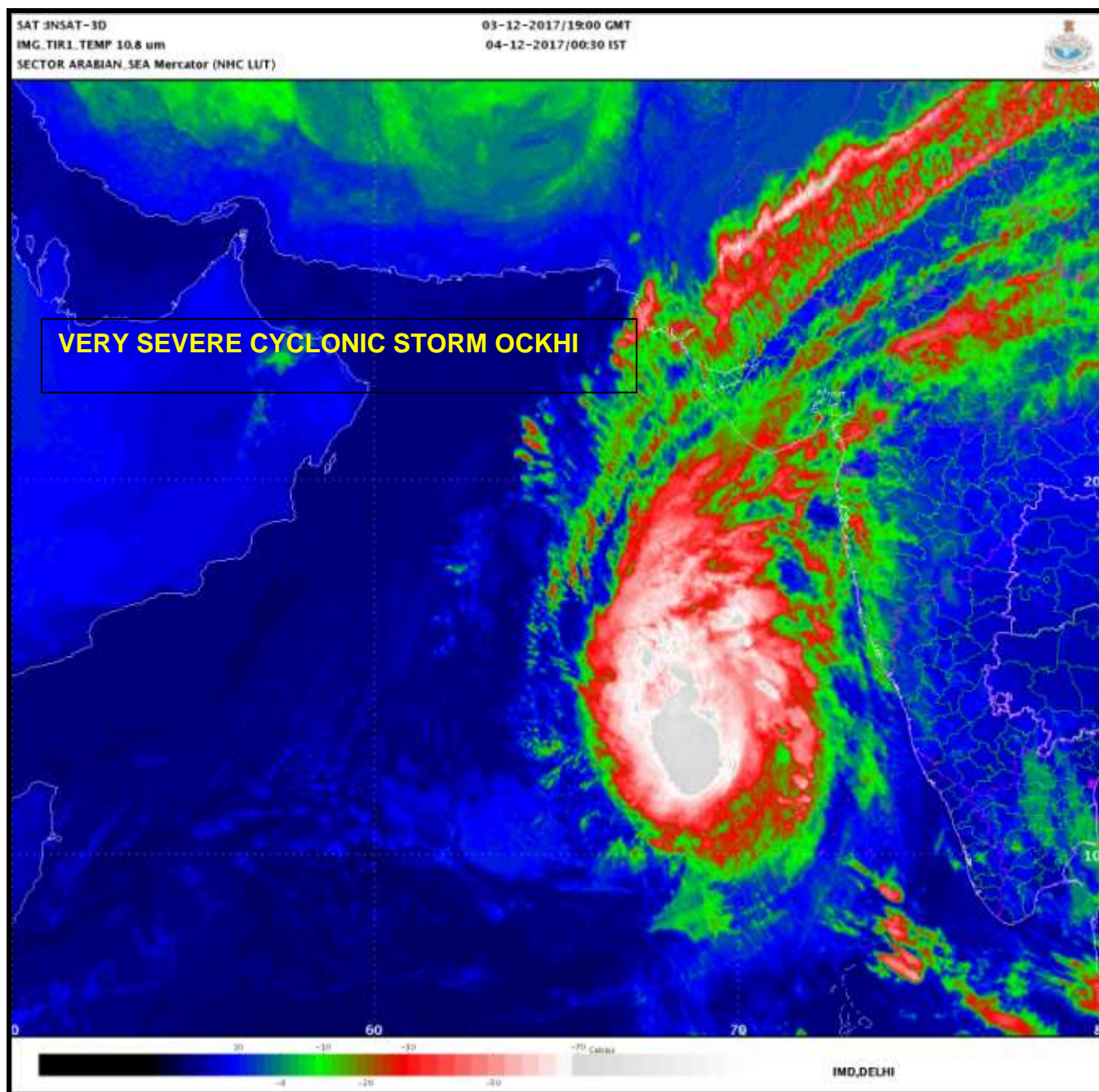
- **Heavy Rainfall warning:**
Light to moderate rainfall at many places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and over south and north Gujarat regions on 6th December (upto around noon). The weather will improve thereafter. Light to moderate rainfall at many places is also likely over north Konkan on 5th December.
- **Wind warning:**
 - Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Action suggested**
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

The next bulletin will be issued at 0530 hrs IST of 04th December 2017.

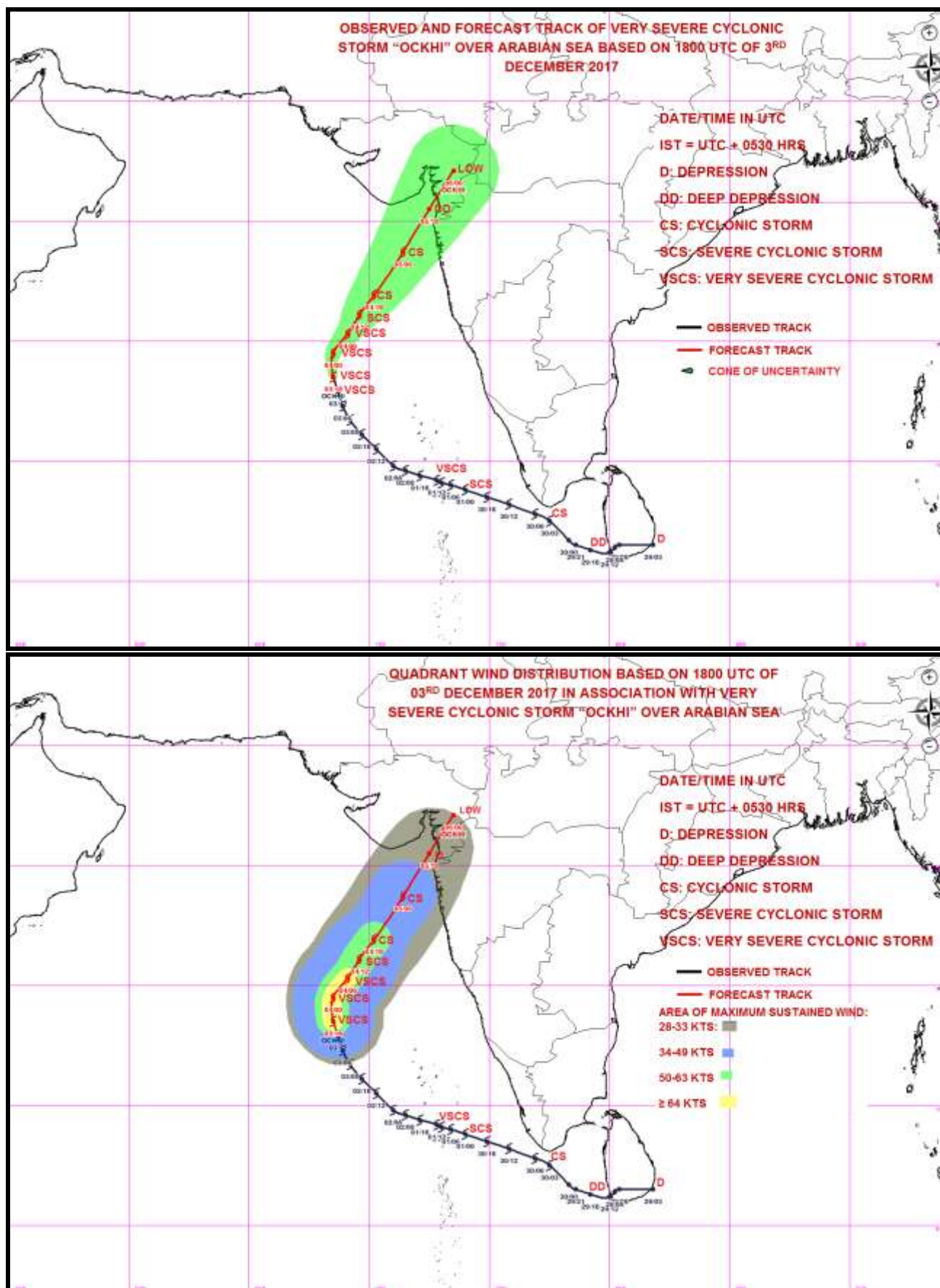
**SHIBIN B
Scientist-B
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 37 (BOB 07/2017)

TIME OF ISSUE: 0330 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over east central and adjoining southeast Arabian Sea moved further north-northwestwards with a speed of 16 kmph during past 6 hours and lay centred at 0230 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 14.0° N and Longitude 68.5° E, about 560 km west-northwest of Amini Divi, 730 km south-southwest of Mumbai and 920 km south-southwest of Surat. It is very likely to move nearly northwards during next 6 hours and then recurve north-northeastwards towards south Gujarat and adjoining north Maharashtra coasts. It is very likely to cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by mid night of 5th December 2017.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/0230	14.0/68.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0530	14.5/68.5	125-135 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1730	16.1/69.6	100-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/1130	18.7/71.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/2330	20.5/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.1/73.5	25-35 GUSTING TO 45	WELL MARKED LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

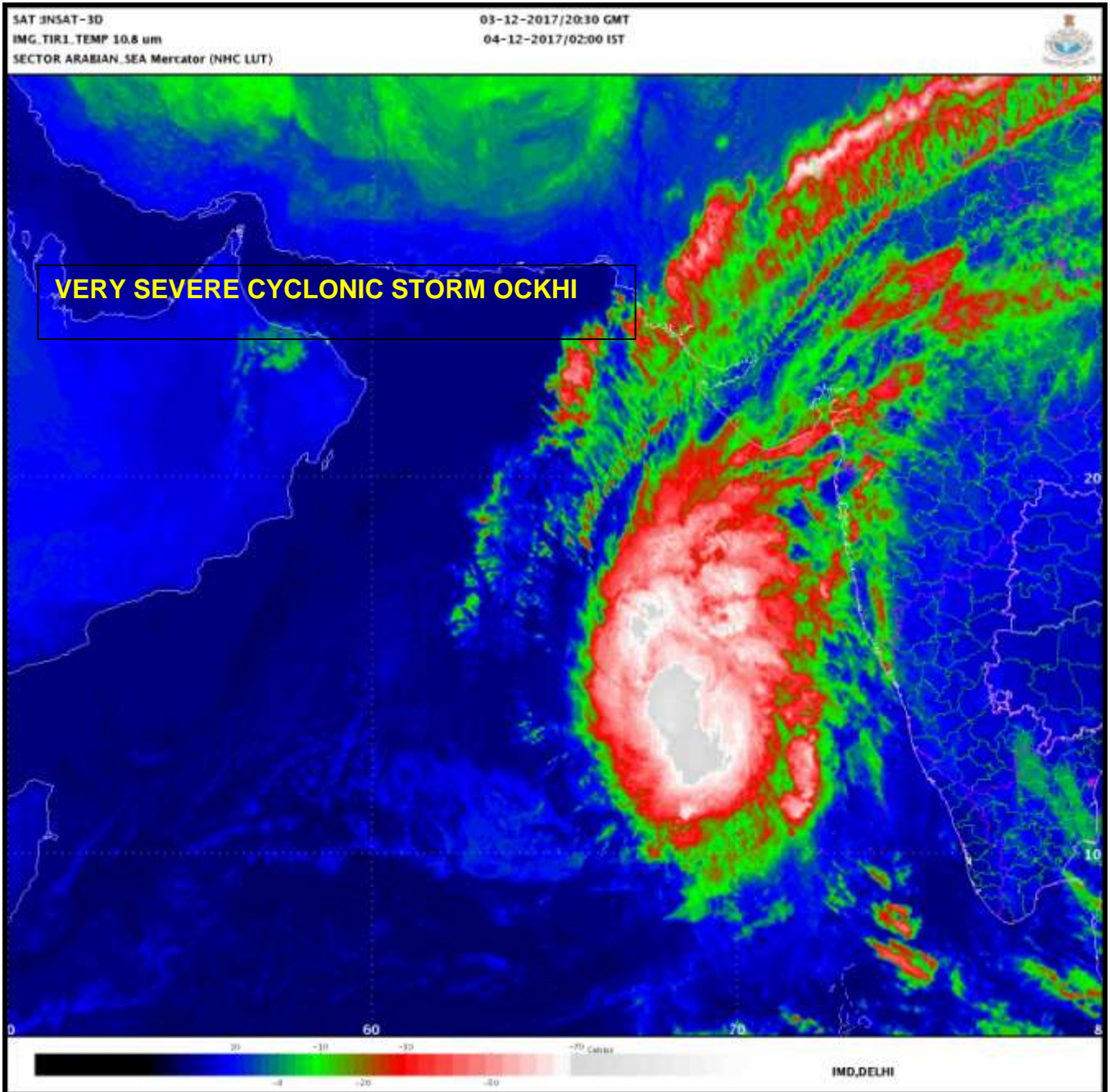
- **Heavy Rainfall warning:**
Light to moderate rainfall at many places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and over south and north Gujarat regions on 6th December (upto around noon). The weather will improve thereafter. Light to moderate rainfall at many places is also likely over north Konkan on 5th December.
- **Wind warning:**
 - Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from 4th night to 6th December 2017 morning.
- **Action suggested**
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

The next bulletin will be issued at 0830 hrs IST of 04th December 2017.

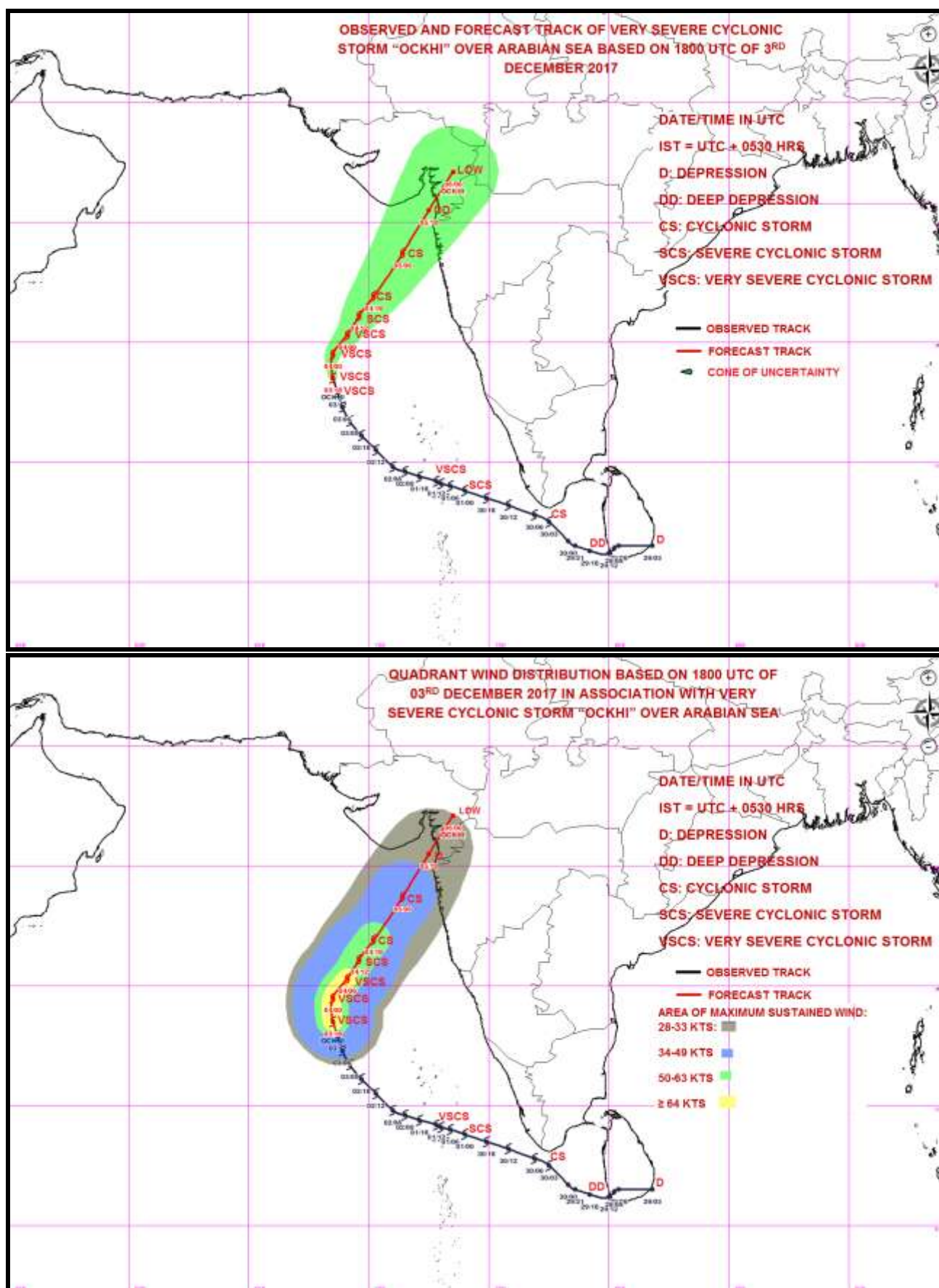
**SHIBIN B
Scientist-B
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 38 (BOB 07/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

Sub: Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over eastcentral and adjoining southeast Arabian Sea moved further northwards with a speed of 18 kmph during past 6 hours and lay centred at 0530 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 14.5° N and Longitude 68.5° E, about 590 km north-northwest of Amini Divi, 690 km south-southwest of Mumbai and 870 km south-southwest of Surat. It is very likely to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by mid-night of 5th December 2017.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/0530	14.5/68.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1730	16.1/69.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.7/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1730	19.6/72.0	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0530	21.3/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1730	23.0/74.4	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

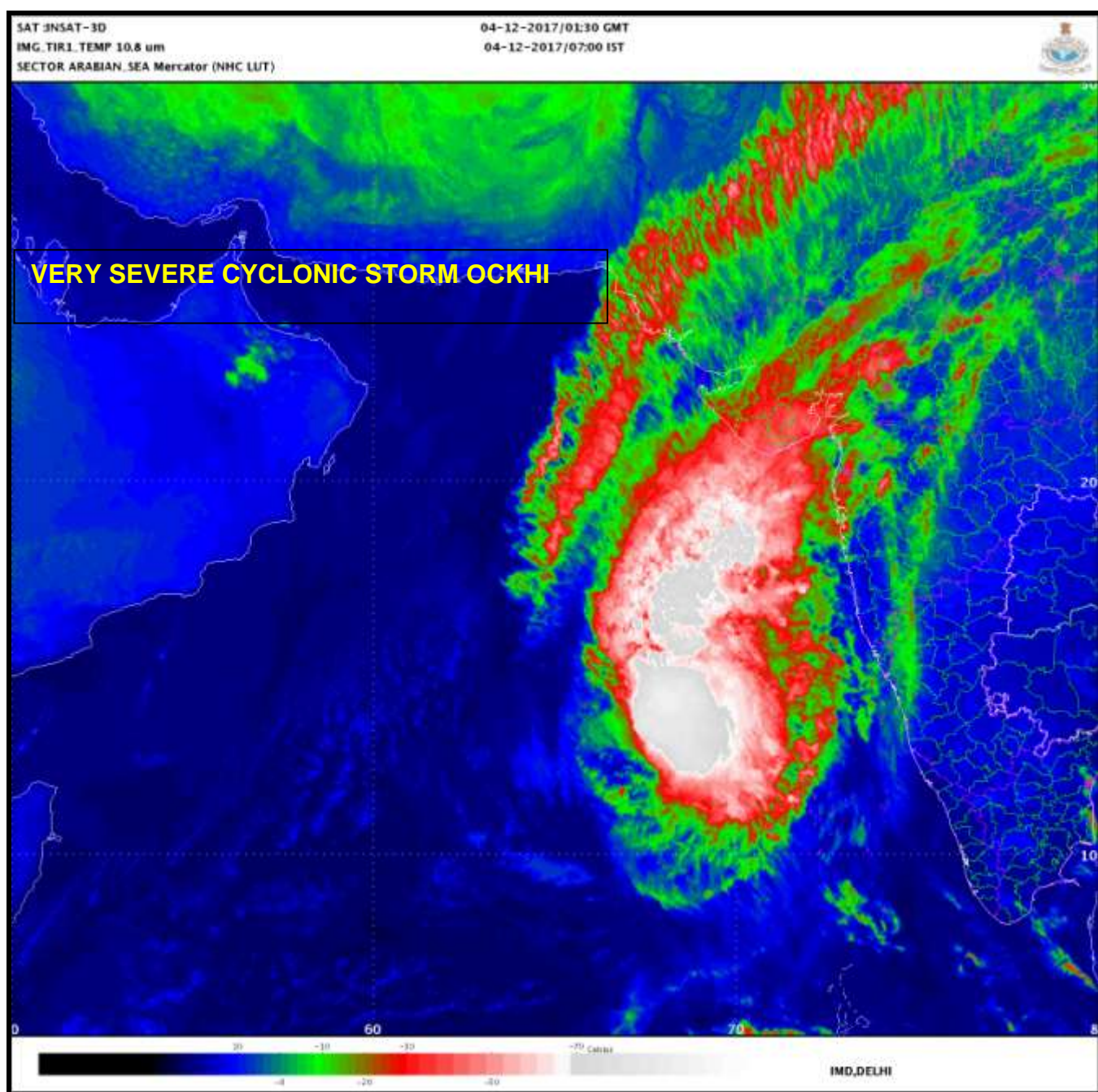
- **Heavy Rainfall warning:**
Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at many places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and light to moderate rainfall over Gujarat region on 6th December (upto around noon). Light to moderate rainfall at many places with isolated heavy rainfall is also likely over north Konkan on 5th December.
- **Wind warning:**
 - Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.
- **Sea condition:**
 - Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.
- **Action suggested**
 - **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

The next bulletin will be issued at 1130 hrs IST of 04th December 2017.

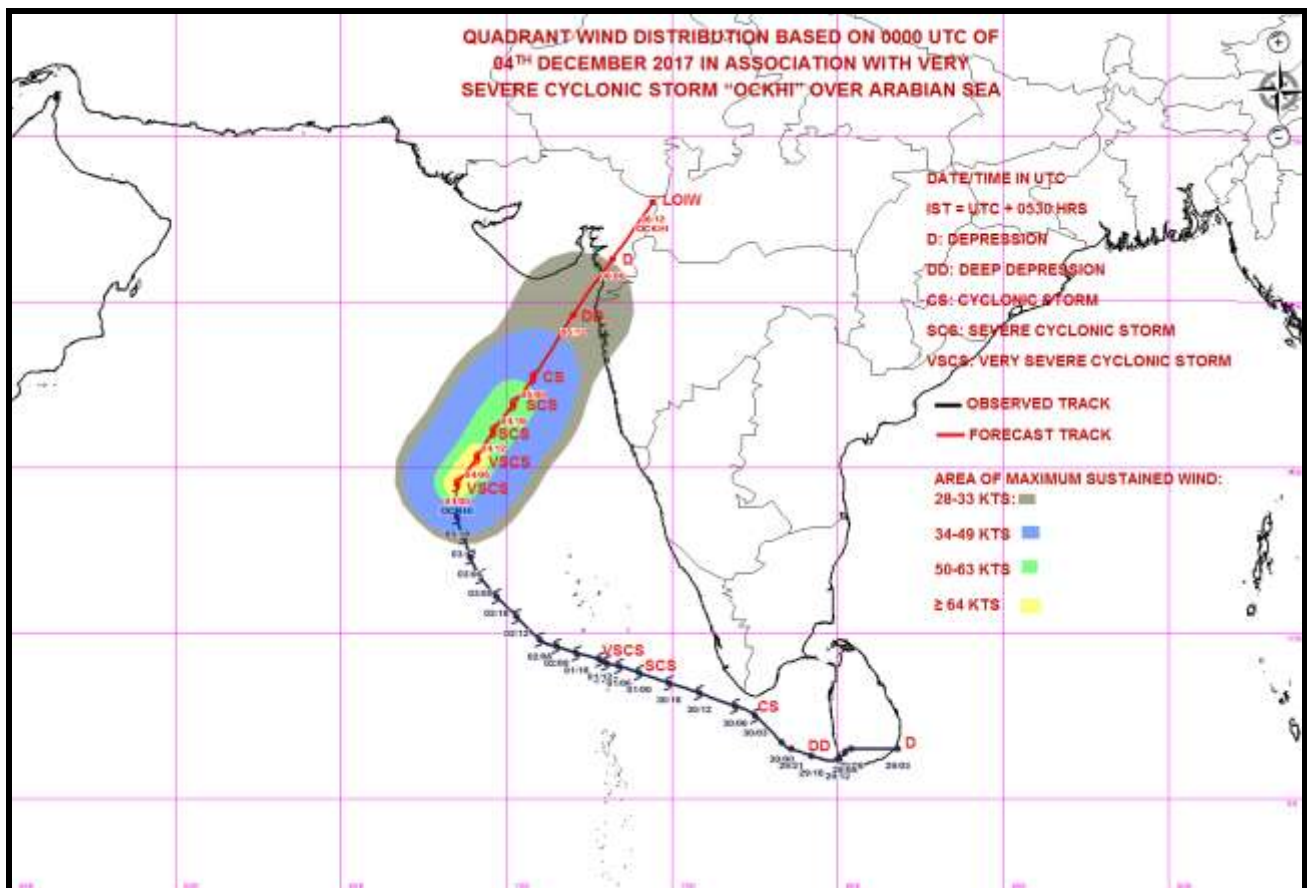
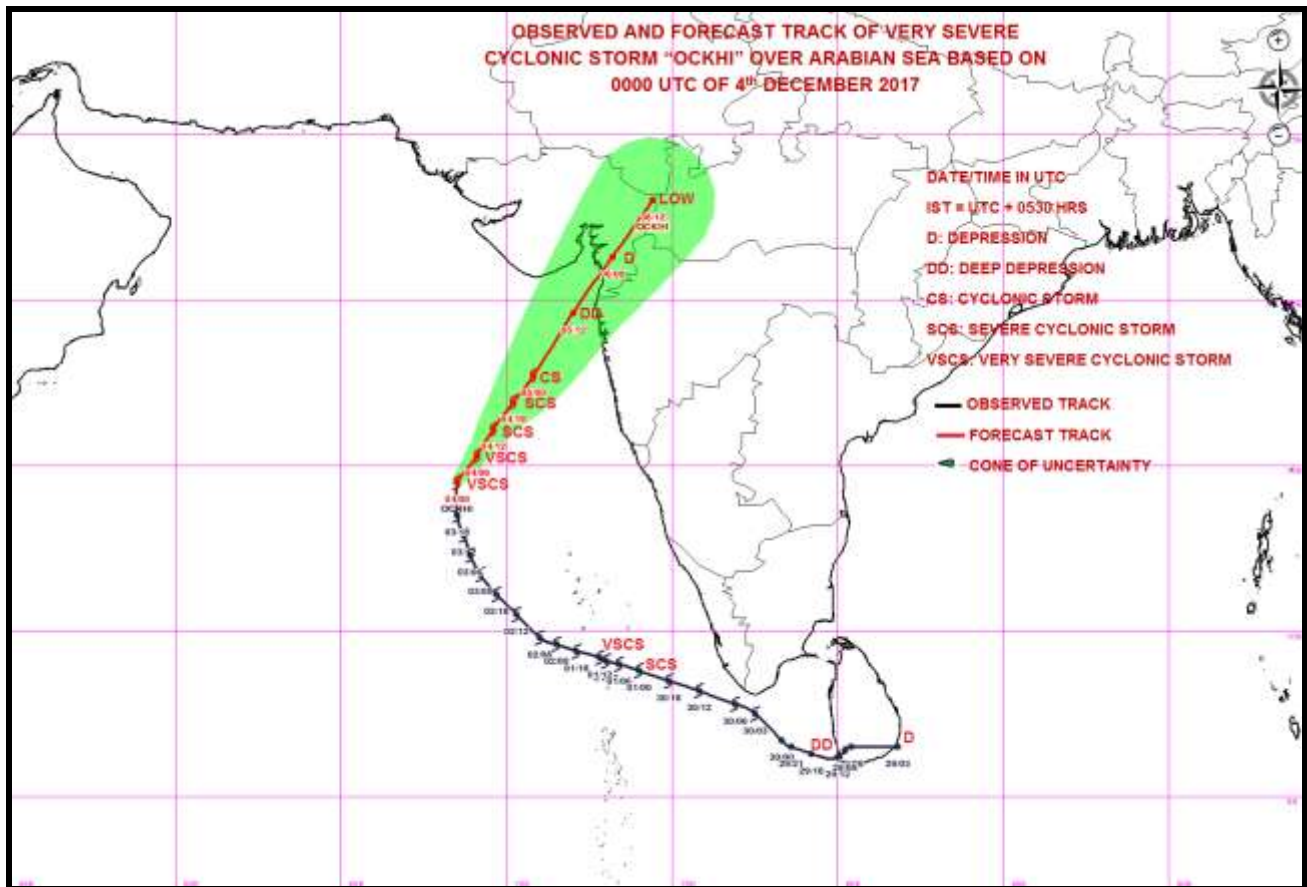
**SHIBIN B
Scientist-B
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 39 (BOB 07/2017)

TIME OF ISSUE: 1200 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

**Sub: (1) Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further northwards with a speed of 13 kmph during past 6 hours and lay centred at 0830 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 14.7° N and Longitude 68.5° E, about 600 km north-northwest of Amini Divi, 670 km southwest of Mumbai and 850 km south-southwest of Surat. It is very likely to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by mid-night of 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/0830	14.7/68.5	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1130	15.3/69.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1730	16.1/69.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.7/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1730	19.6/72.0	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0530	21.3/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1730	23.0/74.4	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall warning:**

- **Gujarat :** Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December and light to moderate rainfall over Gujarat region at many places on 6th December (upto around noon).
- **Maharashtra:** Light to moderate rainfall is very likely at a few places over north Konkan including Mumbai on 4th December. Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December.

➤ **Wind warning:**

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ **Sea condition:**

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ **Action suggested**

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

2. Well Marked low pressure area over Southeast Bay of Bengal:

A well marked low pressure area lies over southeast Bay of Bengal and adjoining south Andaman Sea. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Heavy Rain:

Rainfall at most places with isolated heavy rainfall over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days.

Wind Warning:

Squally winds speed reaching 30-40 kmph gusting to 50 kmph on 4th, and 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 4th to 6th December, 2017 around Nicobar Islands.

Action suggested:

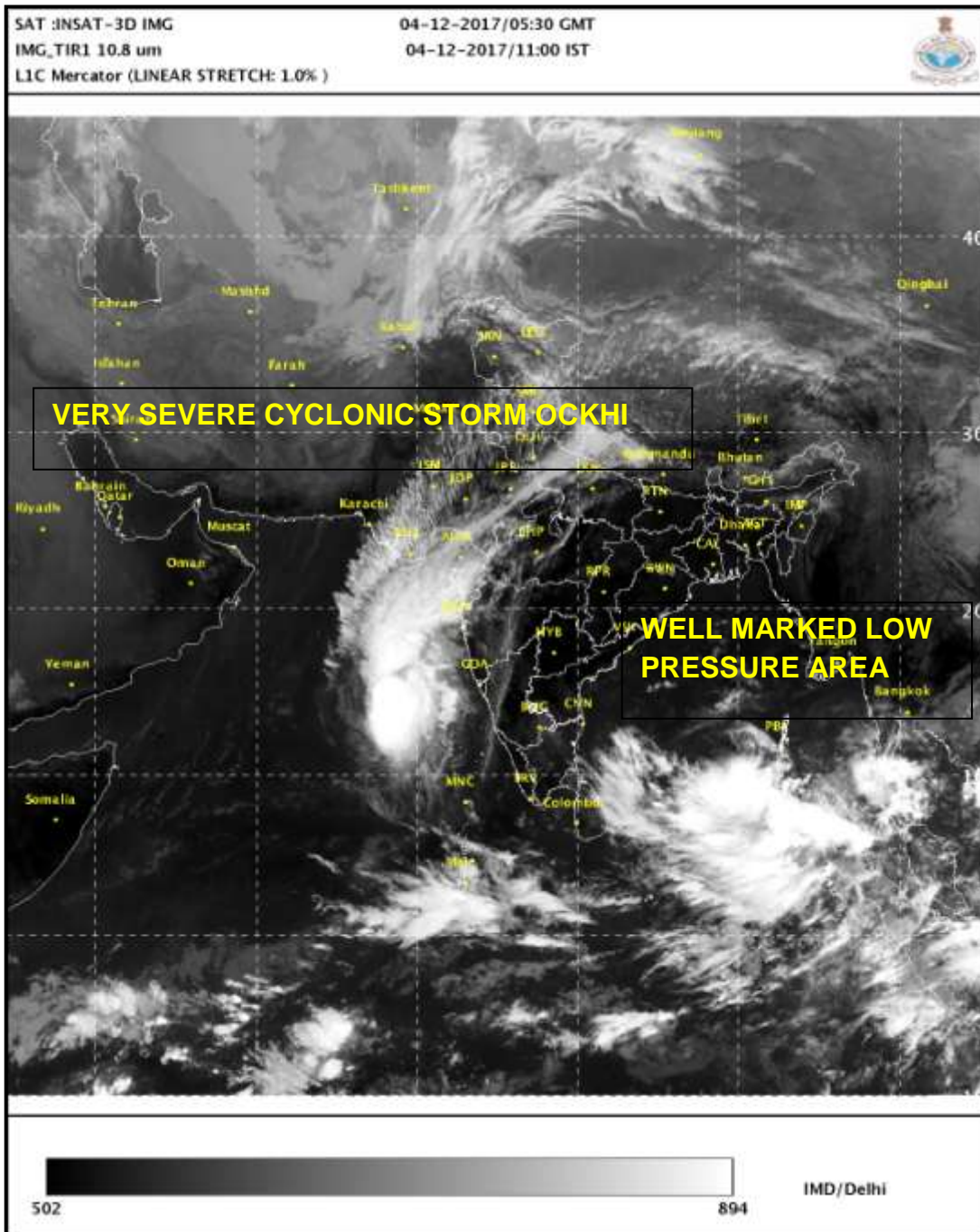
- Fishermen along and off Nicobar Islands are advised not to venture into sea during 4th to 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

The next bulletin will be issued at 1430 hrs IST of 04th December 2017.

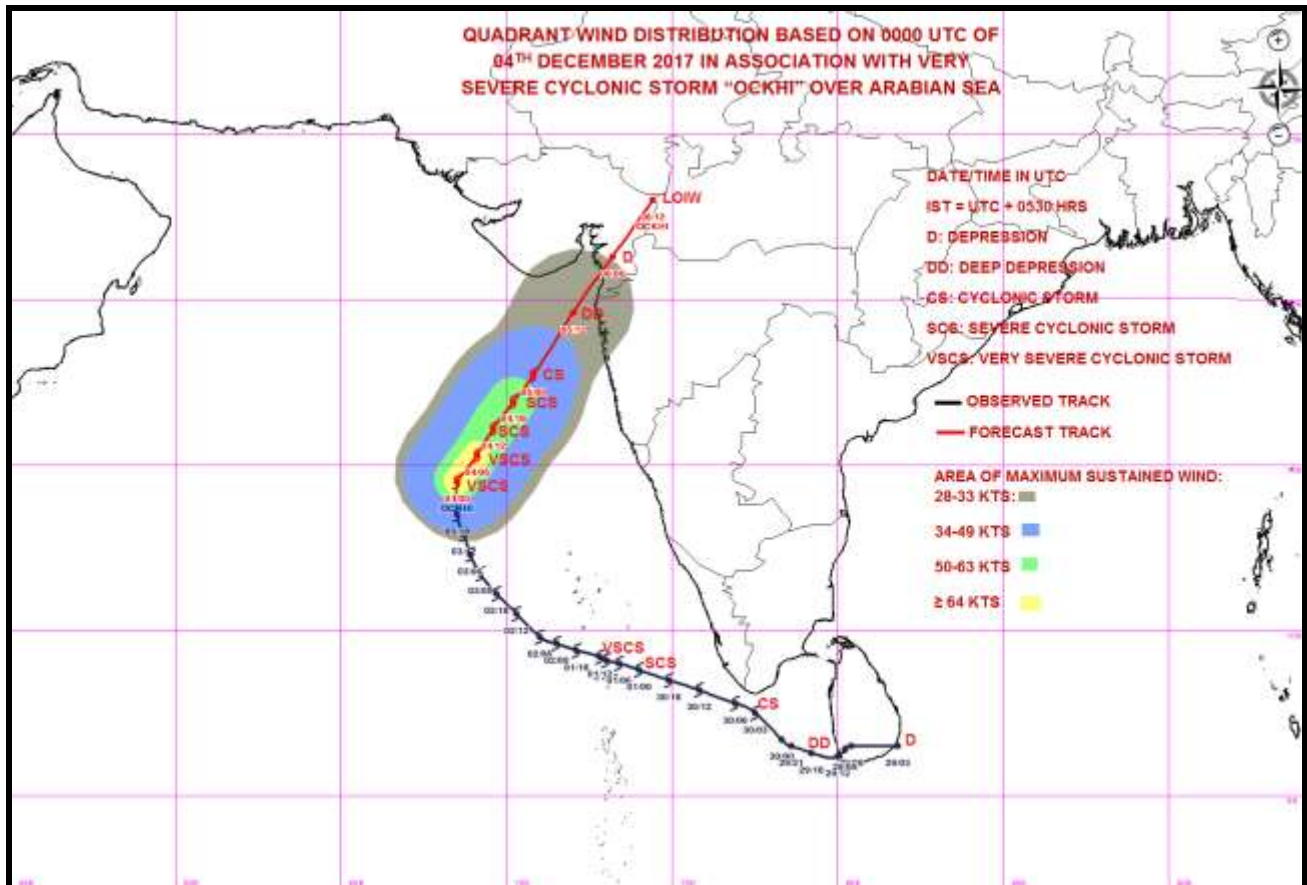
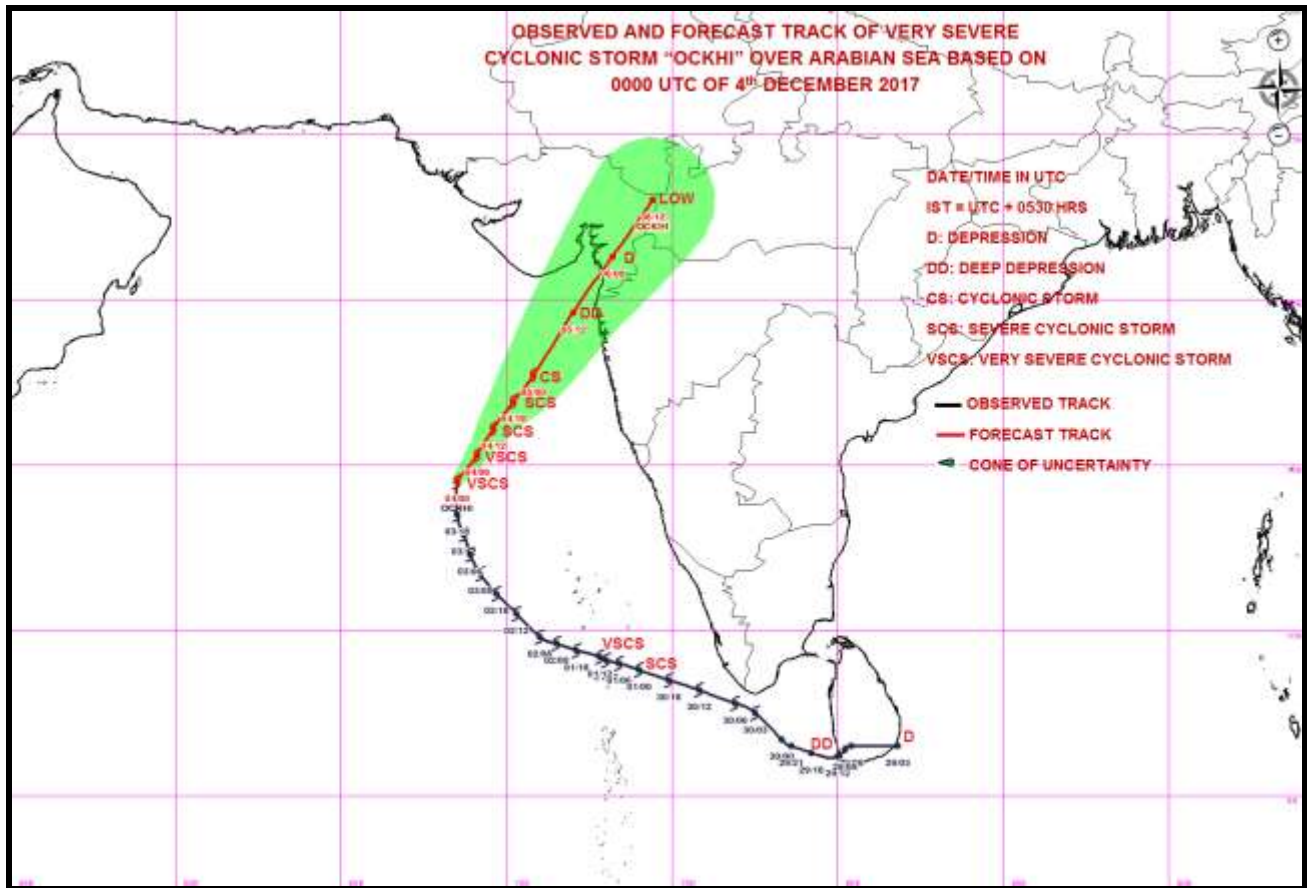
(NEETHA K GOPAL)
Scientist-E
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 40 (BOB 07/2017)

TIME OF ISSUE: 1420 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF ADMINISTRATOR, GOVT. OF ODISHA**

**Sub: (1) Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved north-northeastwards with a speed of 9 kmph during past 6 hours and lay centred at 1130 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 14.9° N and Longitude 68.8° E, about 630 km southwest of Mumbai and 810 km south-southwest of Surat. It is very likely to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by mid-night of 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/1130	14.9/68.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1730	15.8/69.3	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.3/70.4	90-100 GUSTING TO 110	CYCLONIC STORM
05/1130	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/2330	20.5/72.6	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.3/73.8	35-45 GUSTING TO 55	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ Heavy Rainfall:

- **Gujarat :** Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places on 6th December (upto around noon).
- **Maharashtra:** Light to moderate rainfall is very likely at a few places over north Konkan including Mumbai on 4th December. Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ Wind:

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Sea condition:

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):

Minor damage to loose / unsecured structures. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutch embankments.

➤ Action suggested

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

2. Well Marked low pressure area over Southeast Bay of Bengal:

A well marked low pressure area lies over southeast Bay of Bengal and adjoining south Andaman Sea. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

Rainfall at most places with isolated heavy rainfall over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days.

Wind:

Squally winds speed reaching 30-40 kmph gusting to 50 kmph on 4th, and 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 4th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea during 4th to 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

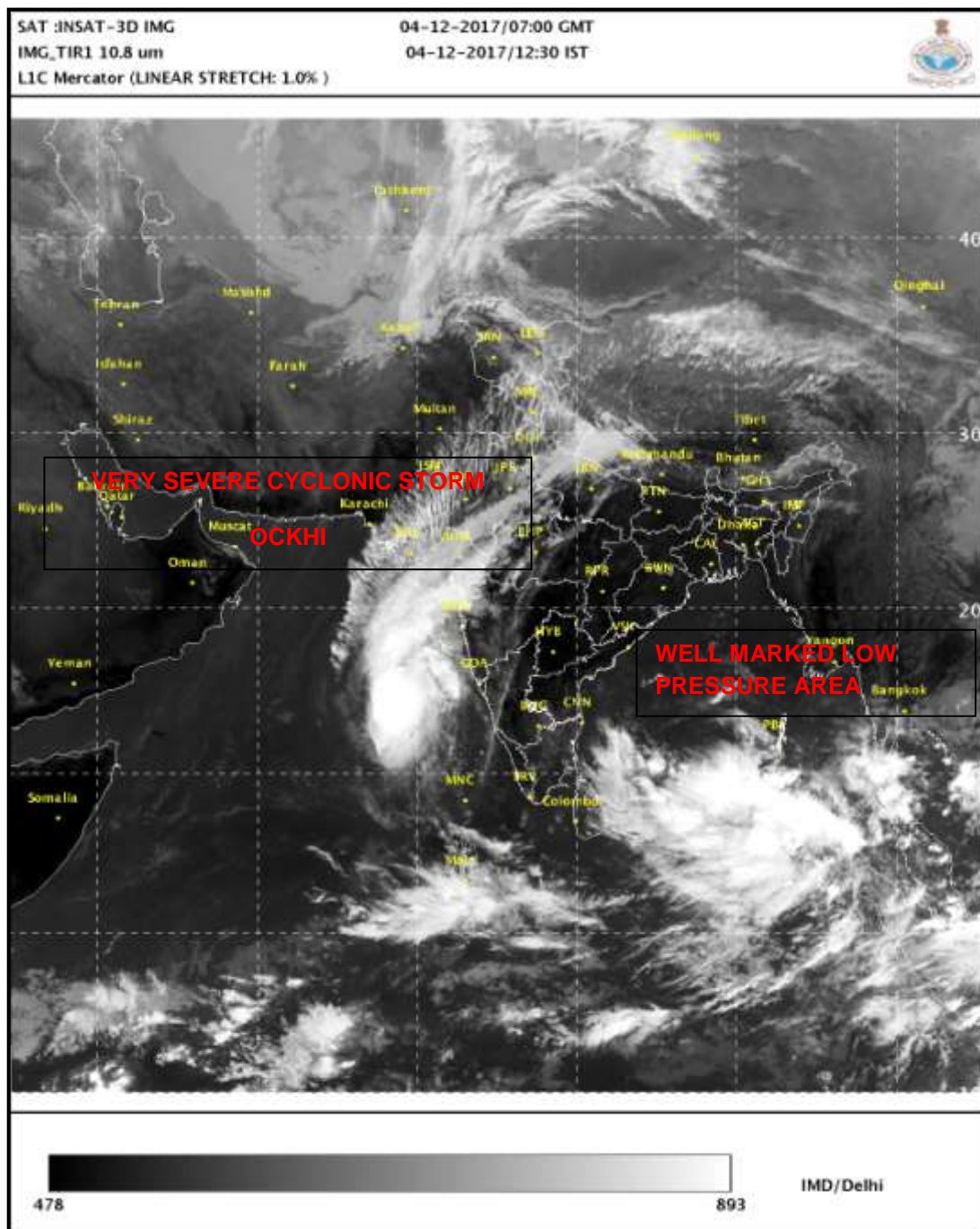
The next bulletin will be issued at 1730 hrs IST of 04th December 2017.

(NEETHA K GOPAL)
Scientist-E
RSMC New Delhi

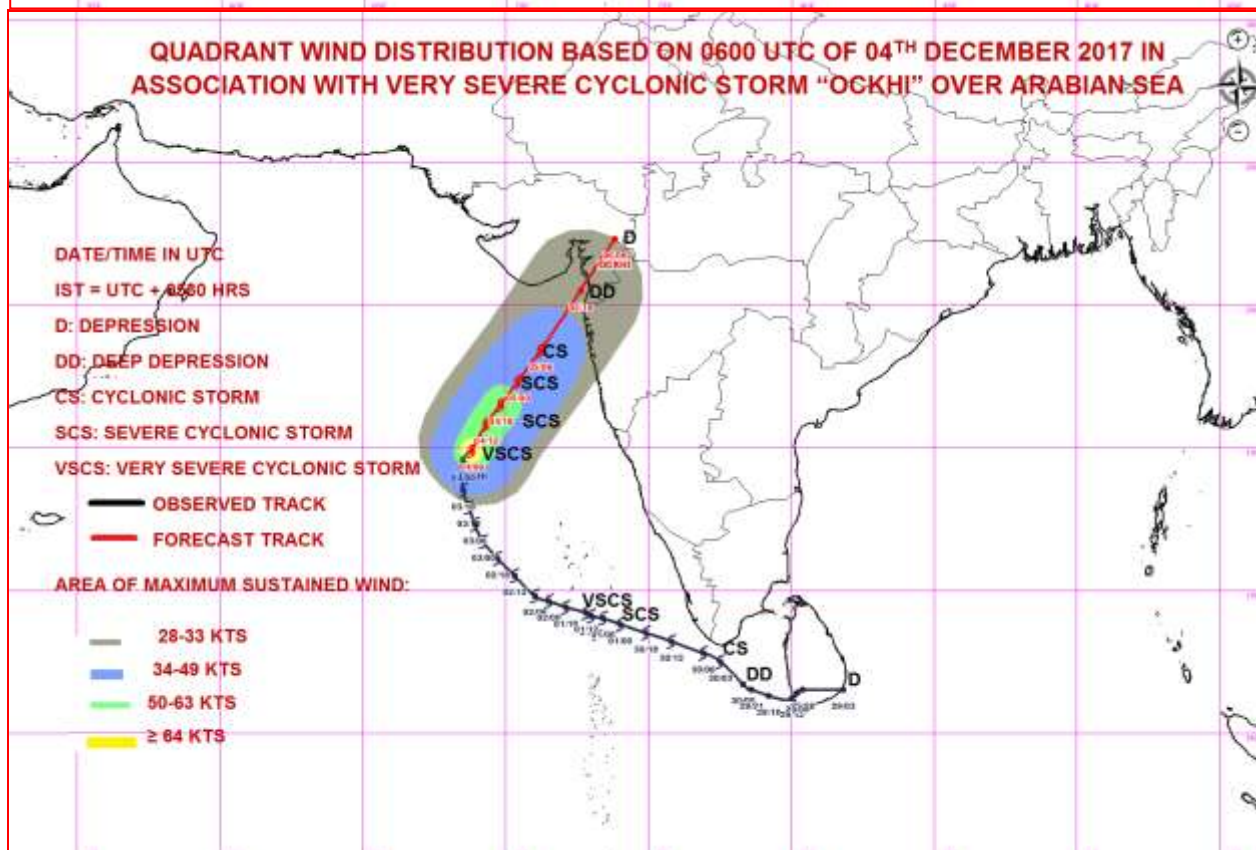
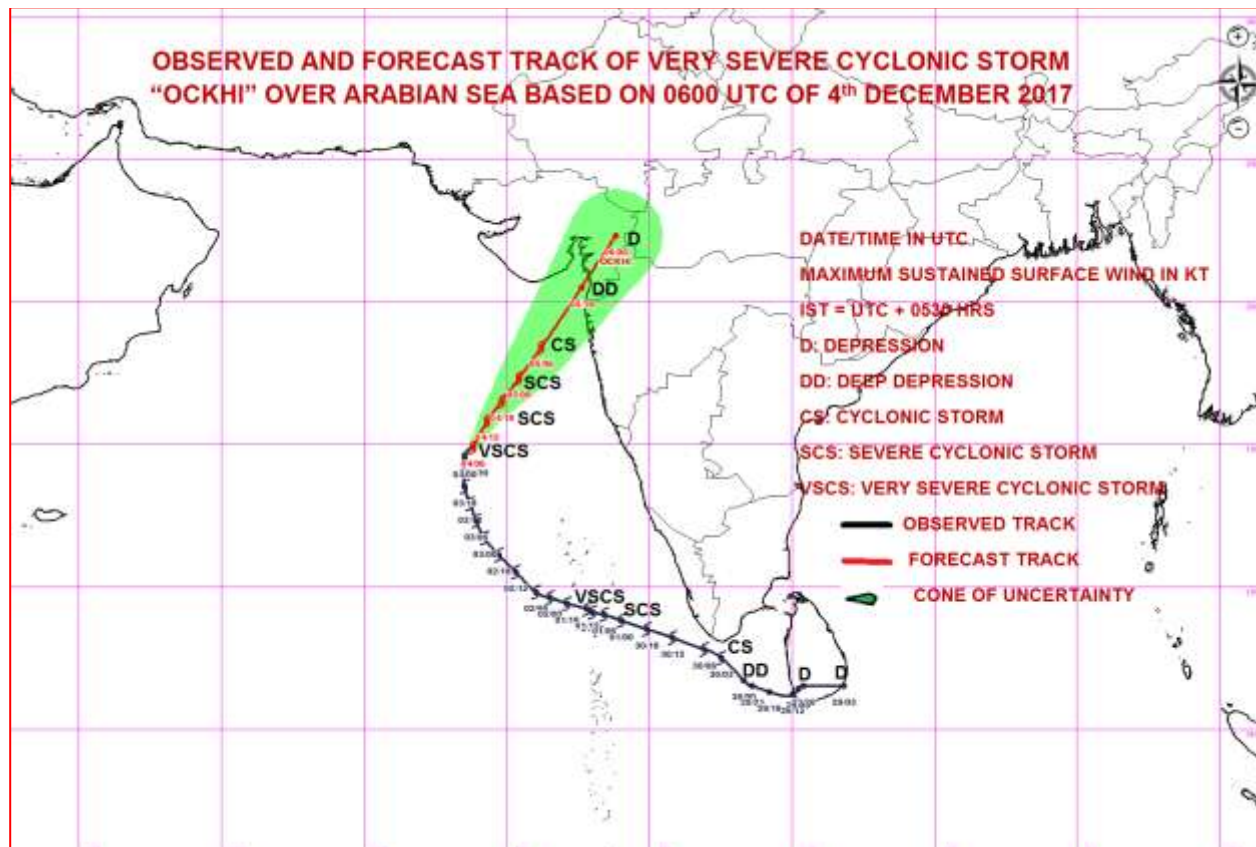
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
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Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
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**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 41 (BOB 07/2017)

TIME OF ISSUE: 1620 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

CHIEF ADMINISTRATOR, GOVT. OF ODISHA

Sub: (1) Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

(2) Well Marked low pressure area over Southeast Bay of Bengal

1) Very Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 13 kmph during past 6 hours and lay centred at 1430 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 15.2° N and Longitude 69.0° E, about 590 km southwest of Mumbai and 770 km south-southwest of Surat. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by the night of tomorrow, the 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/1430	15.2/69.0	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1730	15.8/69.3	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.3/70.4	90-100 GUSTING TO 110	CYCLONIC STORM
05/1130	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/2330	20.5/72.6	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.3/73.8	35-45 GUSTING TO 55	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ Heavy Rainfall:

- **Gujarat :** Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places on 6th December.
- **Maharashtra:** Light to moderate rainfall is very likely at a few places over north Konkan including Mumbai on 4th December. Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ Wind:

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Sea condition:

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):

Minor damage to loose / unsecured structures. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutch embankments.

➤ Action suggested

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

2. Well Marked low pressure area over Southeast Bay of Bengal:

A well marked low pressure area lies over southeast Bay of Bengal and adjoining south Andaman Sea. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 30-40 kmph gusting to 50 kmph on 4th, and 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 4th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea during 4th to 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

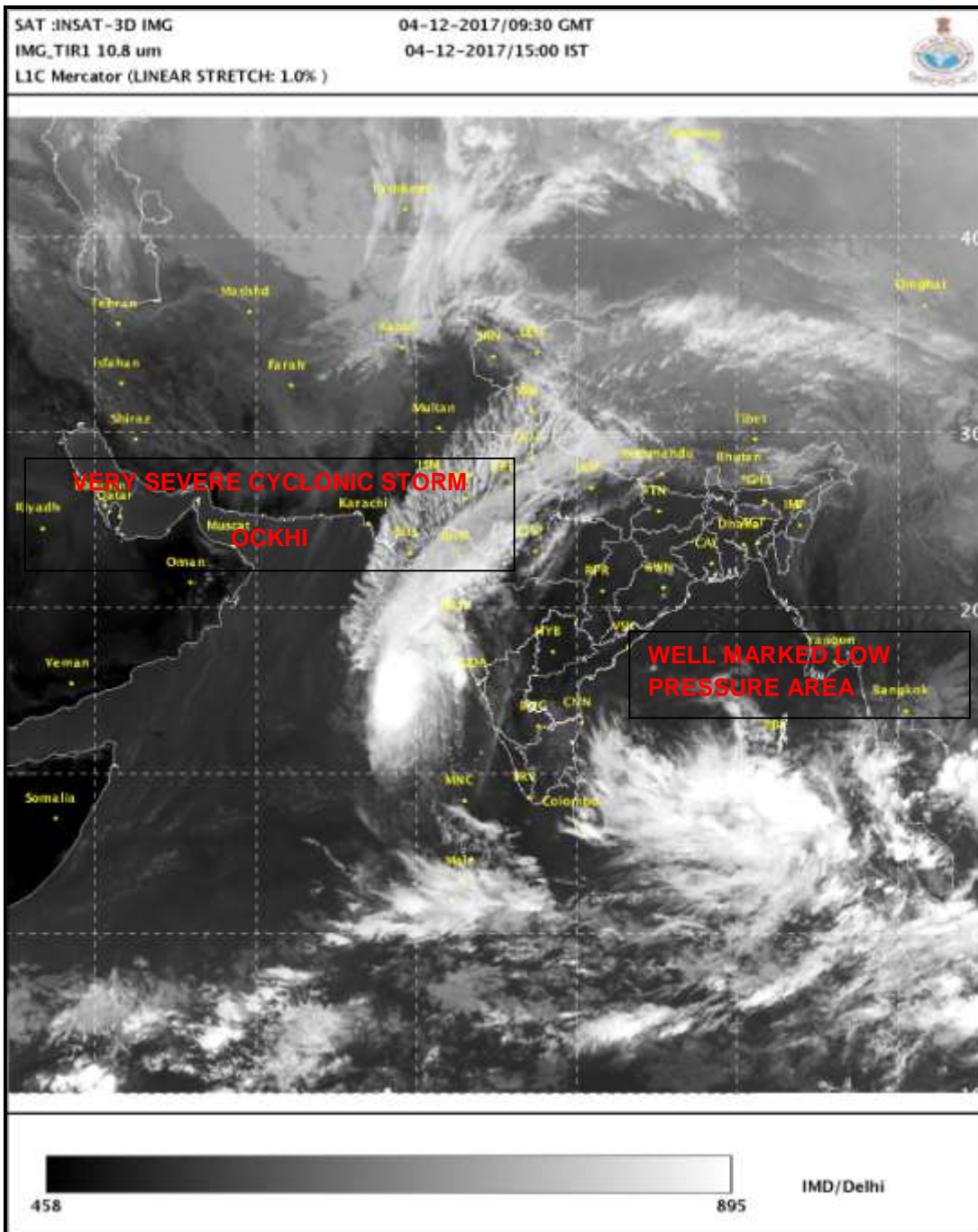
The next bulletin will be issued at 2030 hrs IST of 04th December 2017.

(Neetha K Gopal)
Scientist-E
RSMC New Delhi

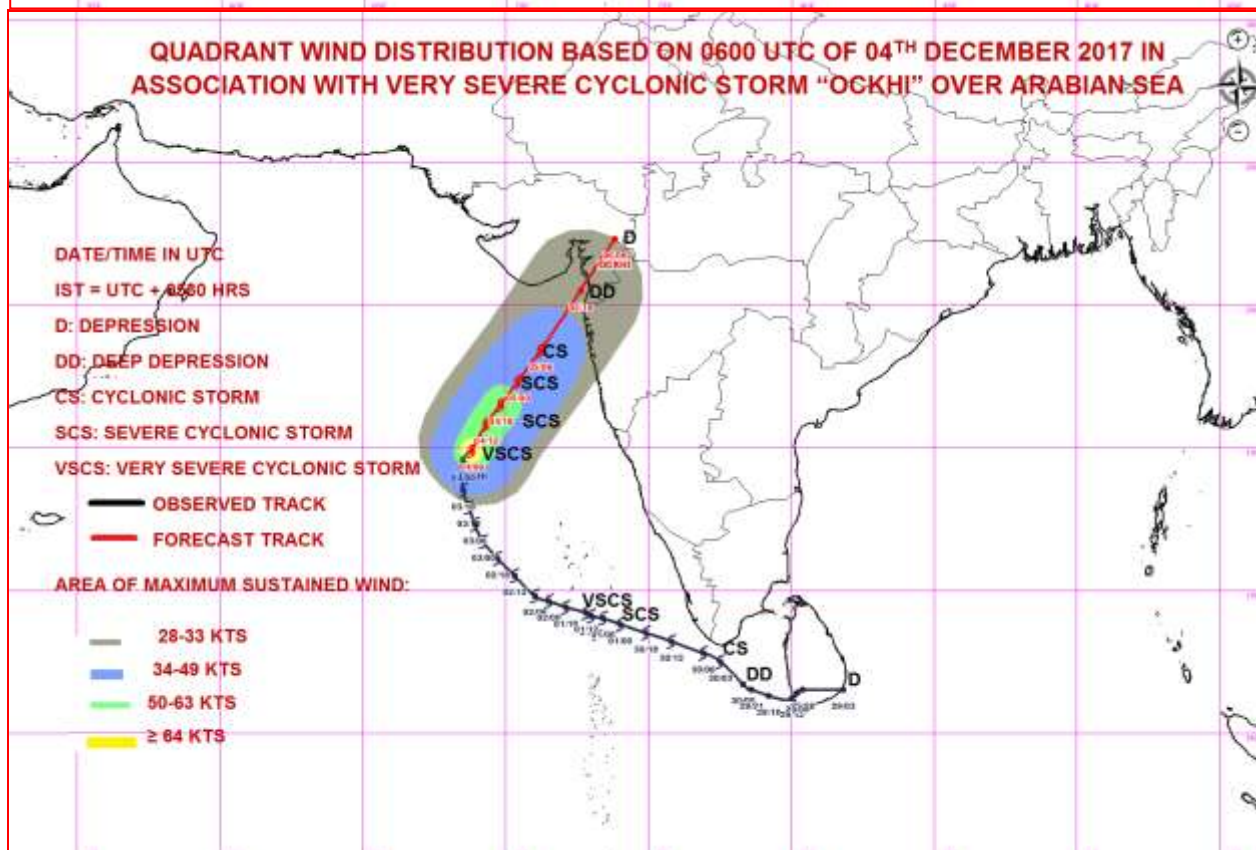
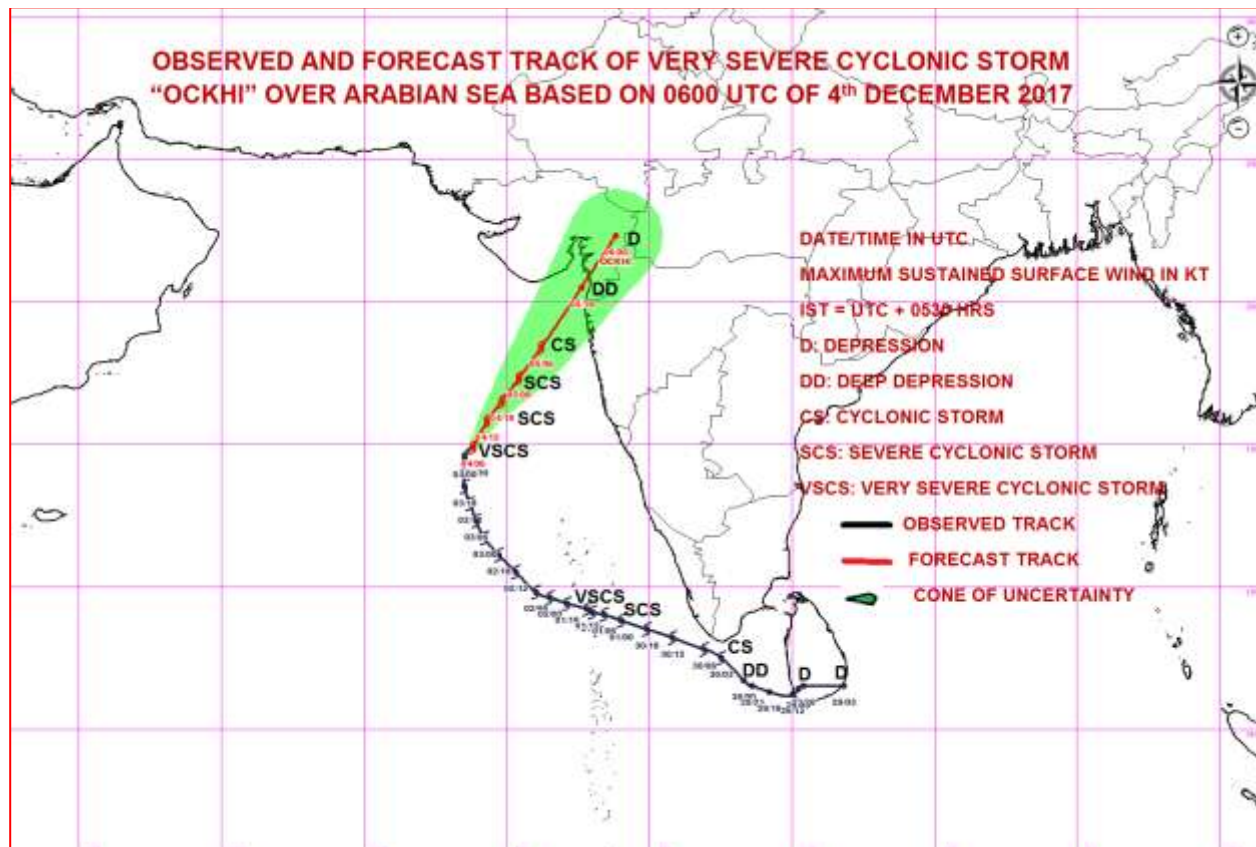
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneswar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
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**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 42 (BOB 07/2017)

TIME OF ISSUE: 2015 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

CHIEF ADMINISTRATOR, GOVT. OF ODISHA

Sub: (1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

(2) Well Marked low pressure area over Southeast Bay of Bengal

1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **very severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 16 kmph during past 6 hours and weakened into a severe cyclonic storm and lay centred at 1730 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 15.7° N and Longitude 69.2° E, about 720 km south-southwest of Surat and 540 km southwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by the night of tomorrow, the 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/1730	15.7/69.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/1130	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0530	21.4/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1730	23.3/74.5	25-35 GUSTING TO 45	WELL MARKED LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ Heavy Rainfall:

- **Gujarat :** Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places on 6th December.
- **Maharashtra:** Light to moderate rainfall is very likely at a few places over north Konkan including Mumbai on 4th December. Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

(ii) Wind:

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Sea condition:

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):

Minor damage to loose / unsecured structures. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutch embankments.

➤ Action suggested

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and adjoining south Andaman Sea persists. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 30-40 kmph gusting to 50 kmph on 4th, and 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 4th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea during 4th to 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

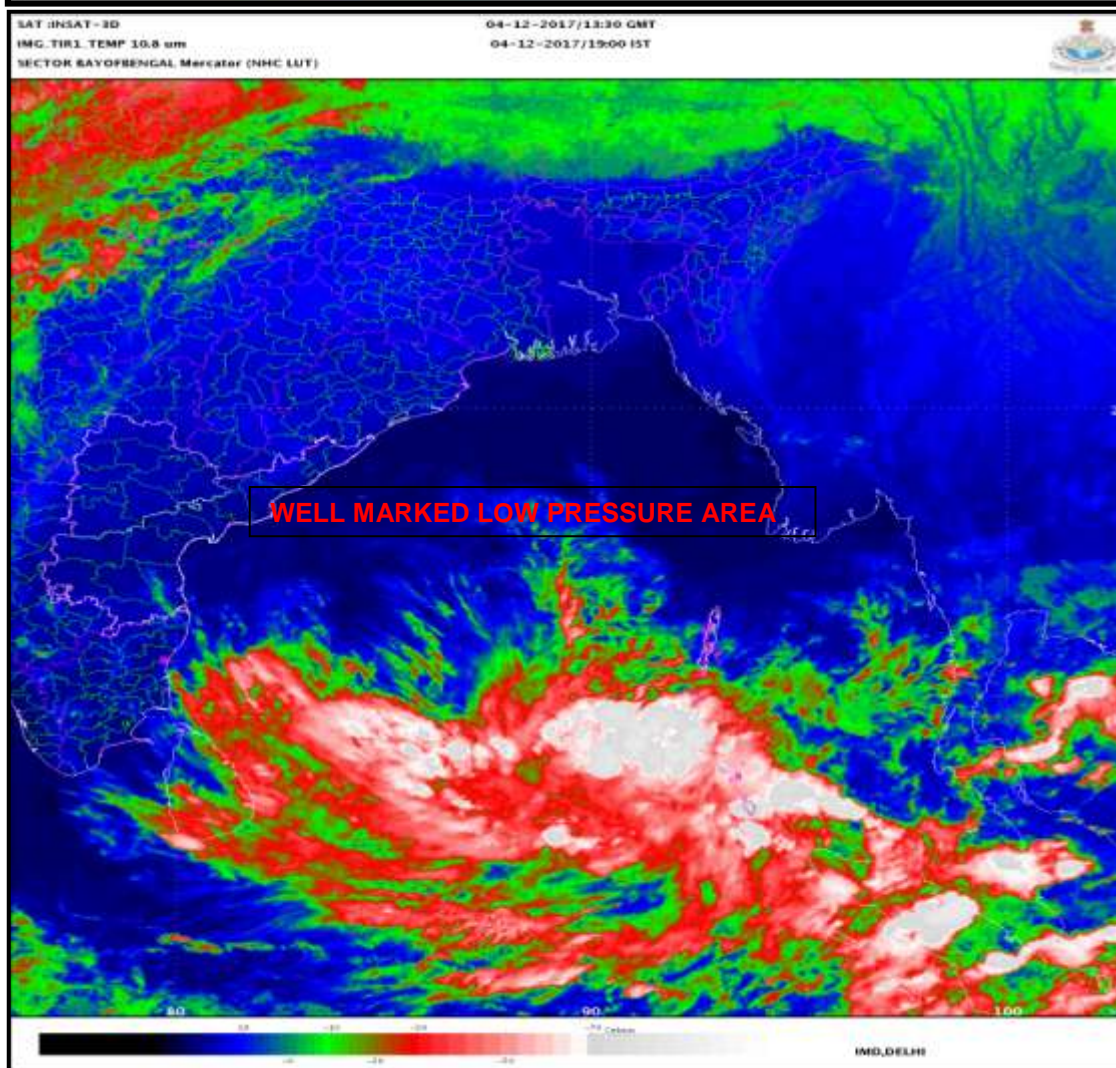
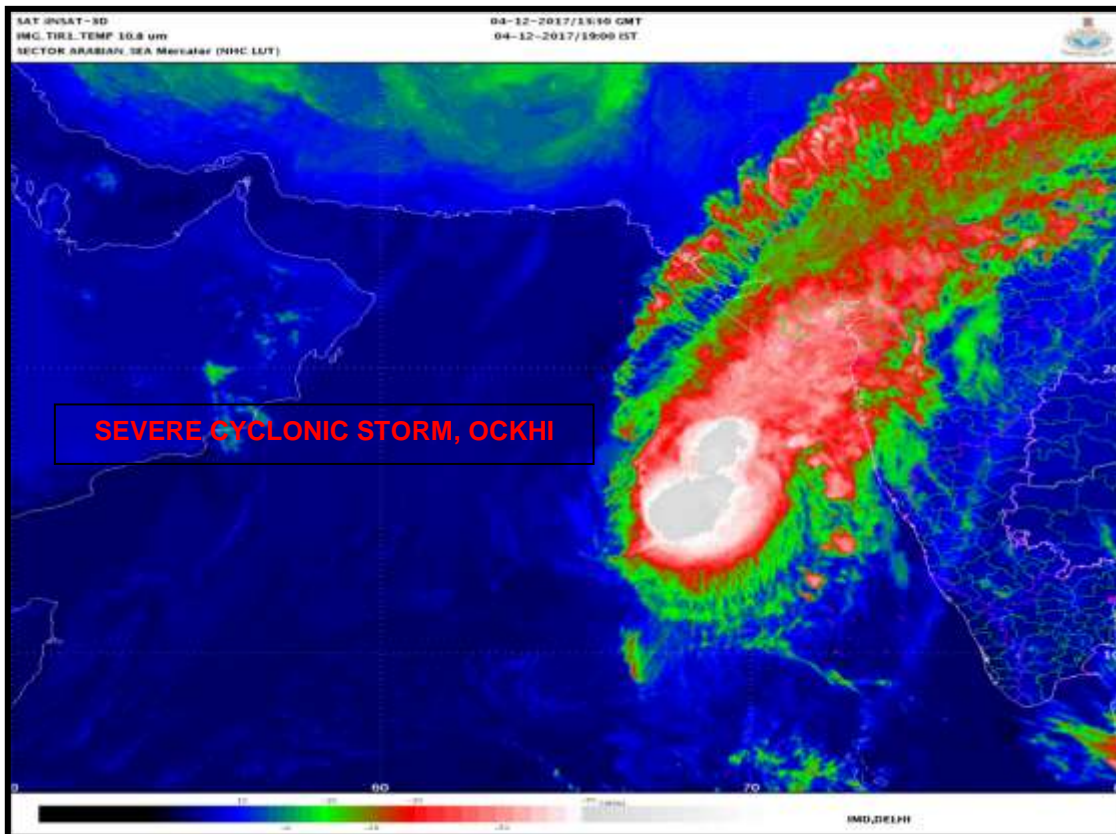
The next bulletin will be issued at 2330 hrs IST of 04th December 2017.

(Shobhit Katiyar)
Scientist-B
RSMC New Delhi

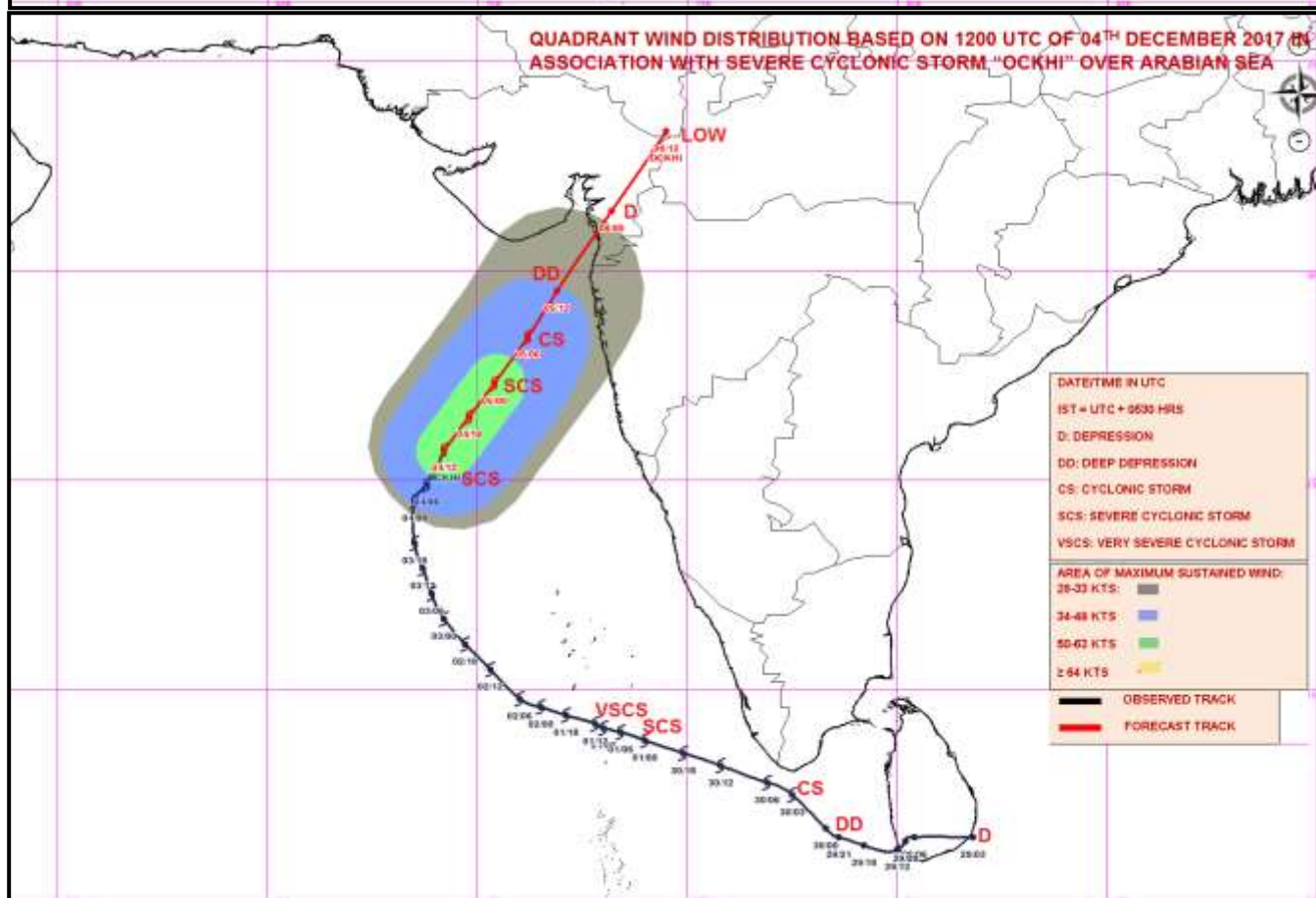
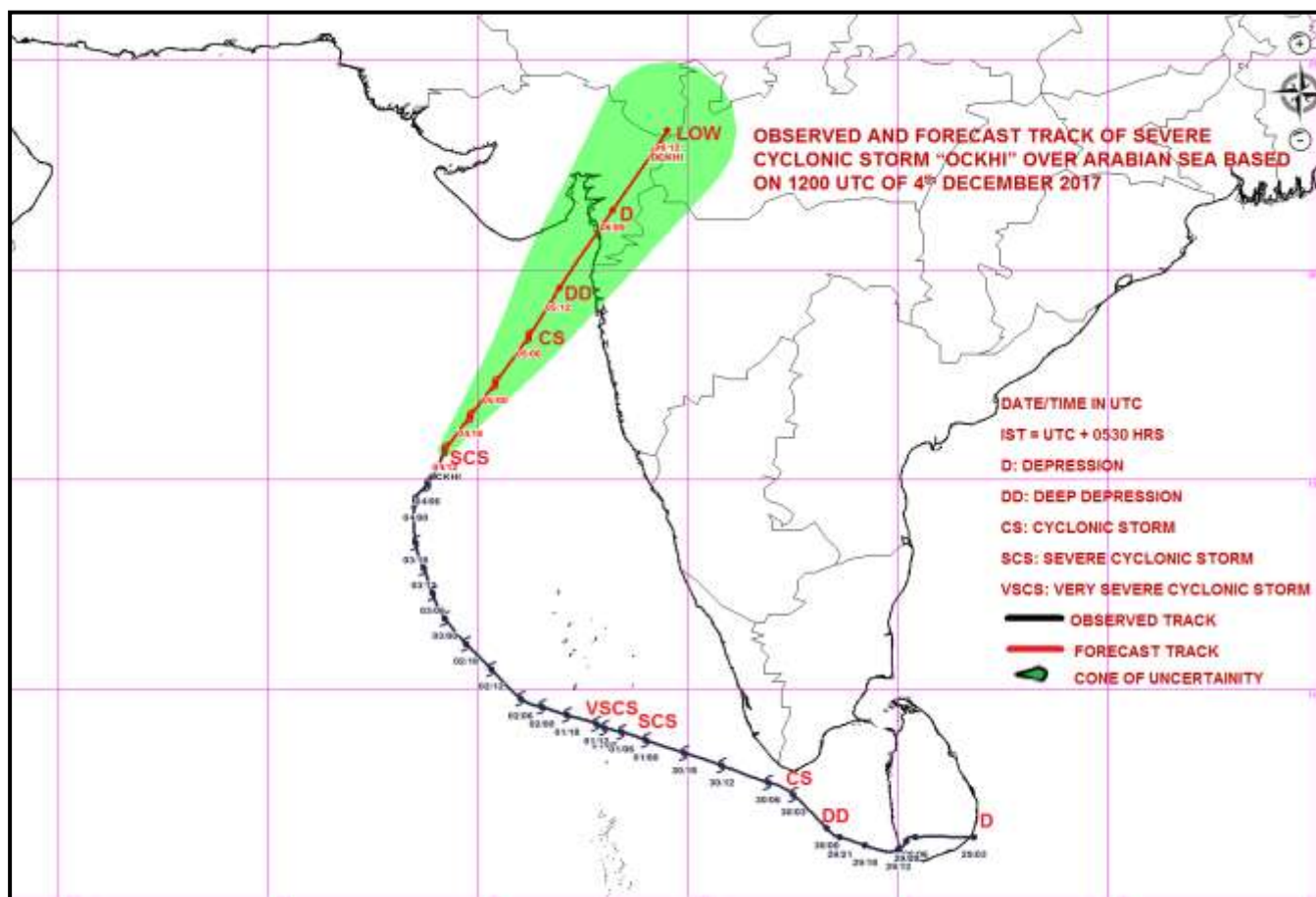
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneswar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 43 (BOB 07/2017)

TIME OF ISSUE: 2300 HOURS IST

DATED: 04.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF ADMINISTRATOR, GOVT. OF ODISHA**

**Sub: (1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 19 kmph during past 6 hours and lay centred at 2030 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 16.1° N and Longitude 69.5° E, about 660 km south-southwest of Surat and 470 km southwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by the night of tomorrow, the 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/2030	16.1/69.5	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/1130	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0530	21.4/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1730	23.3/74.5	25-35 GUSTING TO 45	WELL MARKED LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ Heavy Rainfall:

- **Gujarat :** Light to moderate rainfall is very likely at a few places over Saurashtra and south Gujarat region on 4th December. Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places on 6th December.
- **Maharashtra:** Light to moderate rainfall is very likely at a few places over north Konkan including Mumbai on 4th December. Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ Wind:

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Sea condition:

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts from today, the 4th night to 6th December 2017 morning.

➤ Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):

Minor damage to loose / unsecured structures. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutch embankments.

➤ Action suggested

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts from 4th December to 6th morning.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and adjoining south Andaman Sea persists. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 30-40 kmph gusting to 50 kmph on 4th, and 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 4th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea during 4th to 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

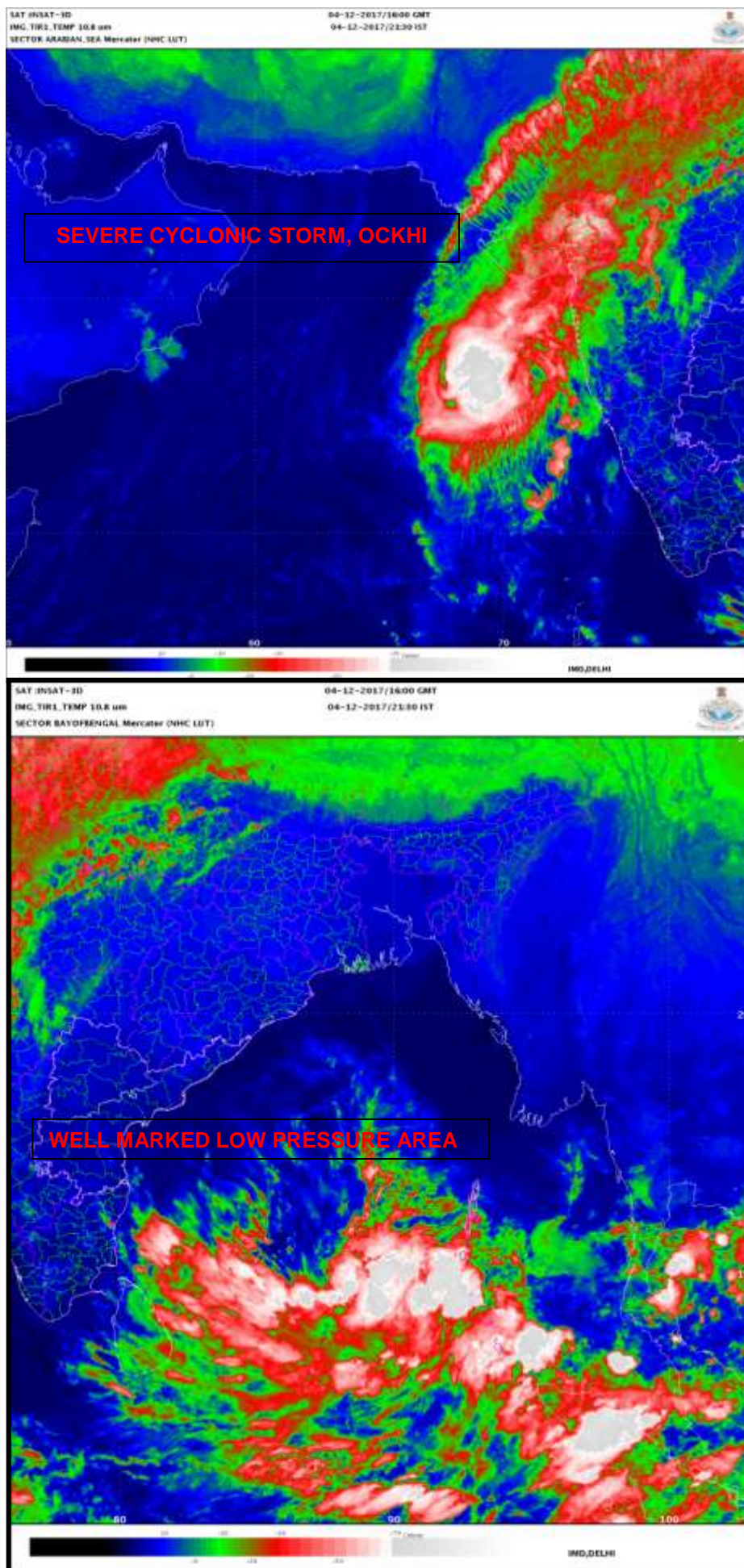
The next bulletin will be issued at 0230 hrs IST of 05th December 2017.

(Shobhit Katiyar)
Scientist-B
RSMC New Delhi

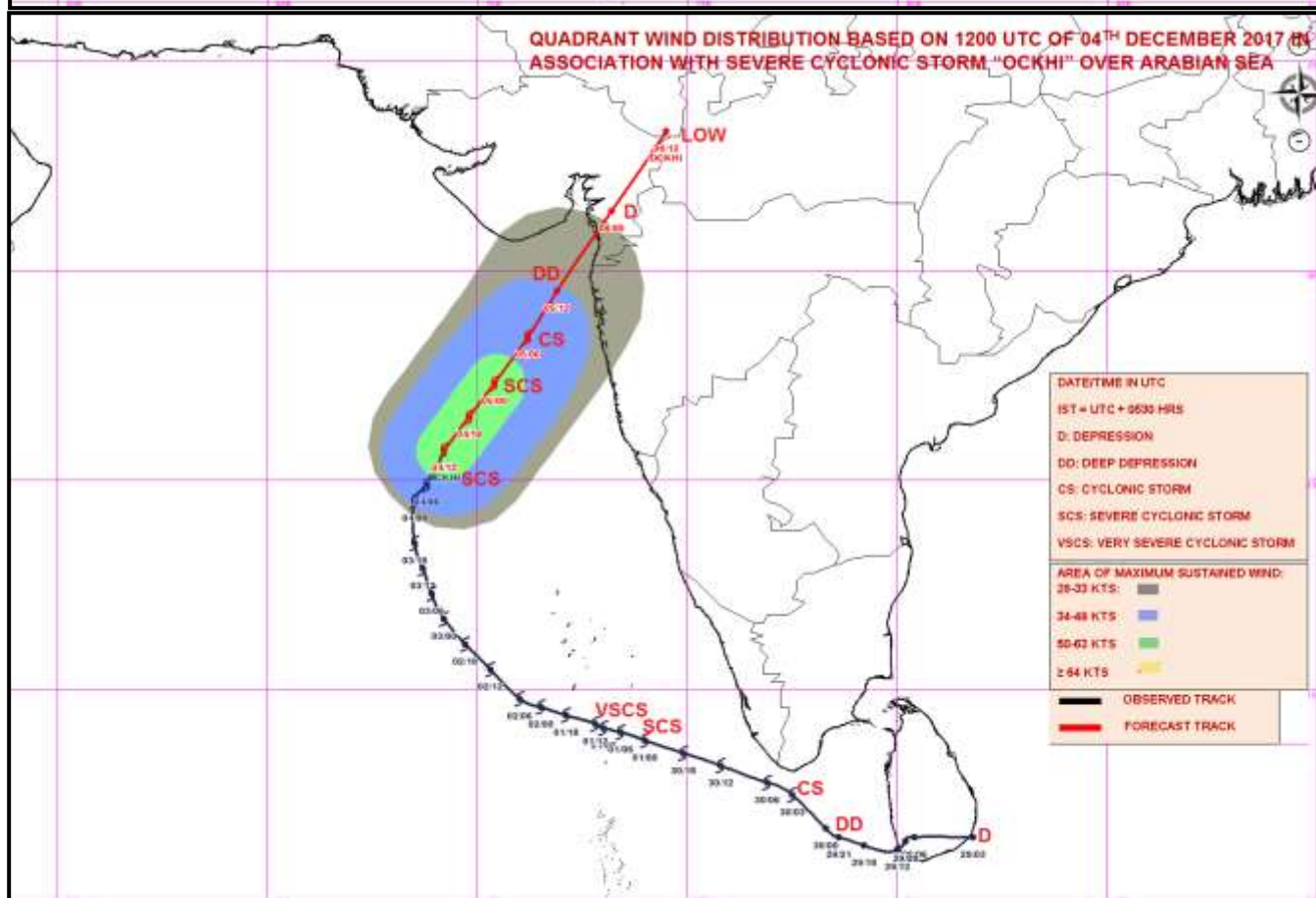
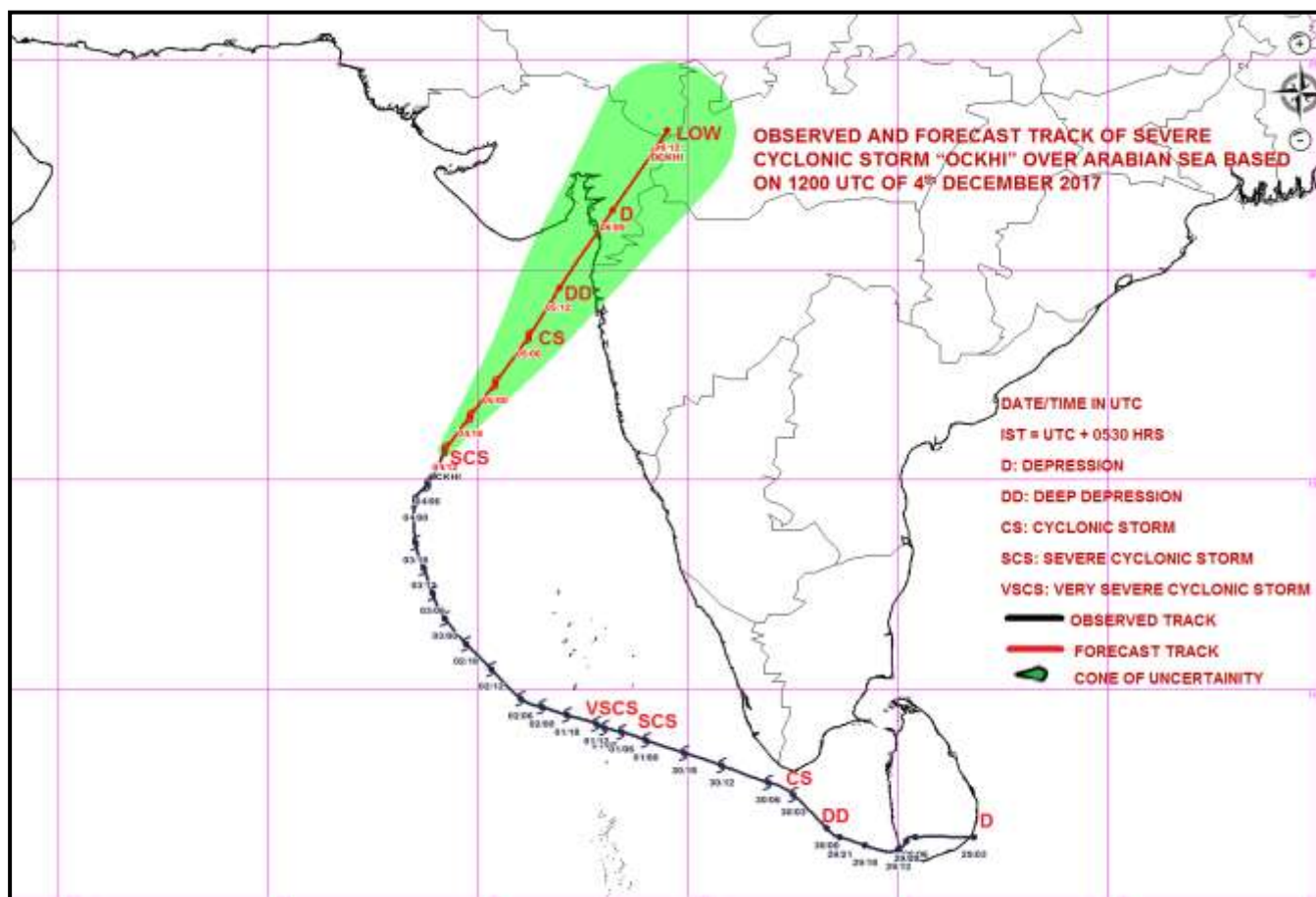
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneswar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
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Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
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**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 44 (BOB 07/2017)

TIME OF ISSUE: 0100 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF ADMINISTRATOR, GOVT. OF ODISHA**

**Sub: (1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 18 kmph during past 6 hours and lay centred at 2330 hrs IST of 04th December, 2017 over eastcentral Arabian Sea near Latitude 16.5° N and Longitude 69.8° E, about 610 km southwest of Surat and 420 km southwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by the night of 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/2330	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/1130	18.4/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1730	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
05/2330	20.0/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.4/73.8	35-45 GUSTING TO 55	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places on 6th December.
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ **Wind:**

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 36 hours.

➤ **Sea condition:**

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts during next 36 hours.

➤ **Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):**

Minor damage to loose / unsecured structures. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutcha embankments.

➤ **Action suggested**

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts during next 36 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and adjoining south Andaman Sea persists. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 5th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

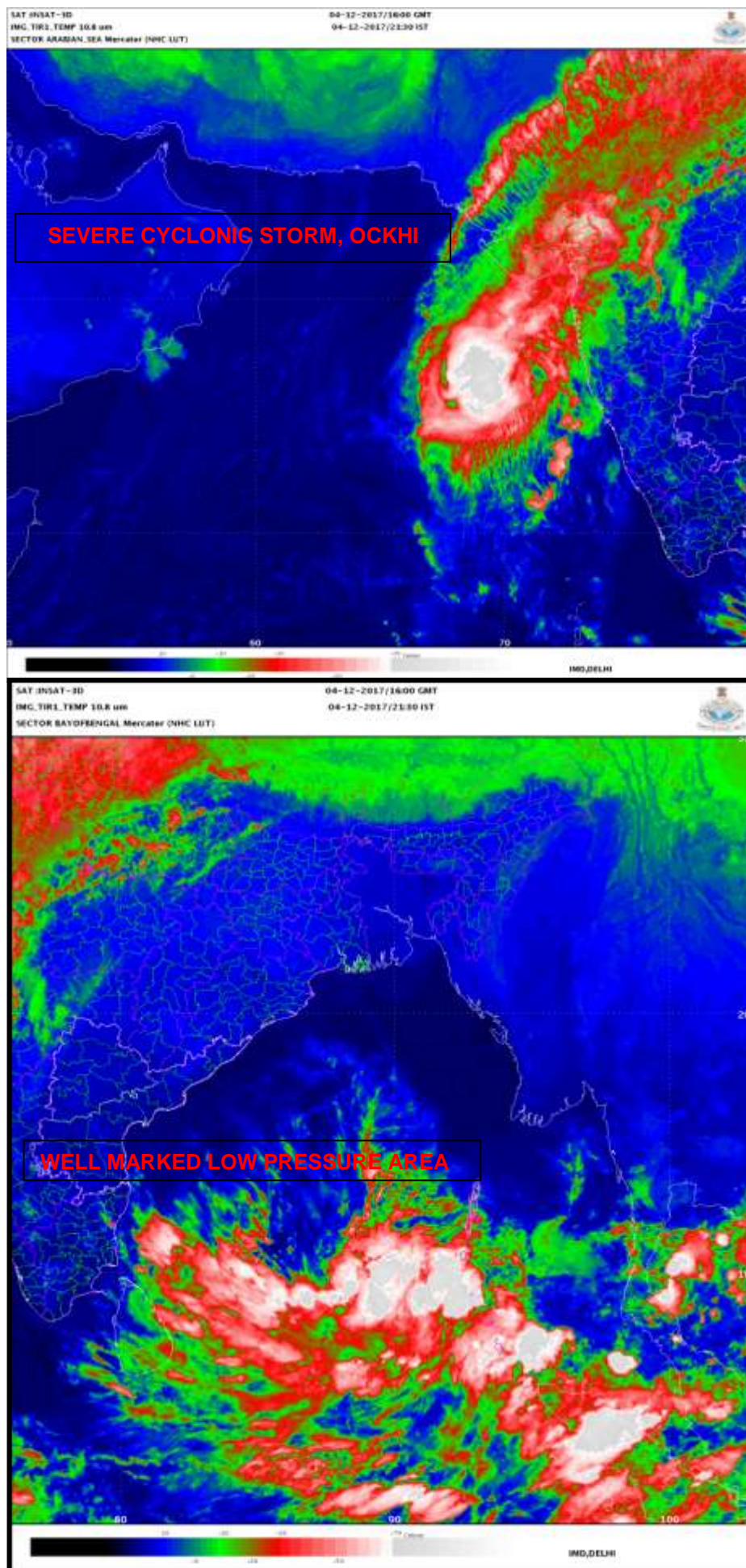
The next bulletin will be issued at 0330 hrs IST of 05th December 2017.

(Shobhit Katiyar)
Scientist-B
RSMC New Delhi

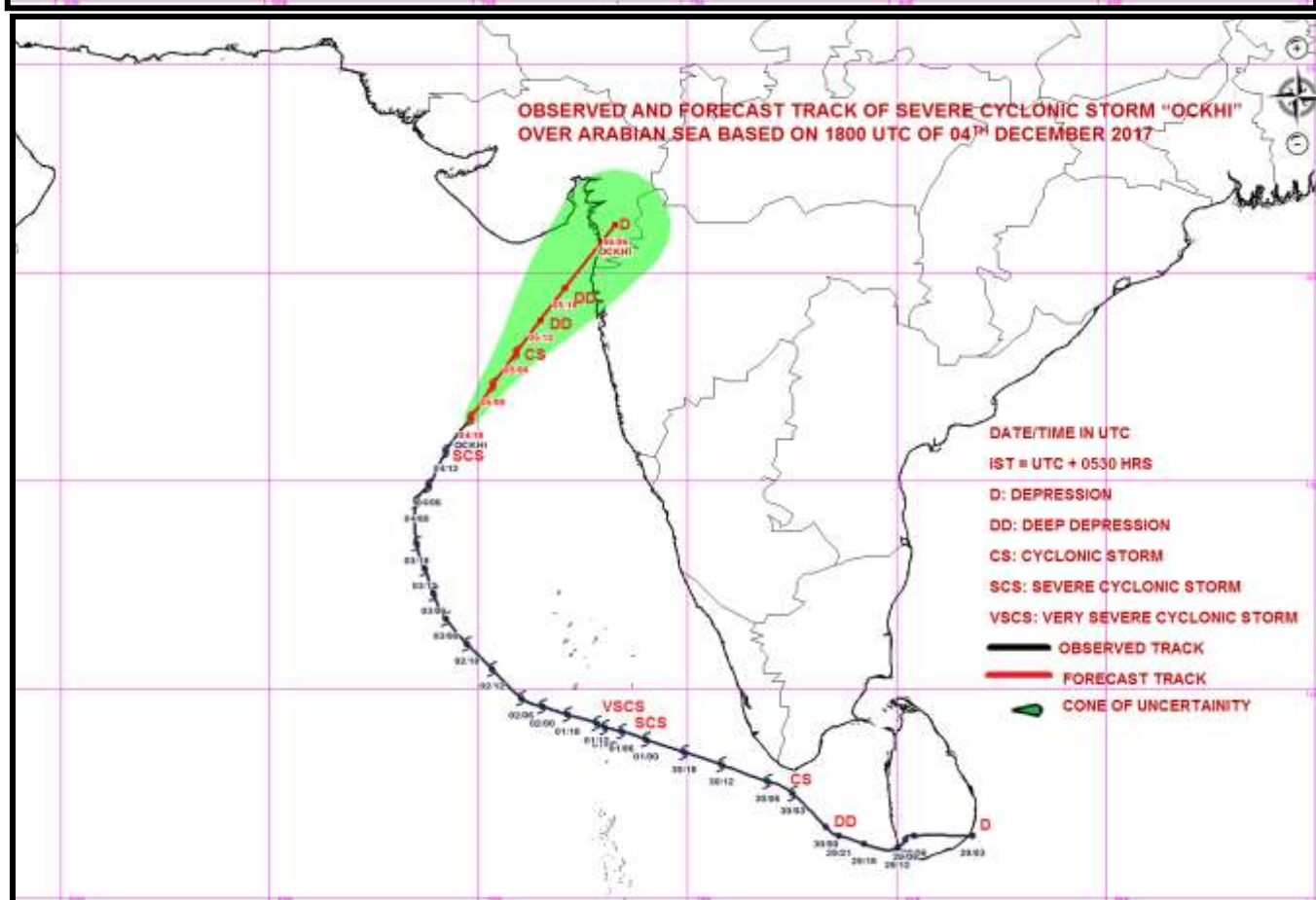
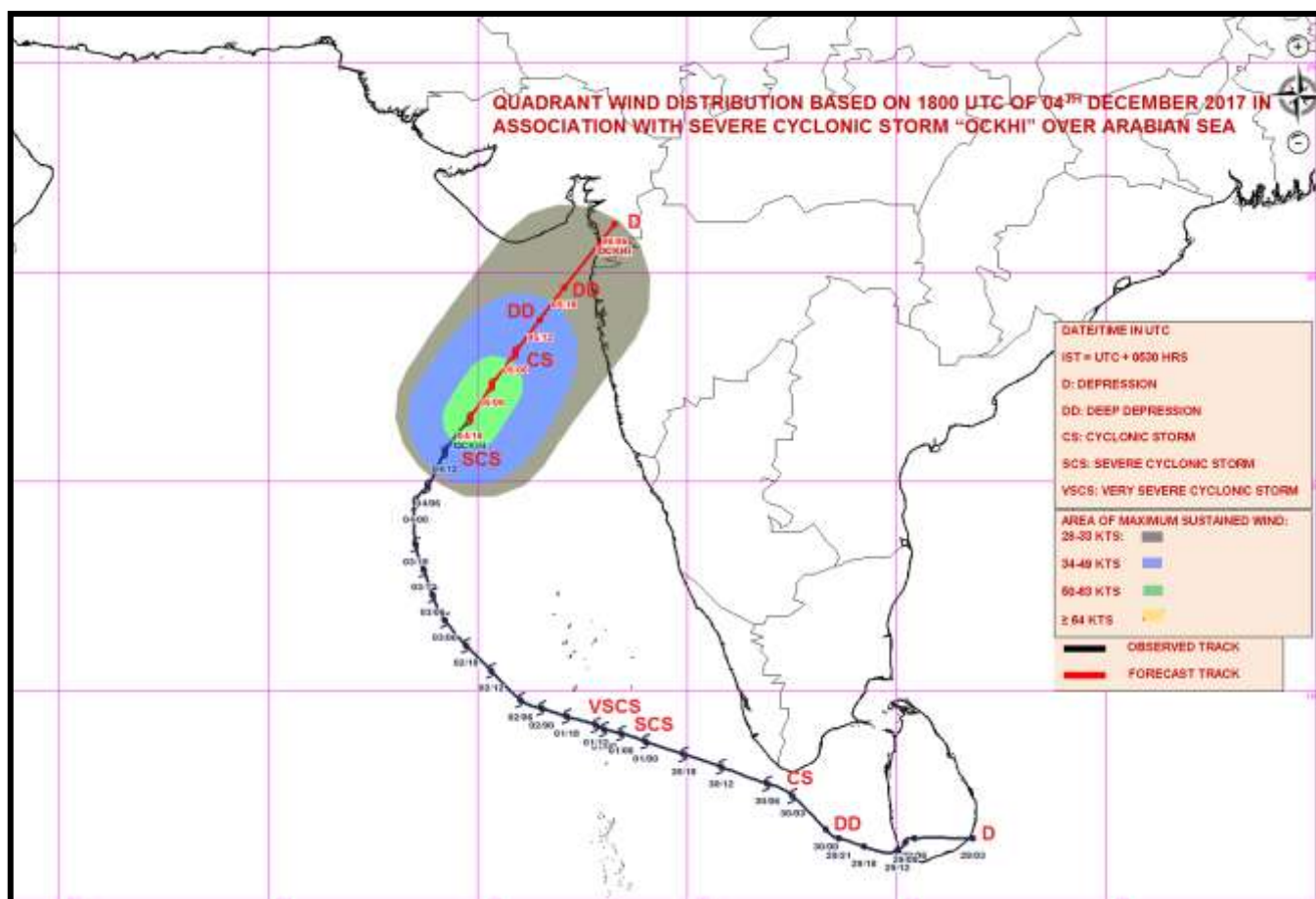
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneswar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
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Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 45 (BOB 07/2017)

TIME OF ISSUE: 0330 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
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DIRECTOR GENERAL, DOORDARSHAN
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CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF ADMINISTRATOR, GOVT. OF ODISHA**

**Sub: (1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 18 kmph during past 6 hours and lay centred at 0230 hrs IST of 05th December, 2017 over eastcentral Arabian Sea near Latitude 16.9° N and Longitude 70.1° E, about 560 km south-southwest of Surat and 360 km southwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by the night of 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/0230	16.9/70.1	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/1130	18.4/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1730	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
05/2330	20.0/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1130	22.4/73.8	35-45 GUSTING TO 55	DEPRESSION

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region on 05th December (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places on 6th December.
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan on 5th December (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ **Wind:**

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 36 hours.

➤ **Sea condition:**

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts during next 36 hours.

➤ **Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):**

Minor damage to loose / unsecured structures. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutcha embankments.

➤ **Action suggested**

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts during next 36 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and adjoining south Andaman Sea persists. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 5th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

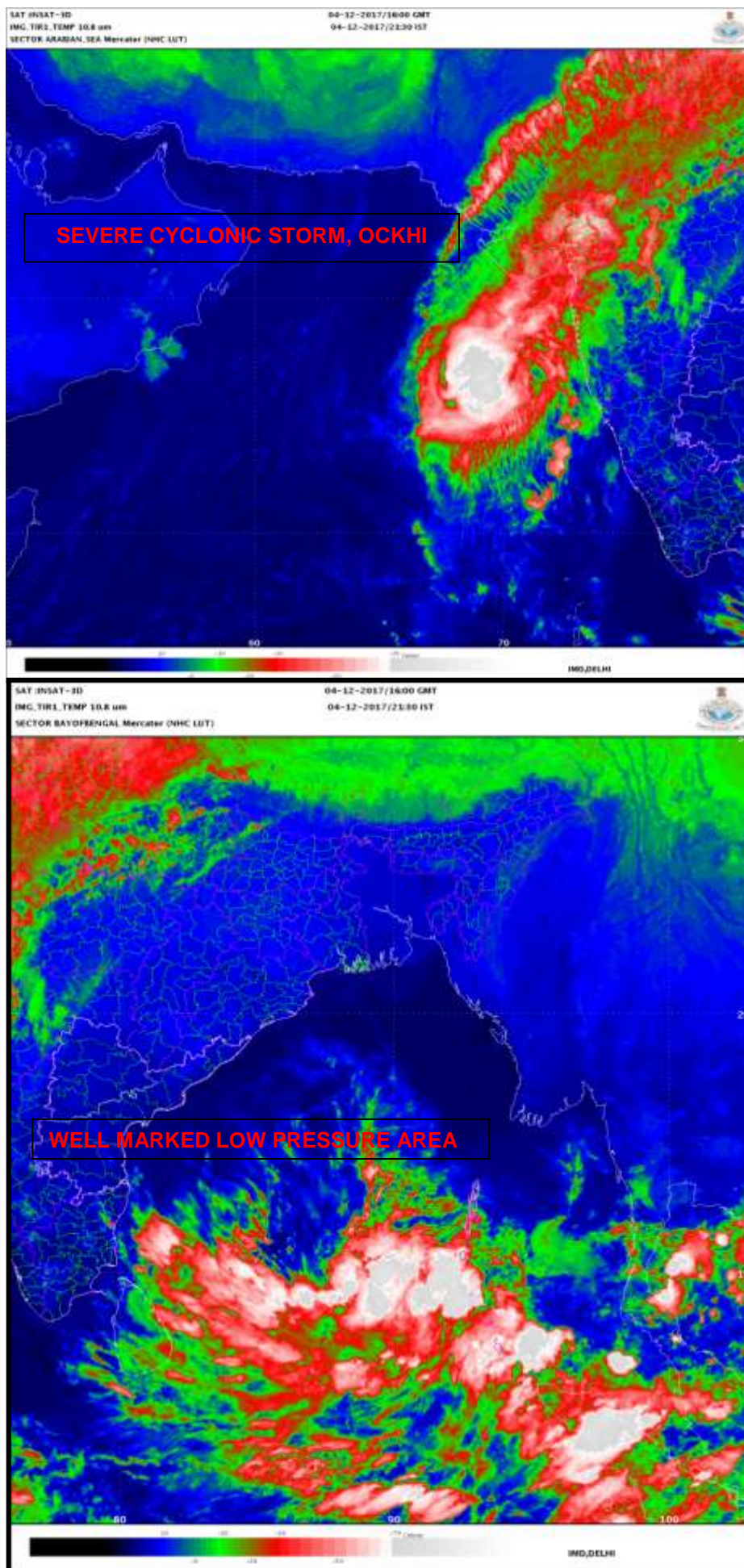
The next bulletin will be issued at 0830 hrs IST of 05th December 2017.

(Shobhit Katiyar)
Scientist-B
RSMC New Delhi

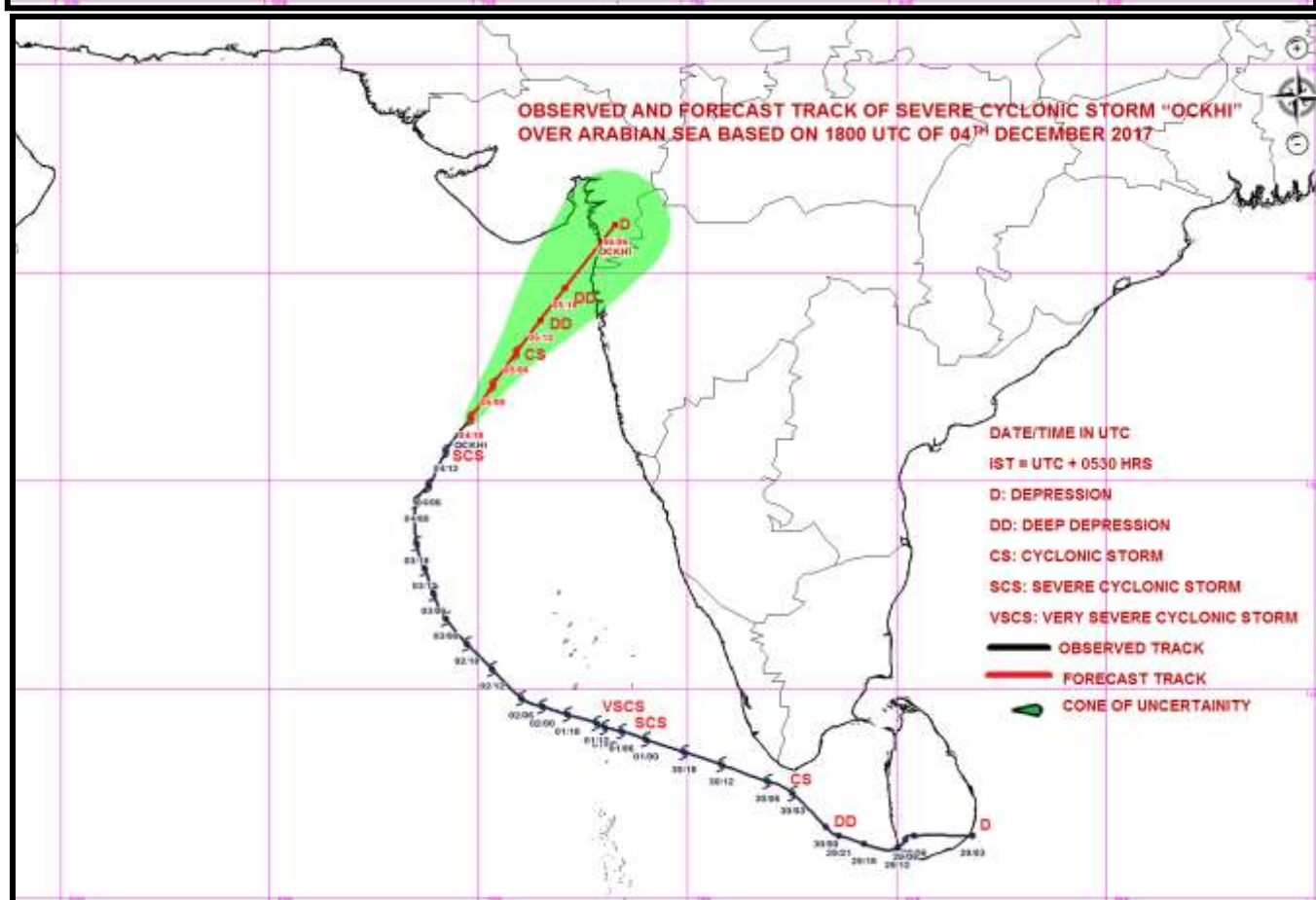
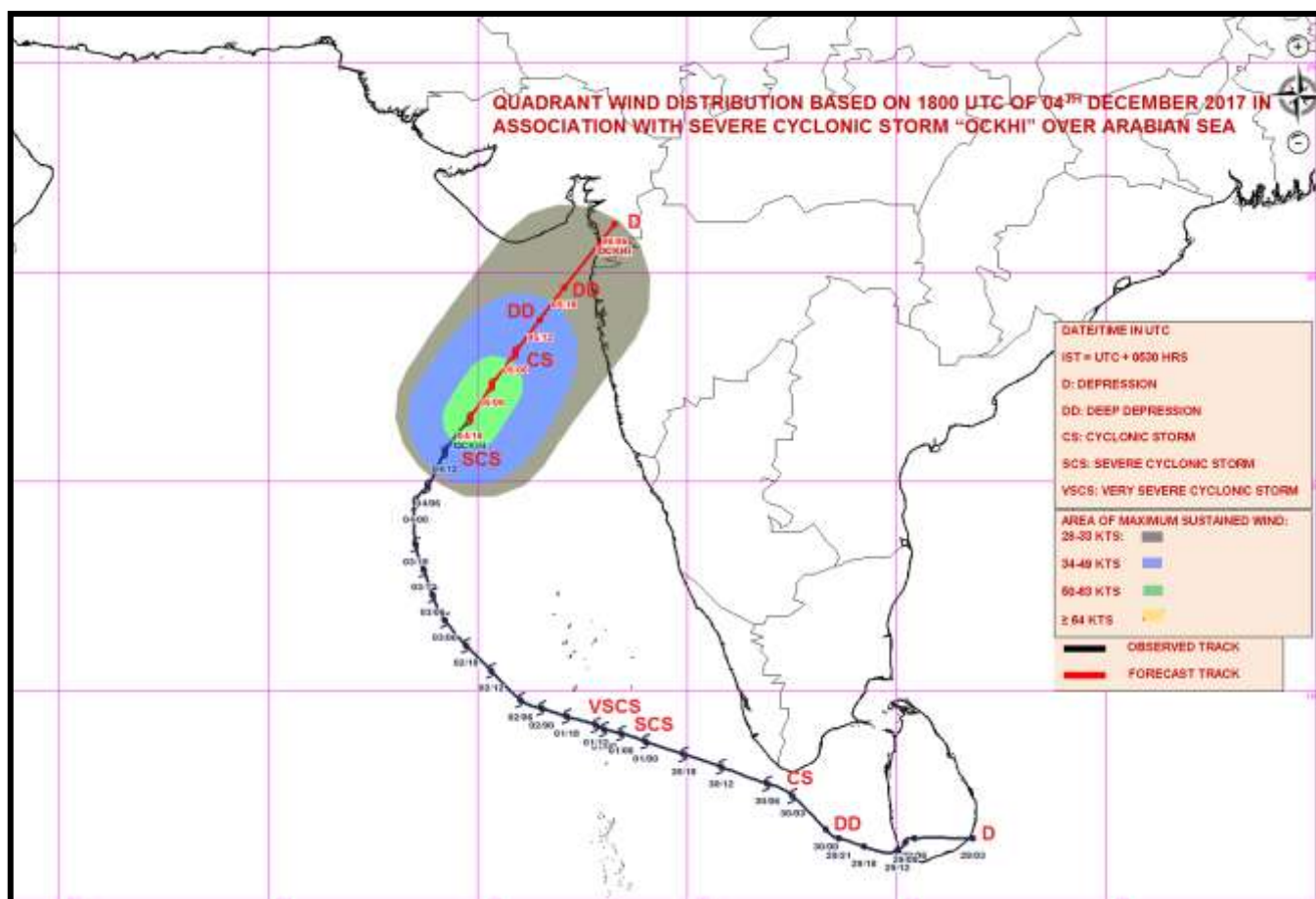
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneswar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



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**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 46 (BOB 07/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
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CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF ADMINISTRATOR, GOVT. OF ODISHA**

**Sub: (1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Severe Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 21 kmph during past 6 hours and lay centred at 0530 hrs IST of 05th December, 2017 over eastcentral Arabian Sea near Latitude 17.5° N and Longitude 70.4° E, about 480 km south-southwest of Surat and 300 km west-southwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by the night of 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/0530	17.5/70.4	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
05/1130	18.4/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1730	19.5/71.8	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	20.4/72.4	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0530	21.3/73.0	35-45 GUSTING TO 55	DEPRESSION
06/1730	23.1/74.2	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region during next 24 hours (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places during subsequent 12 hours
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan during next 24 hours (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ **Wind:**

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 36 hours.

➤ **Sea condition:**

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts during next 36 hours.

➤ **Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):**

Minor damage to loose / unsecured structures. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutcha embankments.

➤ **Action suggested**

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts during next 36 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and adjoining south Andaman Sea persists. It is very likely to become a depression over southeast Bay of Bengal during next 24 hours and further intensify into a deep depression during subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamilnadu - south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 5th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

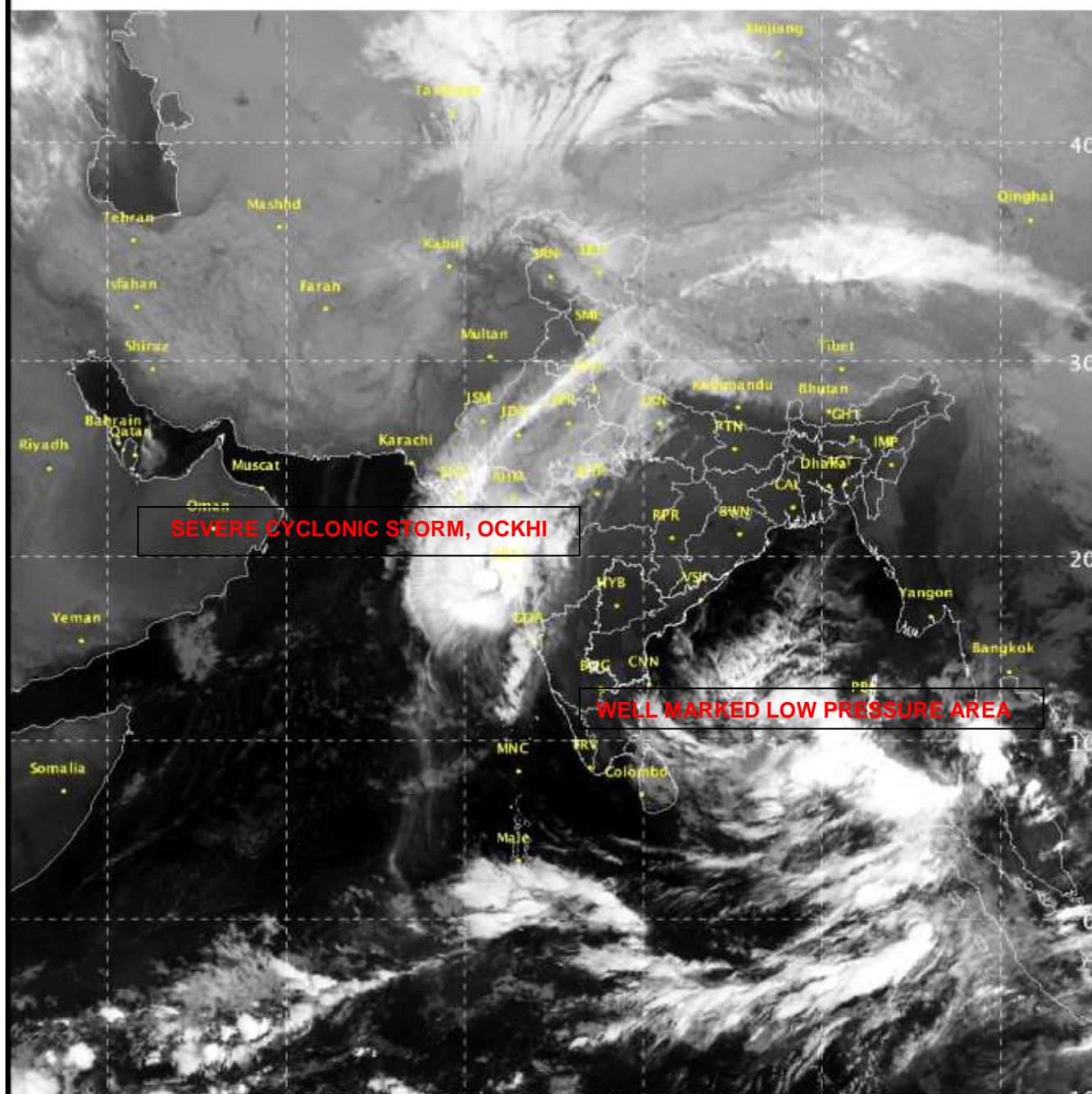
The next bulletin will be issued at 1130 hrs IST of 05th December 2017.

(Shobhit Katiyar)
Scientist-B
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



SEVERE CYCLONIC STORM, OCKHI

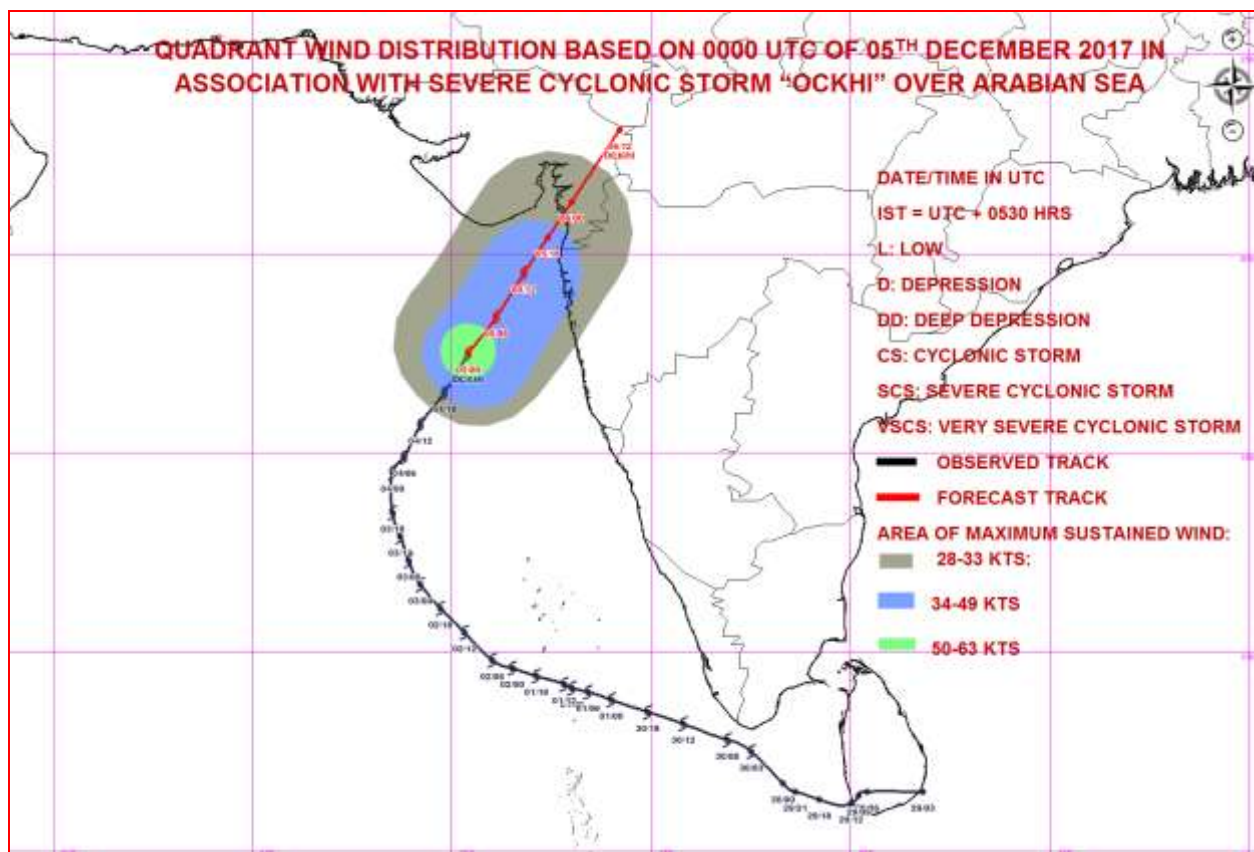
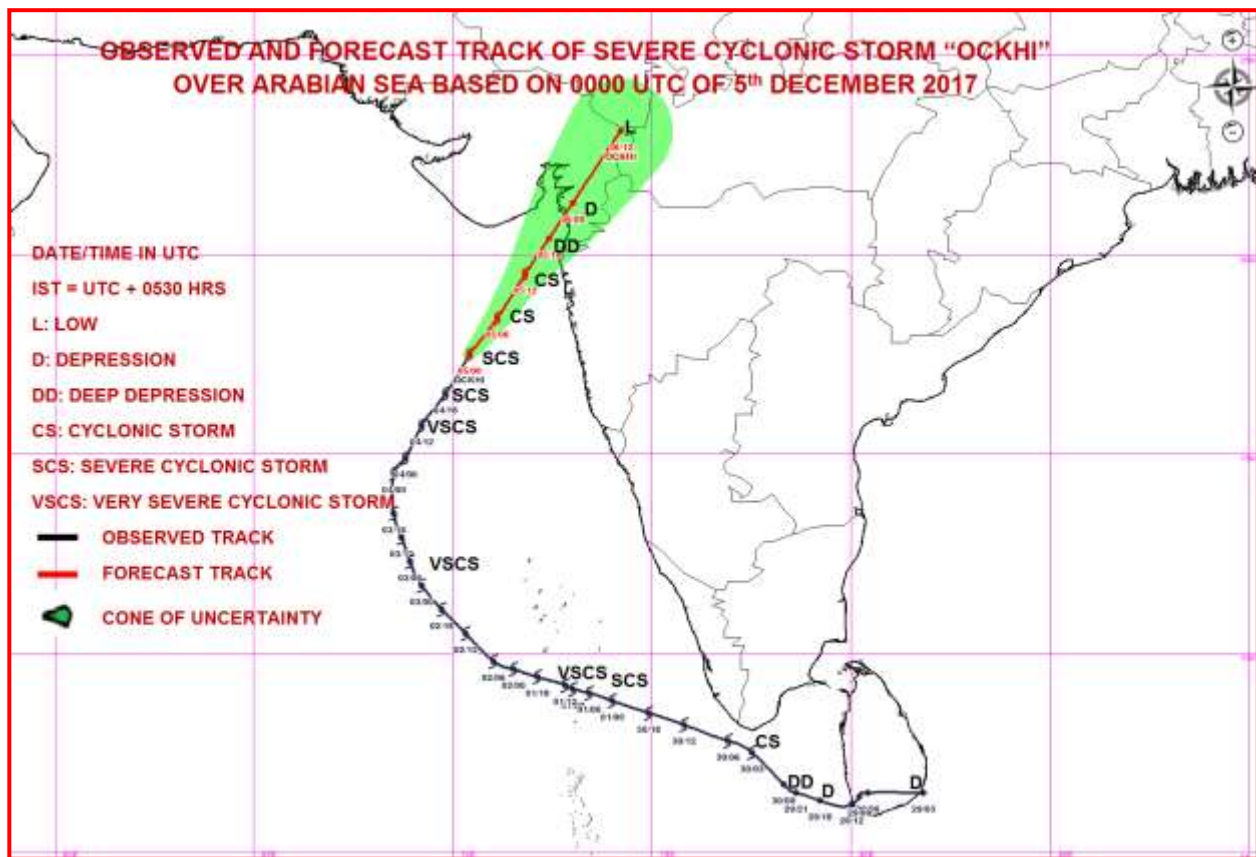
WELL MARKED LOW PRESSURE AREA

534

898

IMD/Delhi

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 47 (BOB 07/2017)

TIME OF ISSUE: 1150 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

CHIEF ADMINISTRATOR, GOVT. OF ODISHA

Sub: (1) Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

(2) Well Marked low pressure area over Southeast Bay of Bengal

1) Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **severe cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 25 kmph during past 6 hours, weakened into a **cyclonic storm** and lay centred at 0830 hrs IST of 05th December, 2017 over eastcentral Arabian Sea near Latitude 18.2° N and Longitude 70.8° E, about 390 km south-southwest of Surat and 230 km west-southwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by the night of 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/0830	18.2/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1130	18.7/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1730	19.7/71.8	65-75 GUSTING TO 85	CYCLONIC STORM
05/2330	20.8/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0530	21.9/73.2	35-45 GUSTING TO 55	DEPRESSION
06/1730	23.8/74.5	20-30 GUSTING TO 40	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ Heavy Rainfall:

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places during subsequent 12 hours.
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ Wind:

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 24 hours.

➤ Sea condition:

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts during next 24 hours.

➤ Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):

Minor damage to loose / unsecured structures, breaking of tree branches, uprooting of small trees. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutcha embankments.

➤ Action suggested

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts during next 24 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and adjoining south Andaman Sea now lies over southeast Bay of Bengal and neighbourhood. It is very likely to become a depression over the same area during next 12 hours and further intensify into a deep depression during the subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamil Nadu- south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 5th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

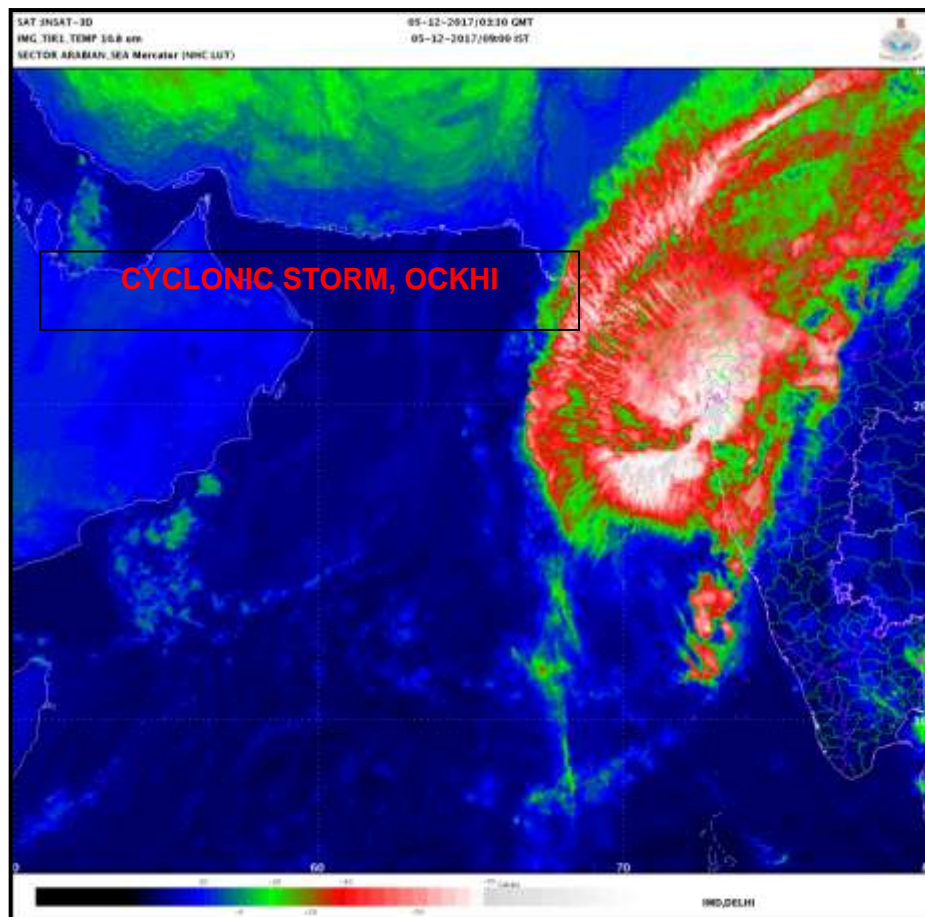
The next bulletin will be issued at 1430 hrs IST of 05th December 2017.

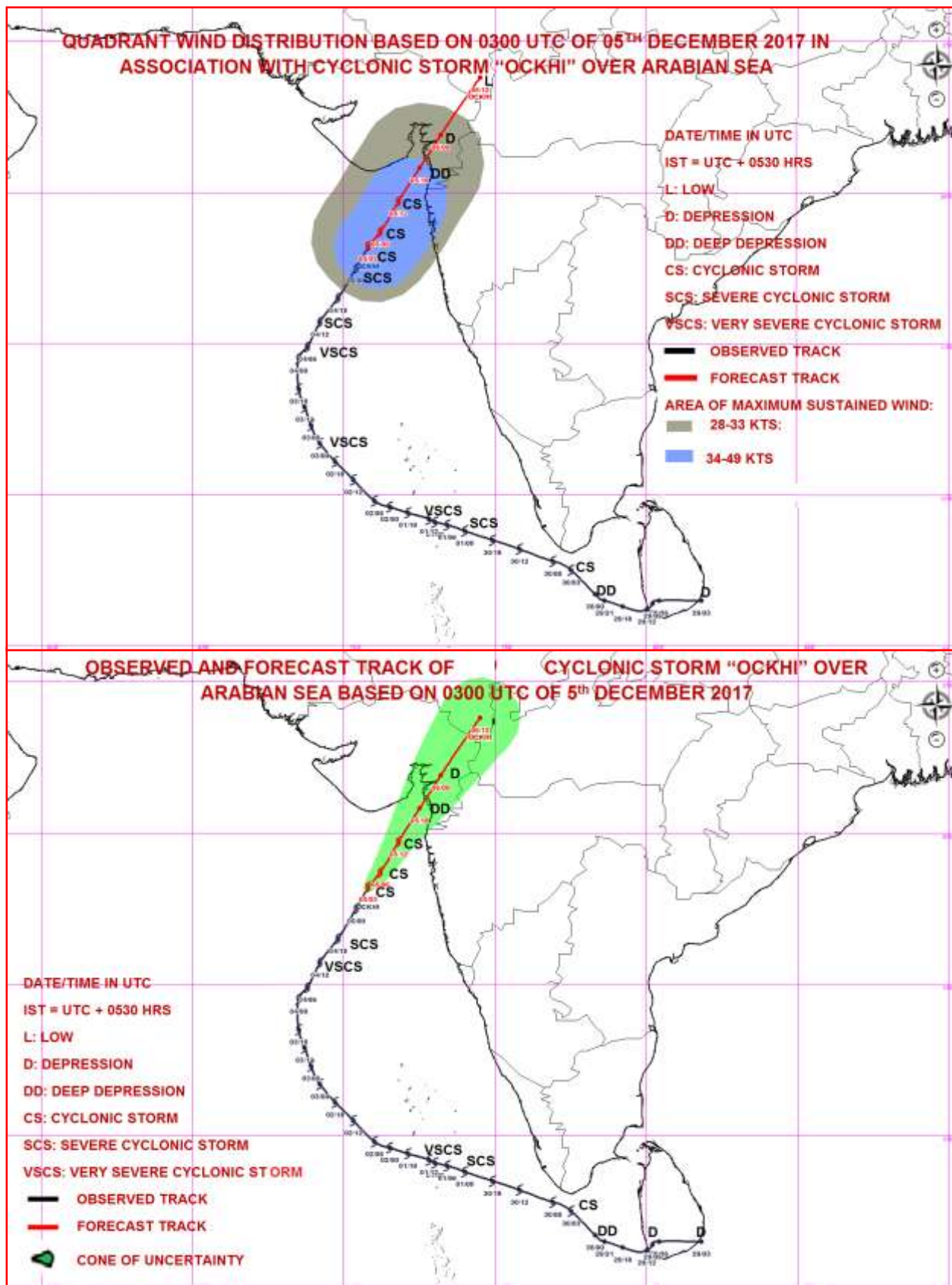
(Neetha K Gopal)
Scientist-E
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.





Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 48 (BOB 07/2017)

TIME OF ISSUE: 1415 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF ADMINISTRATOR, GOVT. OF ODISHA**

**Sub: (1) Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea

The **cyclonic storm 'OCKHI'** over eastcentral Arabian Sea moved further north-northeastwards with a speed of 21 kmph during past 6 hours and lay centred at 1130 hrs IST of 05th December, 2017 over eastcentral Arabian Sea near Latitude 18.5° N and Longitude 71.0° E, about 350 km south-southwest of Surat and 200 km west-southwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken gradually and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a deep depression by tonight, the 5th December 2017.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/1130	18.5/71.0	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.5/71.7	60-70 GUSTING TO 80	CYCLONIC STORM
05/2330	20.6/72.4	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0530	21.7/73.1	40-50 GUSTING TO 60	DEPRESSION
06/1130	22.6/73.7	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over Saurashtra and south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar, Diu, Daman, Dadra, and Nagar Haveli districts) and light to moderate rainfall over Gujarat region at many places during subsequent 12 hours.
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ **Wind:**

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 24 hours.

➤ **Sea condition:**

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts during next 24 hours.

➤ **Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Gir- Somnath, Bhavnagar districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh, and Greater Mumbai):**

Minor damage to loose / unsecured structures, breaking of tree branches, uprooting of small trees. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutcha embankments.

➤ **Action suggested**

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts during next 24 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and adjoining south Andaman Sea now lies over southeast Bay of Bengal and neighbourhood. It is very likely to become a depression over the same area during next 12 hours and further intensify into a deep depression during the subsequent 48 hours. It is very likely to move west-northwestwards towards north Tamil Nadu- south Andhra Pradesh coasts during next 3 days.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 5th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

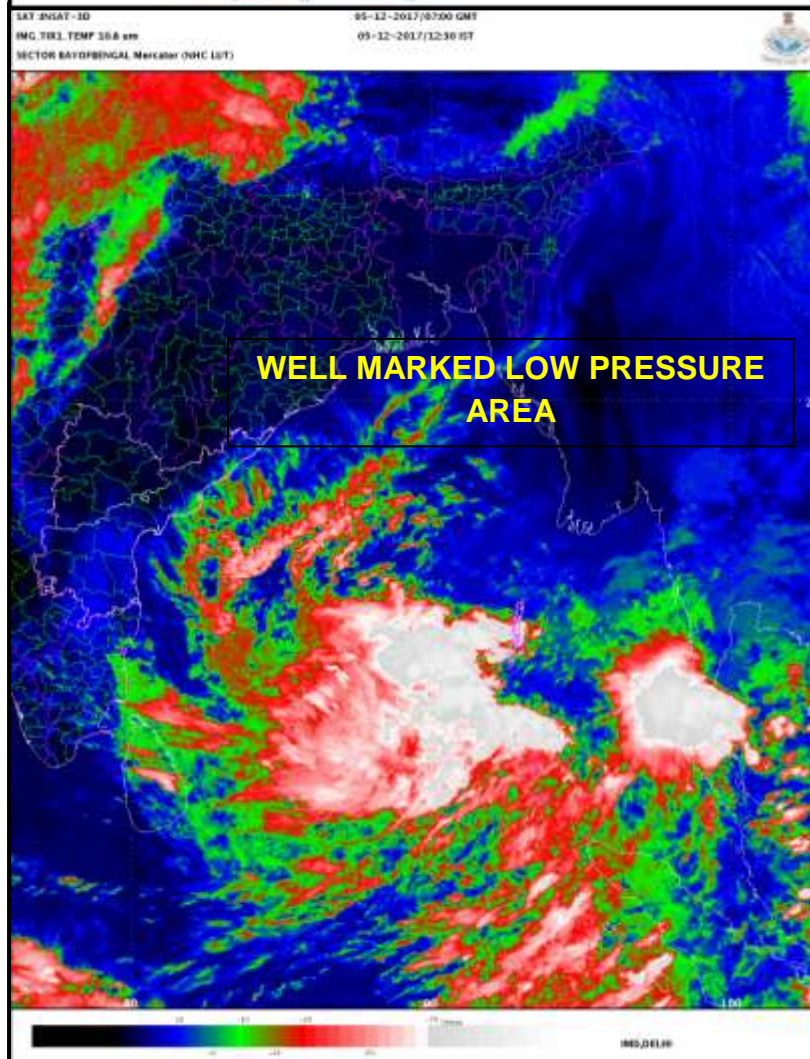
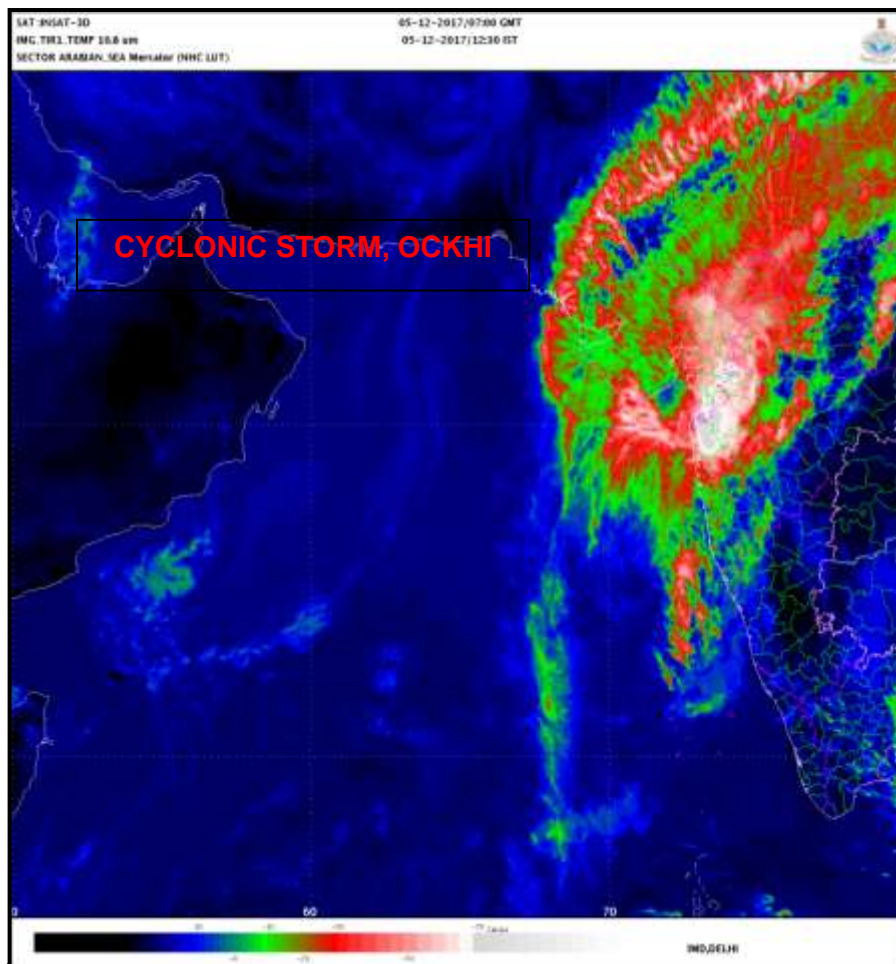
The next bulletin will be issued at 1730 hrs IST of 05th December 2017.

(Neetha K Gopal)
Scientist-E
RSMC New Delhi

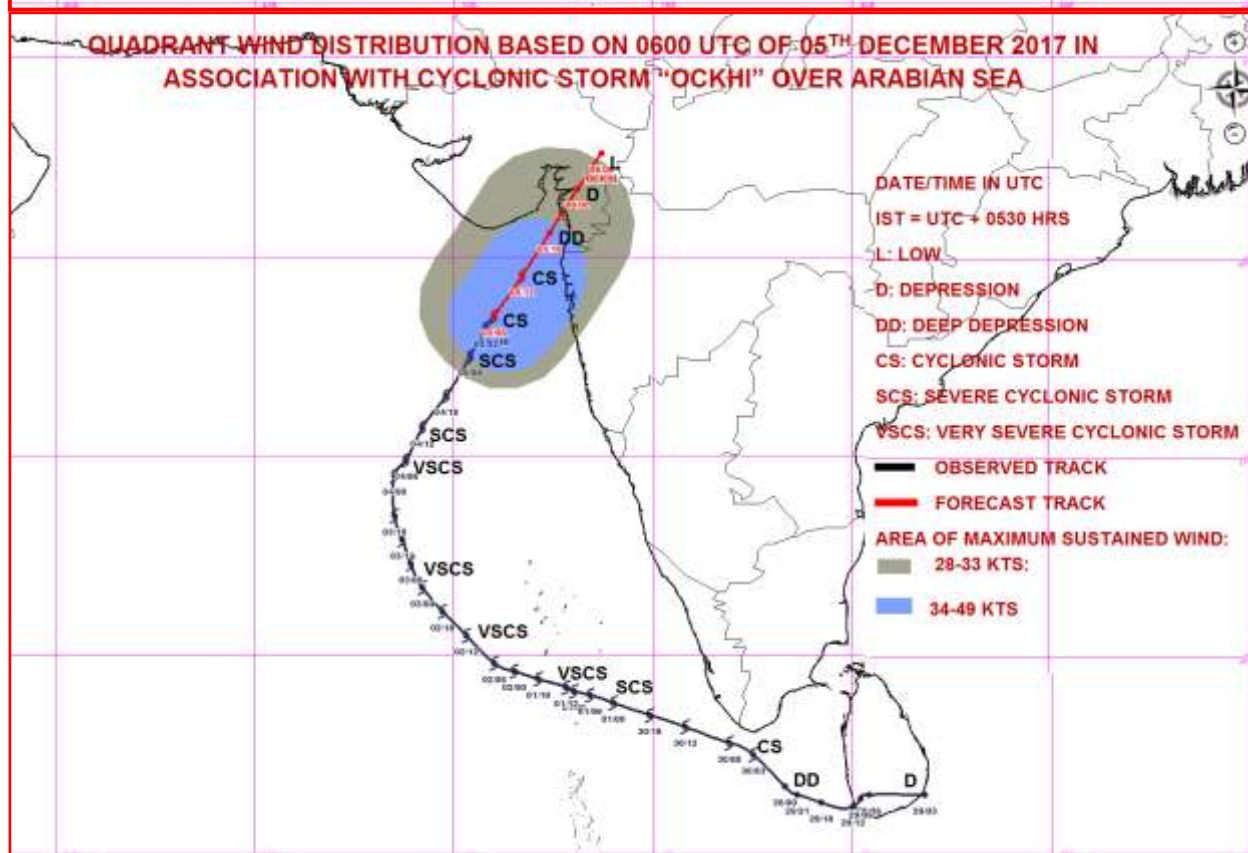
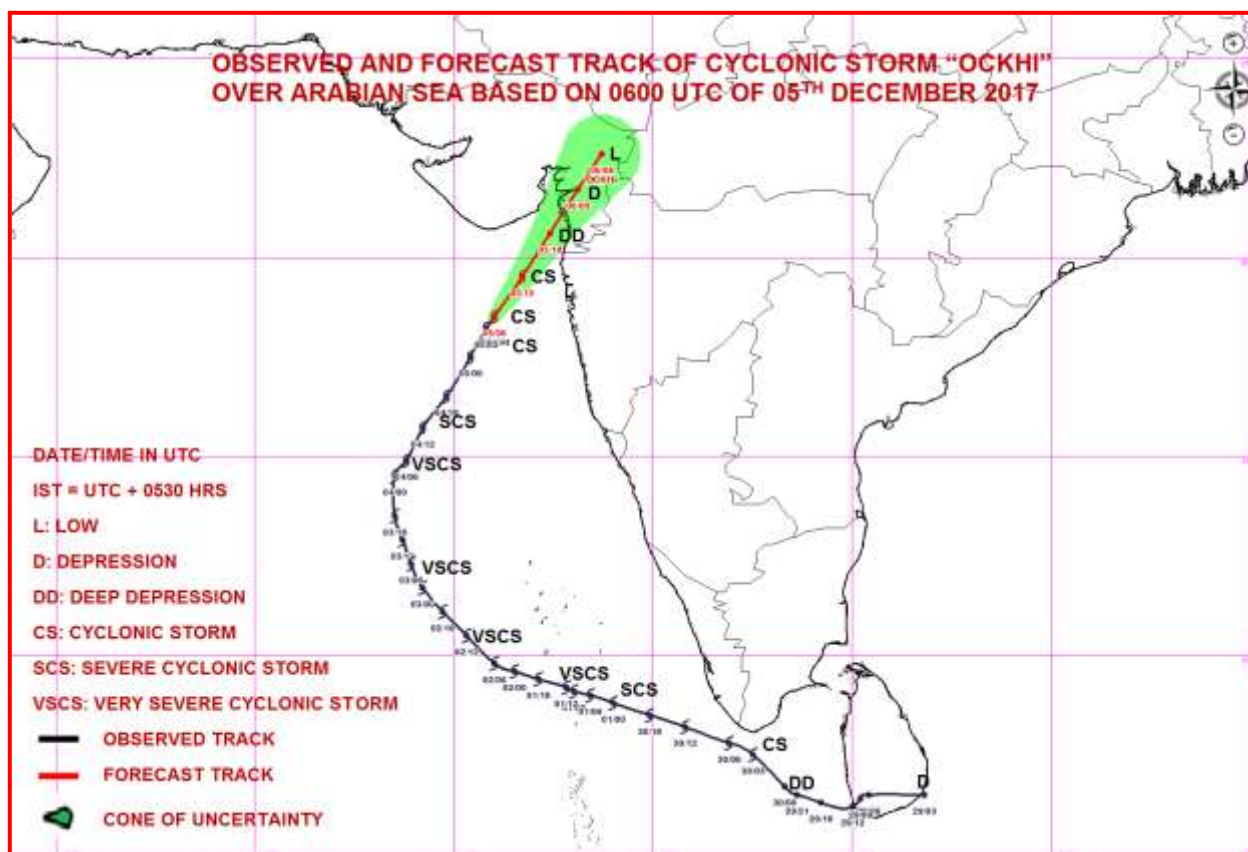
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 49 (BOB 07/2017)

TIME OF ISSUE: 1730 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

CHIEF ADMINISTRATOR, GOVT. OF ODISHA

**Sub: (1) Cyclonic Storm 'OCKHI' over eastcentral Arabian Sea weakened into a Deep Depression
(2) Well Marked low pressure area over Southeast Bay of Bengal**

1) Deep Depression 'OCKHI' over eastcentral Arabian Sea

The cyclonic storm 'OCKHI' over eastcentral Arabian Sea moved further north-northeastwards with a speed of 17 kmph during past 6 hours and weakened into a **Deep Depression** and lay centred at 1430 hrs IST of 05th December, 2017 over eastcentral Arabian Sea near Latitude 19.0° N and Longitude 71.3° E, about 290 km south-southwest of Surat and 160 km west of Mumbai. It is very likely to continue to move north-northeastwards, weaken further and cross south Gujarat and adjoining north Maharashtra coasts near Surat as a **depression** by tonight, the 5th December 2017. However, there is also a probability of dissipation of the system over the Sea before the landfall due to unfavourable environmental conditions, like high wind shear and colder sea surface temperatures near the coast.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/1430	19.0/71.3	55-65 GUSTING TO 75	DEEP DEPRESSION
05/1730	19.5/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
05/2330	20.6/72.4	40-50 GUSTING TO 60	DEPRESSION
06/0530	21.7/73.1	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:**➤ Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Diu, Daman, Dadra, and Nagar Haveli districts). Light to moderate rainfall at a few places likely over Saurashtra till 6th December morning. Light to moderate rainfall at many places likely over north Gujarat region and west Madhya Pradesh till the noon of 6th December.
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ Wind:

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 6 hours and wind becomes 40-50 kmph gusting to 60 kmph during the subsequent 6 hours.

➤ Sea condition:

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts during next 18 hours.

➤ Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh and Greater Mumbai Districts):

Minor damage to loose / unsecured structures, breaking of tree branches. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutcha embankments during next 6 hours.

➤ Action suggested

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts during next 18 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and neighbourhood persists. It is very likely to become a depression over the same area during next 12 hours and further intensify into a deep depression during the subsequent 48 hours. It is very likely to move towards north Tamil Nadu- south Andhra Pradesh coasts during next 48 hours and subsequently to north Andhra Pradesh coast.

Warning:**Heavy Rainfall:**

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 5th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

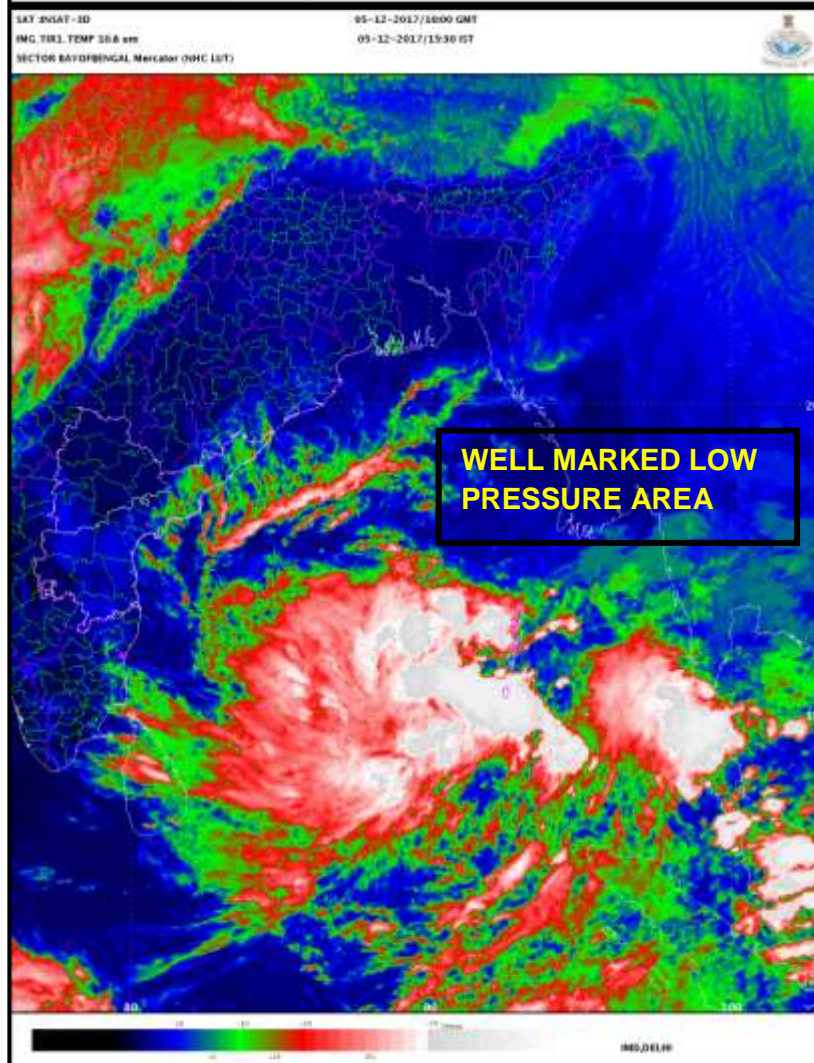
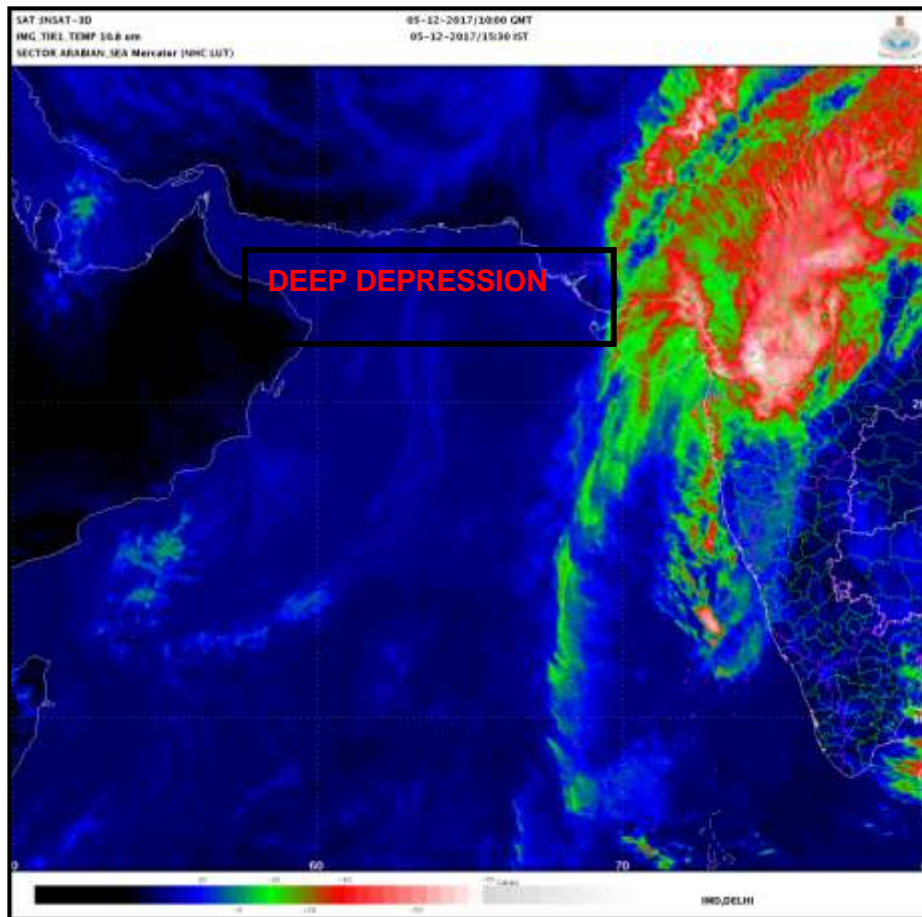
The next bulletin will be issued at 2030 hrs IST of 05th December 2017.

(Neetha K Gopal)
Scientist-E
RSMC New Delhi

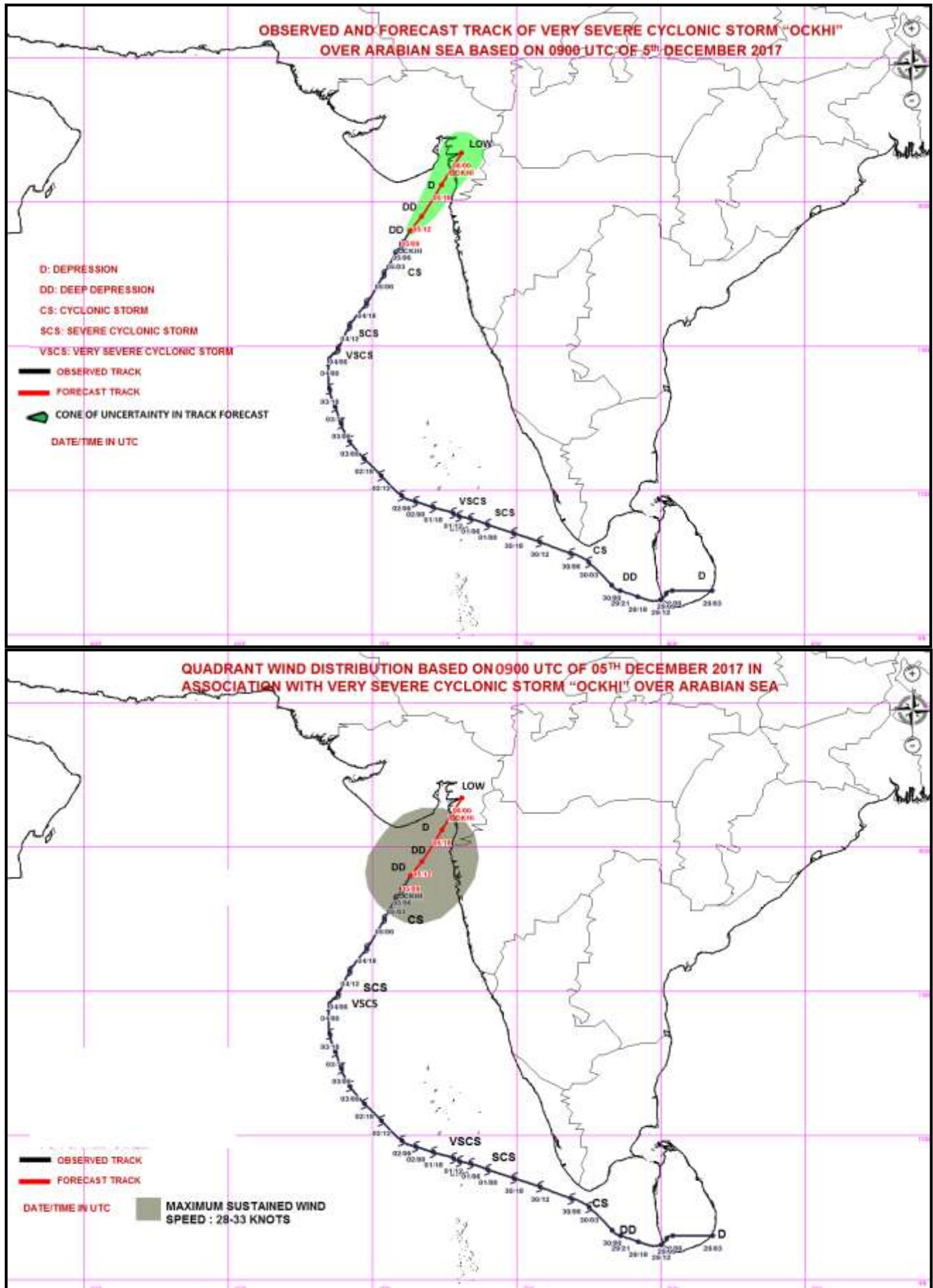
Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 50 (BOB 07/2017)

TIME OF ISSUE: 2000 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

CHIEF ADMINISTRATOR, GOVT. OF ODISHA

Sub: (1) Deep Depression over eastcentral Arabian Sea

(2) Well Marked low pressure area over Southeast Bay of Bengal

1) Deep Depression over eastcentral Arabian Sea

The deep depression over eastcentral Arabian Sea moved further north-northeastwards with a speed of 18 kmph during past 6 hours and lay centred at 1730 hrs IST of 05th December, 2017 over eastcentral Arabian Sea near Latitude 19.4° N and Longitude 71.5° E, about 240 km south-southwest of Surat and 150 km west-northwest of Mumbai. It is very likely to continue to move north-northeastwards, weaken further and cross south Gujarat & adjoining north Maharashtra coasts near Surat as a **depression** by tonight, the 5th December 2017. However, there is also a probability of dissipation of the system over the Sea before the landfall due to unfavourable environmental conditions, like high wind shear and colder sea surface temperatures near the coast.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/1730	19.4/71.5	50-60 GUSTING TO 70	DEEP DEPRESSION
05/2330	20.6/72.4	40-50 GUSTING TO 60	DEPRESSION
06/0530	21.7/73.1	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:**➤ Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Diu, Daman, Dadra, and Nagar Haveli districts). Light to moderate rainfall at a few places likely over Saurashtra till 6th December morning. Light to moderate rainfall at many places likely over north Gujarat region and west Madhya Pradesh till the noon of 6th December.
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ Wind:

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 6 hours and wind becomes 40-50 kmph gusting to 60 kmph during the subsequent 6 hours.

➤ Sea condition:

- Sea condition would be rough to very rough along & off north Maharashtra and South Gujarat coasts during next 18 hours.

➤ Damage Expected over south Gujarat (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli districts), Daman, Diu, and Dadra, Nagar Haveli and north Konkan Districts of Maharashtra (Palghar, Thane, Raigarh and Greater Mumbai Districts):

Minor damage to loose / unsecured structures, breaking of tree branches. Minor damage to Banana trees. Some damage to agriculture near coast due to salt spray. Damage to ripe paddy crops. Minor damage to Kutcha embankments during next 6 hours.

➤ Action suggested

- **South Gujarat and north Maharashtra coasts:** Fishermen are advised not to venture into the Sea along & off South Gujarat and north Maharashtra coasts during next 18 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal and neighbourhood persists. It is very likely to become a depression over the same area during next 12 hours and further intensify into a deep depression during the subsequent 48 hours. It is very likely to move towards north Tamil Nadu- south Andhra Pradesh coasts during next 48 hours and subsequently to north Andhra Pradesh coast.

Warning:**Heavy Rainfall:**

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph on 5th and 6th December, 2017 very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during 5th to 6th December, 2017 around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

The next bulletin will be issued at 2330 hrs IST of 05th December 2017.

(Naresh Kumar)
Scientist-D
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

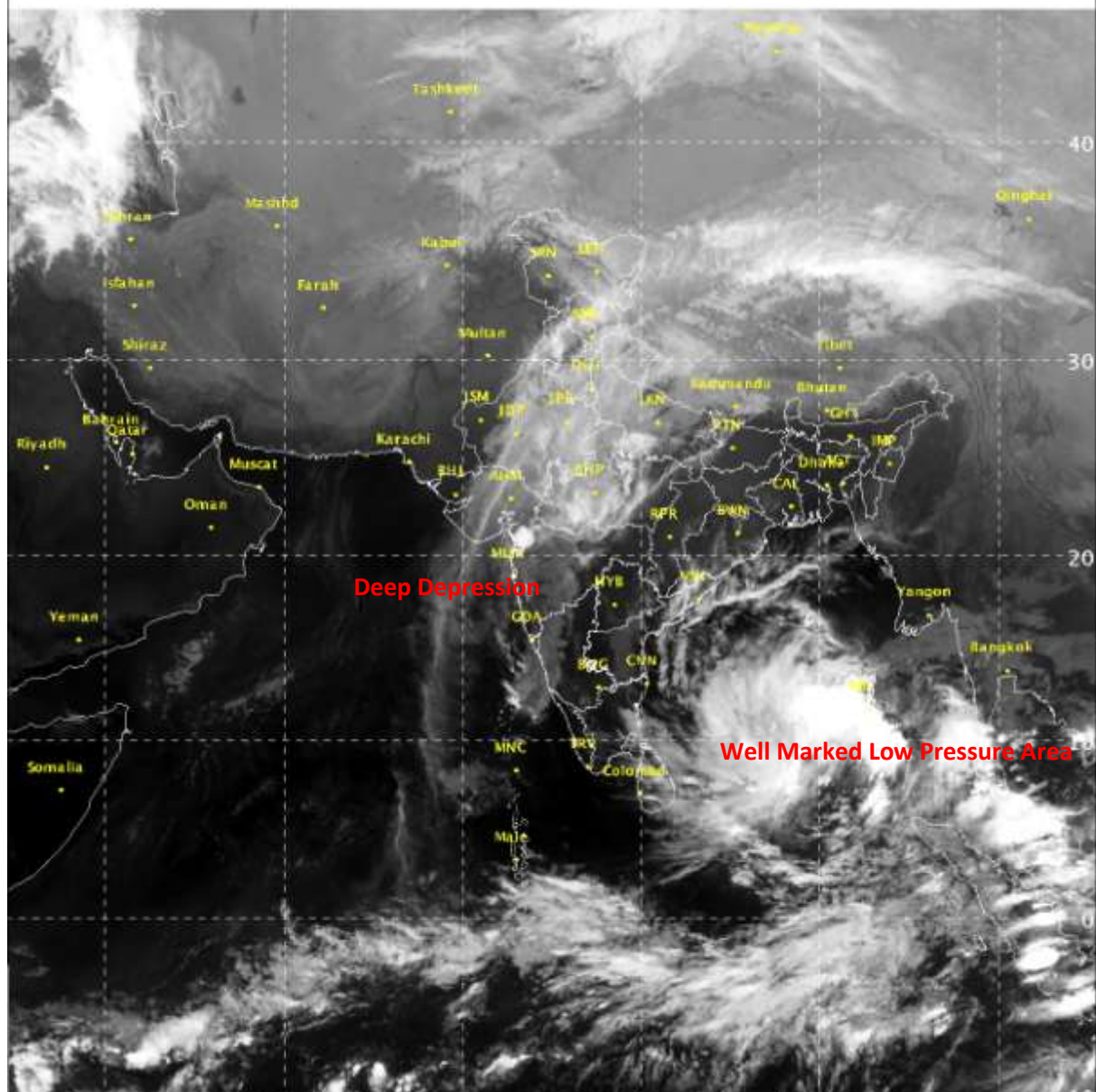
SAT :INSAT-3D IMG

IMG_TIR1 10.8 um

L1C Mercator (LINEAR STRETCH: 1.0%)

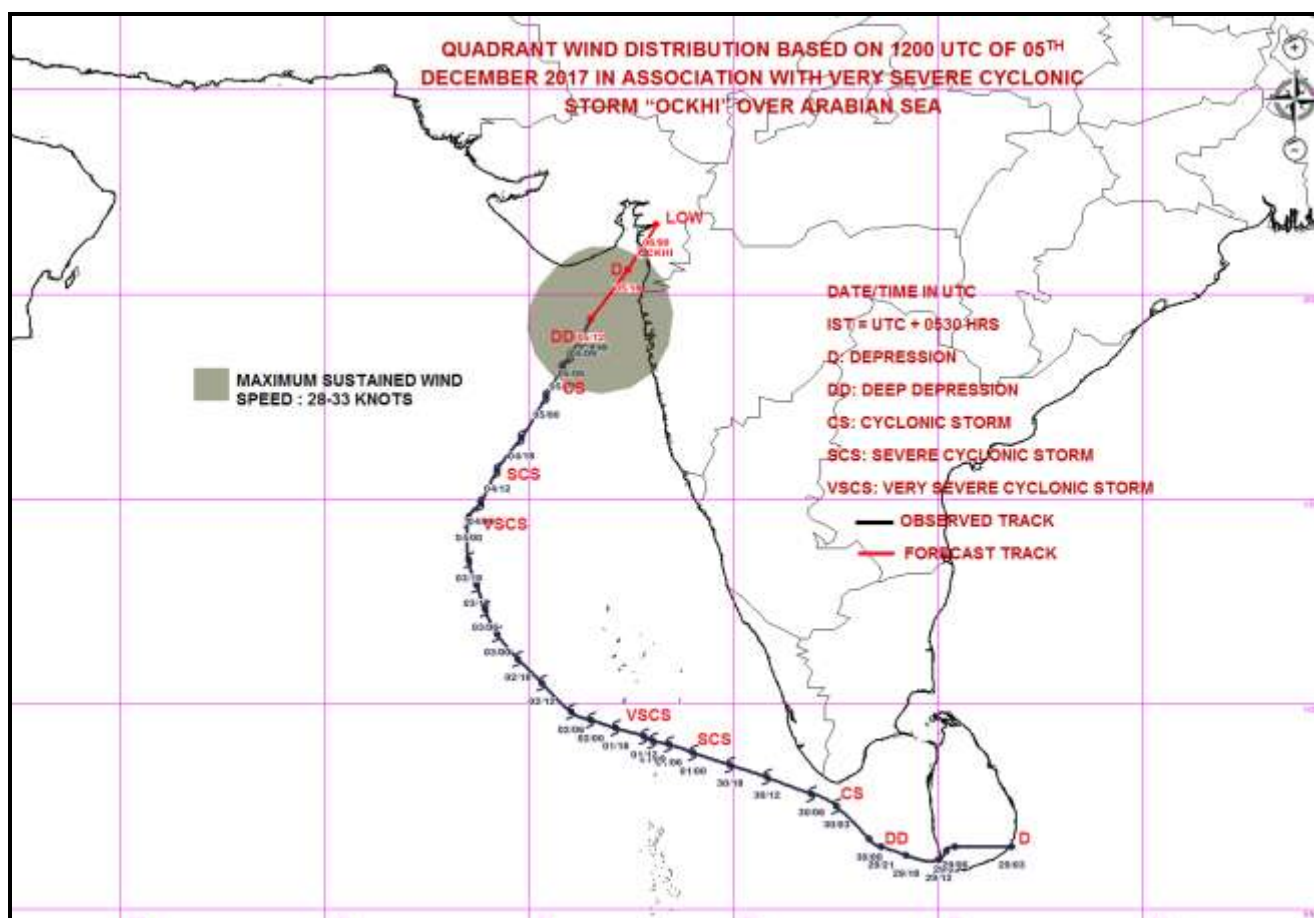
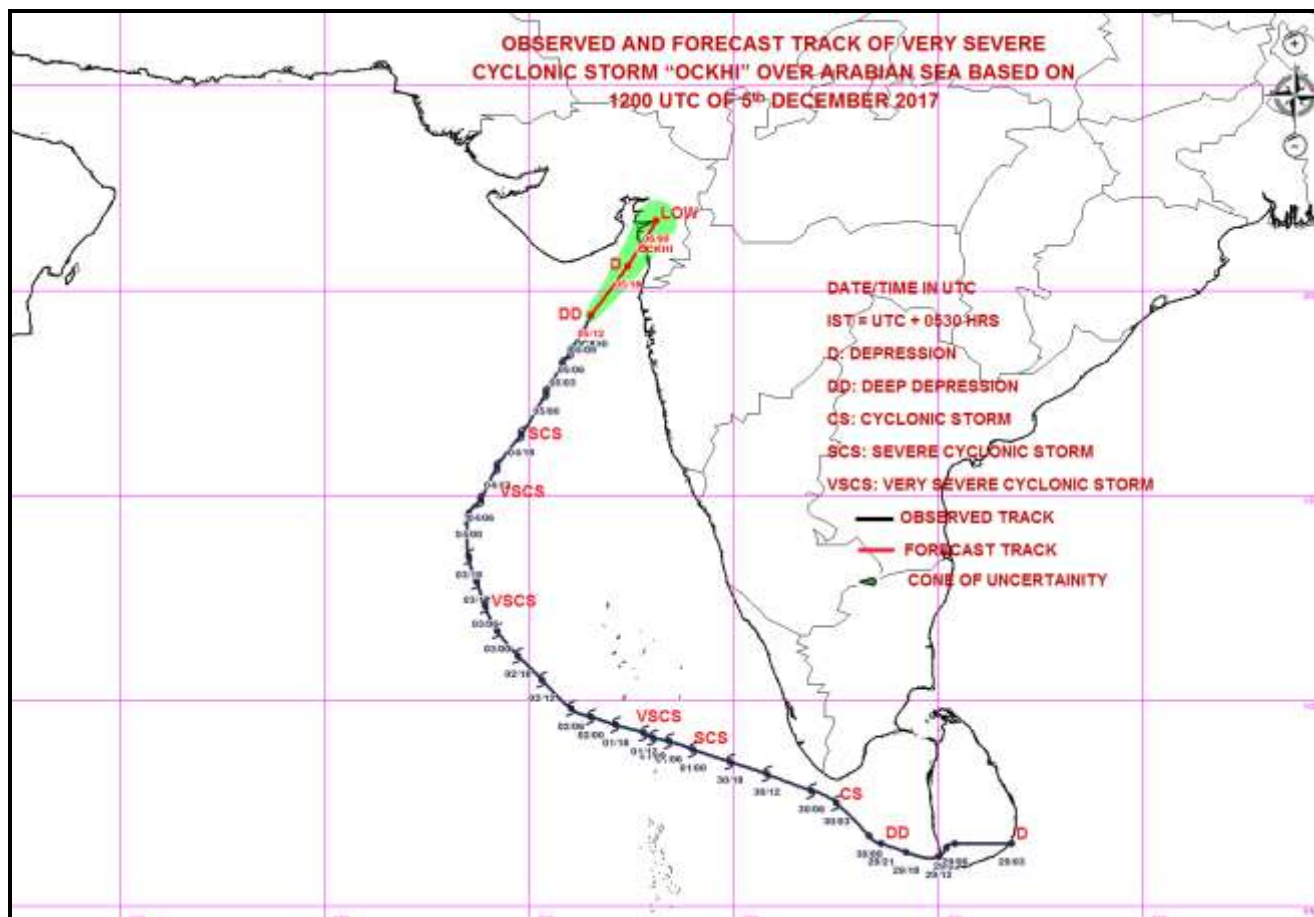
05-12-2017/13:00 GMT

05-12-2017/18:30 IST



IMD/Delhi

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 51 (BOB 07/2017)

TIME OF ISSUE: 2200 HOURS IST

DATED: 05.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

SECRETARY, DST (FAX NO. 26863847/-2418)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (25843825)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS (FAX NO. 04896-262184)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, GOVT. OF KARNATAKA (FAX NO. 080-22258913)

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI (FAX NO. 0260-2230775)

CHIEF SECRETARY, GOVT.OF GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, GOVT.OF MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GOVT.OF GUJARAT (FAX NO. 079-23250305)

CHIEF SECRETARY, GOVT. OF TAMILNADU (FAX NO. 044-25672304)

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH (FAX NO. 040-23456137)

CHIEF SECRETARY, GOVT. OF PUDUCHERRY (FAX NO. 0413-2337575)

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS (FAX NO. 03192-232656)

CHIEF ADMINISTRATOR, GOVT. OF ODISHA (FAX NO. 0674-2536660)

Sub:(1) Deep Depression weakened into a depression over eastcentral & adjoining northeast Arabian Sea

(2) Well Marked low pressure area over Southeast Bay of Bengal

1) Deep Depression weakened into a depression over eastcentral & adjoining northeast Arabian Sea

The deep depression over eastcentral Arabian Sea moved further north-northeastwards with a speed of 22 kmph during past 6 hours, weakened into a depression and lay centred at 2030 hrs IST of 05th December, 2017 over eastcentral & adjoining northeast Arabian Sea near Latitude 20.0° N and Longitude 72.0° E, about 160 km south-southwest of Surat and 130 km northwest of Mumbai. It is very likely to continue to move north-northeastwards and cross south Gujarat & adjoining north Maharashtra coasts near Surat as a **depression** by tonight, the 5th December 2017. The system is very likely to weaken into a well marked low pressure area during next 12 hours. However, there is also a probability of dissipation of the system over the Sea before the landfall due to unfavourable environmental conditions, like high wind shear and colder sea surface temperatures near the coast.

Track and intensity forecast of the system is given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/2030	20.0/72.0	45-55 GUSTING TO 65	DEPRESSION
05/2330	20.6/72.4	40-50 GUSTING TO 60	DEPRESSION
06/0530	21.7/73.1	25-35 GUSTING TO 45	LOW

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning:

➤ **Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at most places with heavy rainfall at isolated places is very likely over south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Diu, Daman, Dadra, and Nagar Haveli districts). Light to moderate rainfall at a few places likely over Saurashtra till 6th December morning. Light to moderate rainfall at many places likely over north Gujarat region and west Madhya Pradesh till the noon of 6th December.
- **Maharashtra:** Light to moderate rainfall at most places with isolated heavy rainfall is also likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

➤ **Wind:**

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 6 hours and wind becomes 40-50 kmph gusting to 60 kmph during the subsequent 6 hours.

➤ **Sea condition:**

- Sea condition would be rough along & off south Gujarat & adjoining north Maharashtra coasts during next 12 hours.

➤ **Fishermen Warning:** Fishermen along & off north Maharashtra and South Gujarat coasts are advised not to venture into sea during next 18 hours.

2. Well Marked low pressure area over Southeast Bay of Bengal:

The well marked low pressure area over southeast Bay of Bengal & neighbourhood persists. It is very likely to become a depression over the same area during next 12 hours and further intensify into a deep depression during the subsequent 48 hours. It is very likely to move towards north Tamil Nadu- south Andhra Pradesh coasts during next 48 hours and subsequently to north Andhra Pradesh coast.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and south Odisha on 7th and 8th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph during next 48 hours very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during next 48 hours around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

The next bulletin will be issued at 0230 hrs IST of 06th December 2017.

(Naresh Kumar)
Scientist-D
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

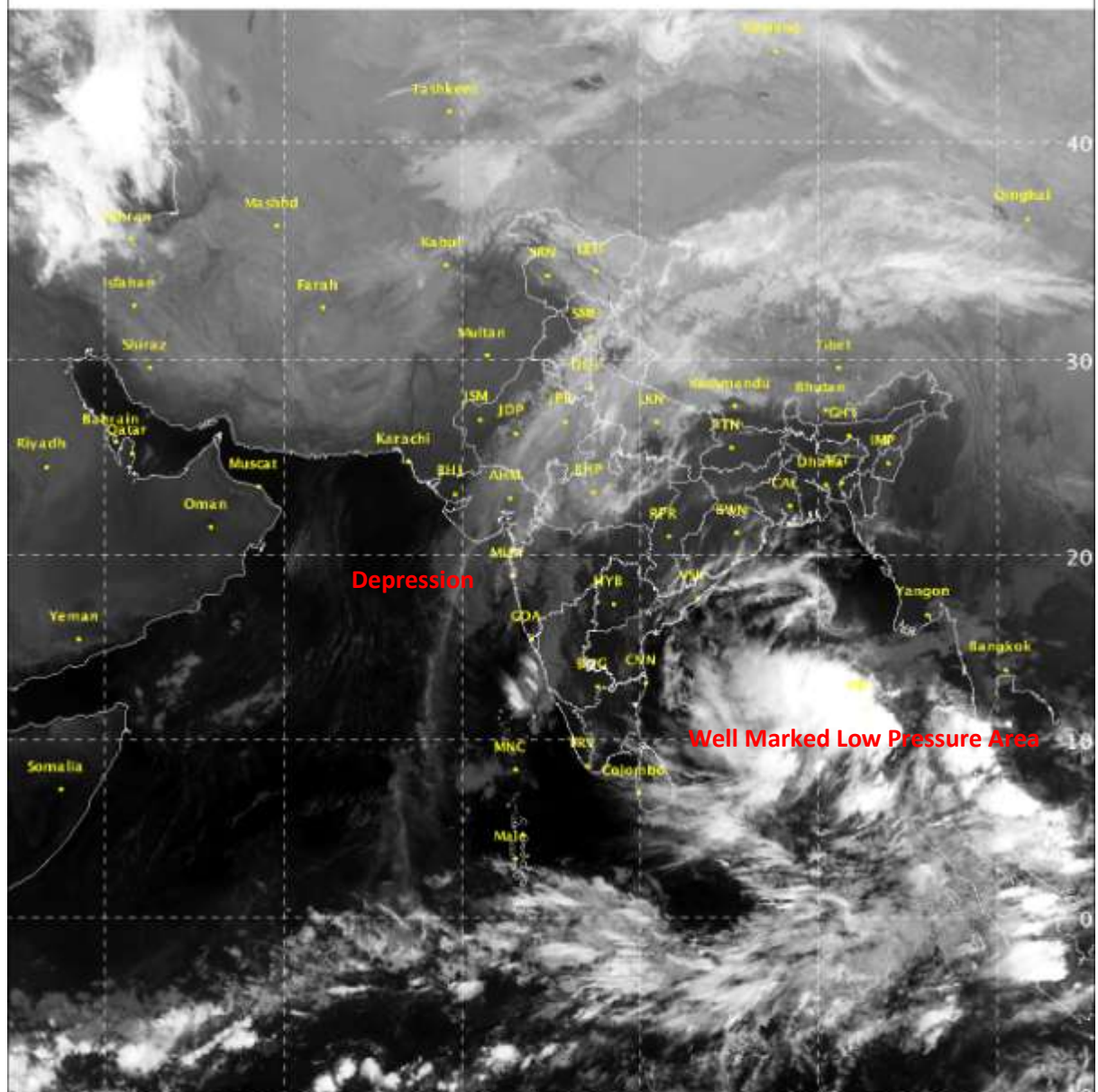
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IMG_TIR1 10.8 um

L1C Mercator (LINEAR STRETCH: 1.0%)

05-12-2017/16:00 GMT

05-12-2017/21:30 IST

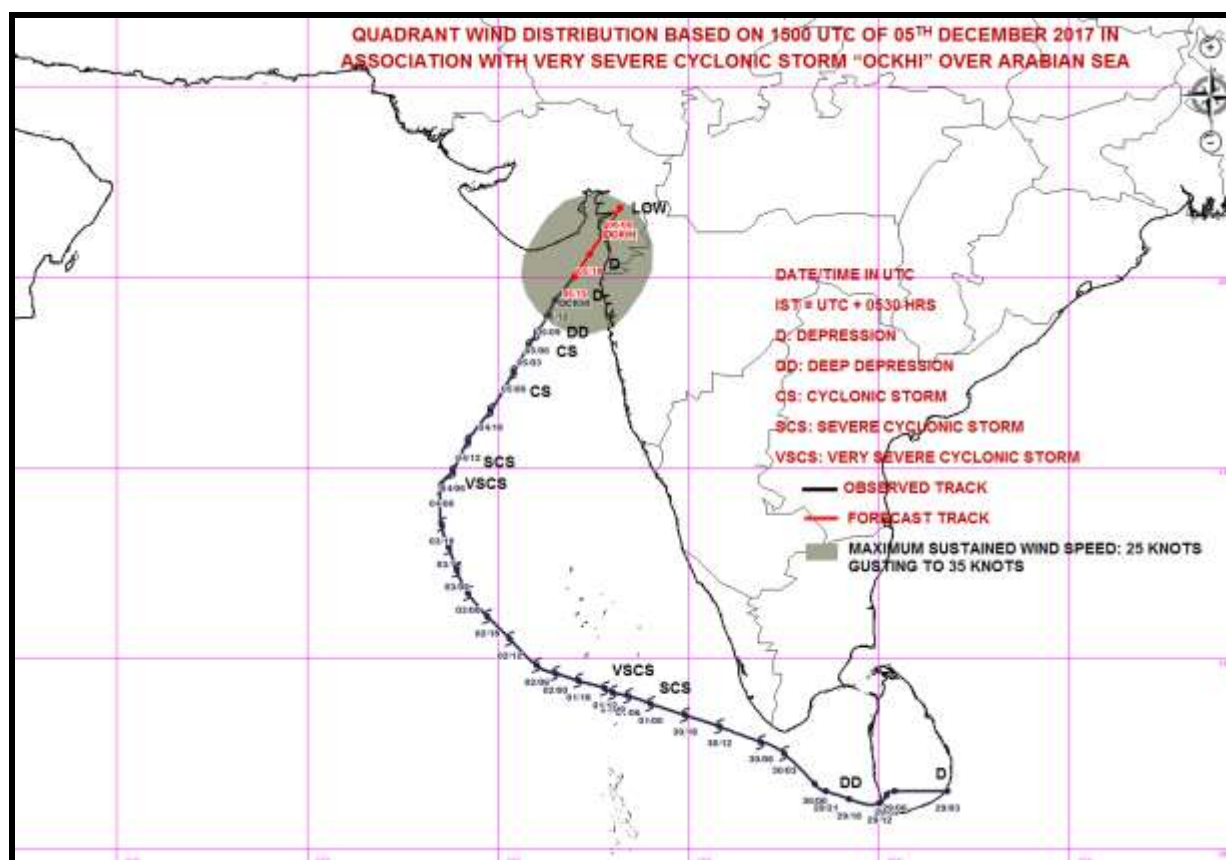
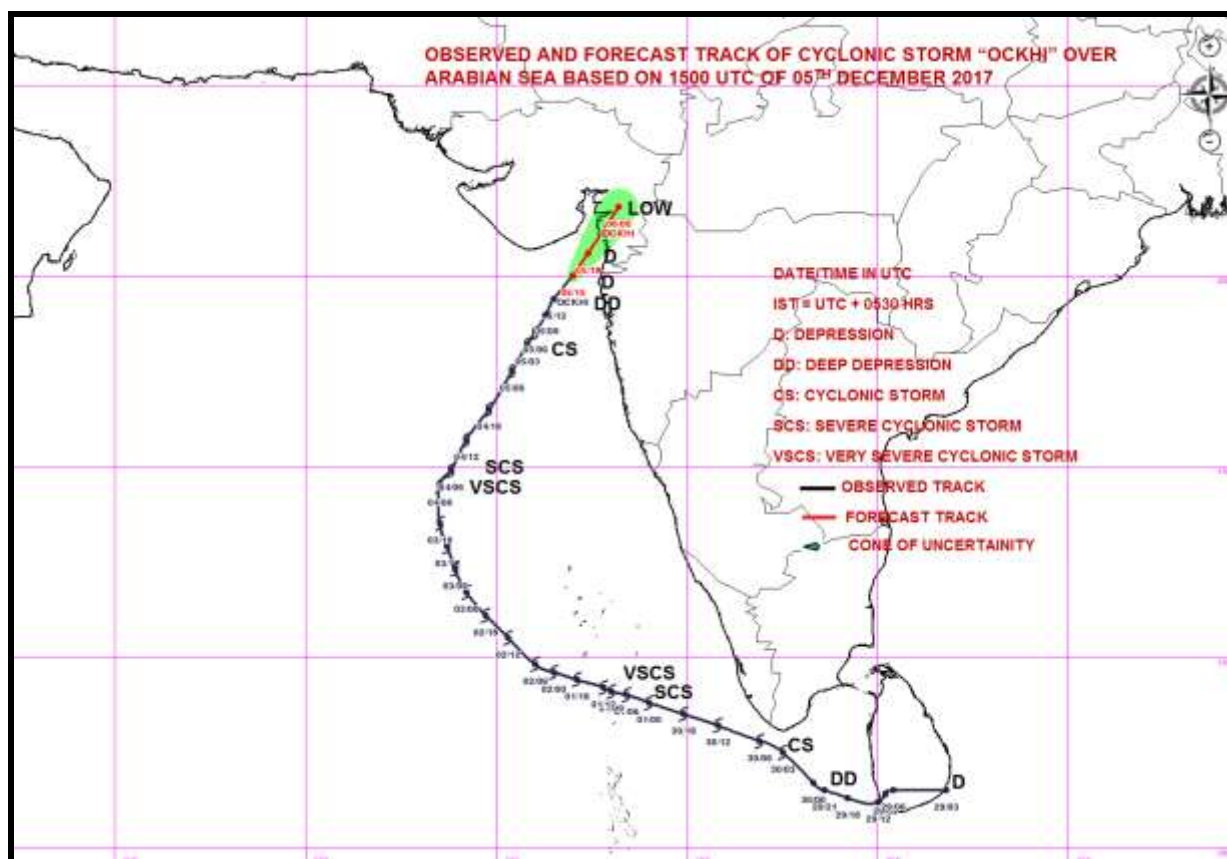


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IMD/Delhi

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 52 (BOB 07/2017)

TIME OF ISSUE: 0230 HOURS IST

DATED: 06.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF KARNATAKA
CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI
CHIEF SECRETARY, GOVT. OF GOA
CHIEF SECRETARY, GOVT. OF MAHARASHTRA
CHIEF SECRETARY, GOVT. OF GUJARAT
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF ADMINISTRATOR, GOVT. OF ODISHA**

Sub:(1) Depression weakened into a well marked low over eastcentral & adjoining northeast Arabian Sea

(2) Well Marked low pressure area over Southeast Bay of Bengal

1) Deep Depression weakened into a depression over eastcentral & adjoining northeast Arabian Sea

The depression over eastcentral and adjoining northeast Arabian Sea weakened into well marked low pressure area over east central Arabian sea and adjoining areas of northeast Arabian Sea, north coastal Maharashtra and south coastal Gujarat at 2330 hrs IST of 05th December 2017.

Warning:

➤ **Heavy Rainfall:**

- **Gujarat :** Light to moderate rainfall at many places is very likely over south Gujarat region till the morning of 6th December, 2017 (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Diu, Daman, Dadra, and Nagar Haveli districts) and over north Gujarat region and west Madhya Pradesh till the noon of 6th December.
- **Maharashtra:** Light to moderate rainfall at many places is likely over north Konkan till the morning of 6th December, 2017 (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- **Wind:**
 - Squally wind speed reaching 35-45 kmph gusting to 55 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 12 hours.
- **Sea condition:**
 - Sea condition would be rough along & off south Gujarat & adjoining north Maharashtra coasts during next 12 hours.
- **Fishermen Warning:** Fishermen along & off north Maharashtra and South Gujarat coasts are advised not to venture into sea during next 12 hours.

2. **Well Marked low pressure area over Southeast Bay of Bengal:**

The well marked low pressure area over southeast Bay of Bengal & neighbourhood persists. It is very likely to become a depression over the same area during next 12 hours and further intensify into a deep depression during the subsequent 48 hours. It is very likely to move towards north Tamil Nadu- south Andhra Pradesh coasts during next 48 hours and subsequently towards north Andhra Pradesh coast.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and over south Odisha during 7th to 9th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph during next 48 hours very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during next 48 hours around Nicobar Islands.

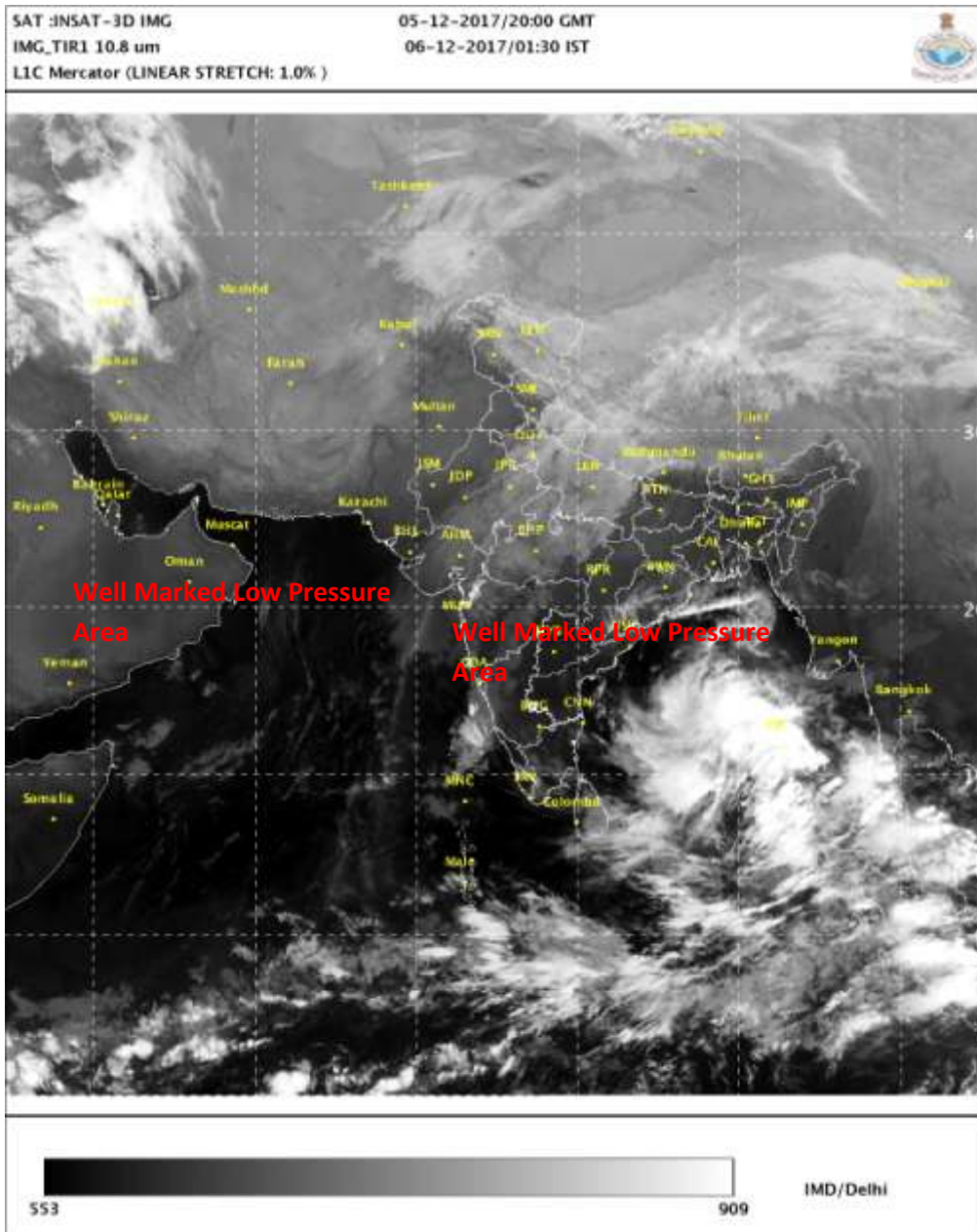
Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

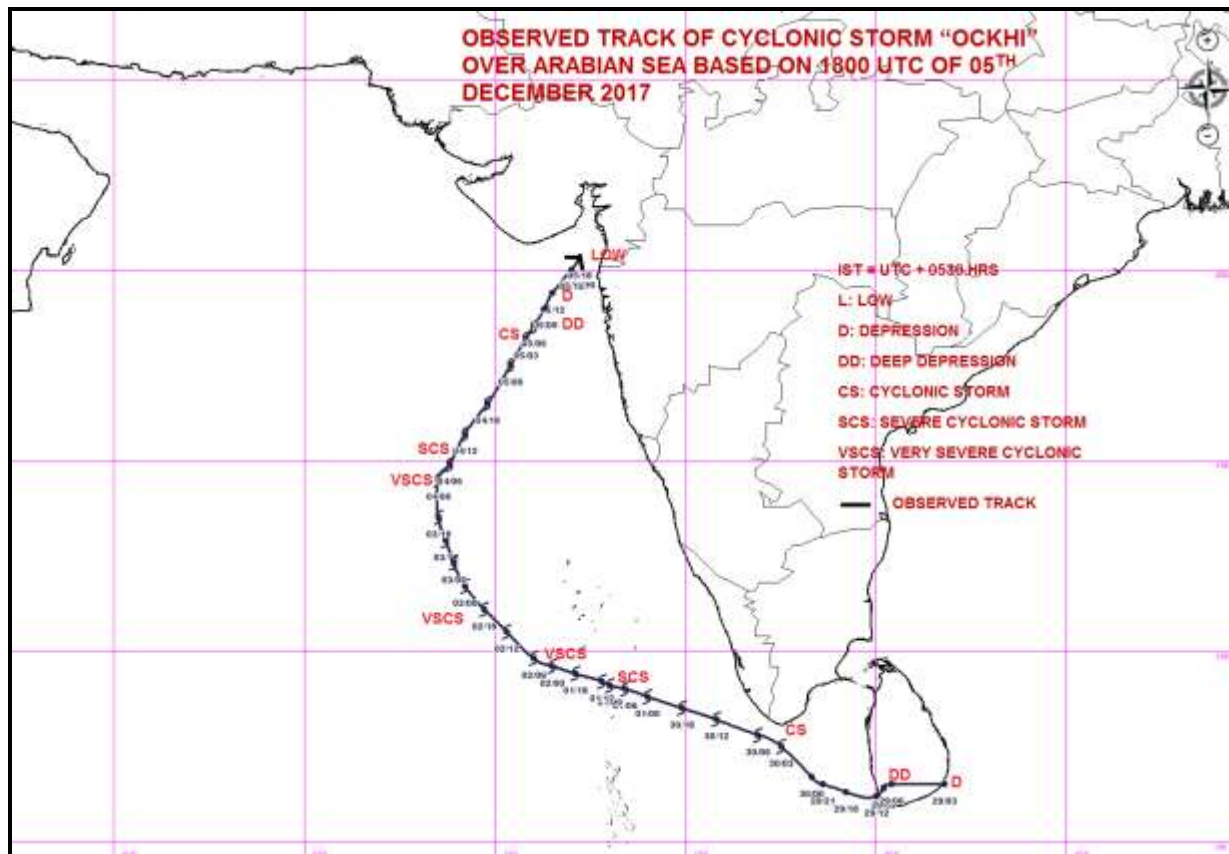
The next bulletin will be issued at 0830 hrs IST of 06th December 2017.

(Shibin B)
Scientist-B
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 53 (BOB 07/2017)

TIME OF ISSUE: 0650 HOURS IST

DATED: 06.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

CHIEF ADMINISTRATOR, GOVT. OF ODISHA

Sub:(1) A well marked low pressure area over north coastal Maharashtra and adjoining south coastal Gujarat & northeast Arabian Sea

(2) Well Marked low pressure area over Southeast Bay of Bengal

1) A well marked low pressure area over north coastal Maharashtra and adjoining south coastal Gujarat & northeast Arabian Sea

The well marked low pressure area over east central Arabian sea & adjoining areas of northeast Arabian Sea, now lies over north coastal Maharashtra and adjoining south coastal Gujarat & northeast Arabian Sea at 0530 hrs IST of today, the 06th December 2017.

Warning:

➤ Rainfall:

- **Gujarat:** Light rainfall at a few places is very likely over south Gujarat region during next six hours (Valsad, Surat, Navsari, Bharuch, Dang, Tapi, Amreli, Dadra, and Nagar Haveli districts)
- **Maharashtra:** Light rainfall at many places is likely over north Konkan during next six hours (Palghar, Thane, Raigarh, Greater Mumbai, Dhule, Nandurbar, Nashik, Jalgaon, Ahmednagar and Pune districts).

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- **Wind:**
 - Squally wind speed reaching 30-40 kmph gusting to 50 kmph very likely along & off north Maharashtra and South Gujarat coasts during next 06 hours.
- **Sea condition:**
 - Sea condition would be rough along & off south Gujarat & adjoining north Maharashtra coasts during next 06 hours.
- **Fishermen Warning:** Fishermen along & off north Maharashtra and South Gujarat coasts are advised not to venture into sea during next 06 hours.

2. **Well Marked low pressure area over Southeast Bay of Bengal:**

The well marked low pressure area over southeast Bay of Bengal & neighbourhood persists. It is very likely to become a depression over the same area during next 06 hours and further intensify into a deep depression during the subsequent 48 hours. It is very likely to move towards north Tamil Nadu- south Andhra Pradesh coasts during next 48 hours and subsequently towards north Andhra Pradesh coast.

Warning:

Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 3 days
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and over south Odisha during 7th to 9th December, 2017.

Wind:

Squally winds speed reaching 40-50 kmph gusting to 60 kmph during next 48 hours very likely over and around Nicobar Islands and decrease thereafter.

Sea Condition:

Sea condition would be rough to very rough during next 48 hours around Nicobar Islands.

Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till 6th December, 2017.
- Fishermen along and off Andhra Pradesh and Tamilnadu coasts are advised not to venture into sea during 6th to 8th December, 2017

The next bulletin will be issued at 1130 hrs IST of 06th December 2017.

(Naresh Kumar)
Scientist-D
RSMC New Delhi

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneswar

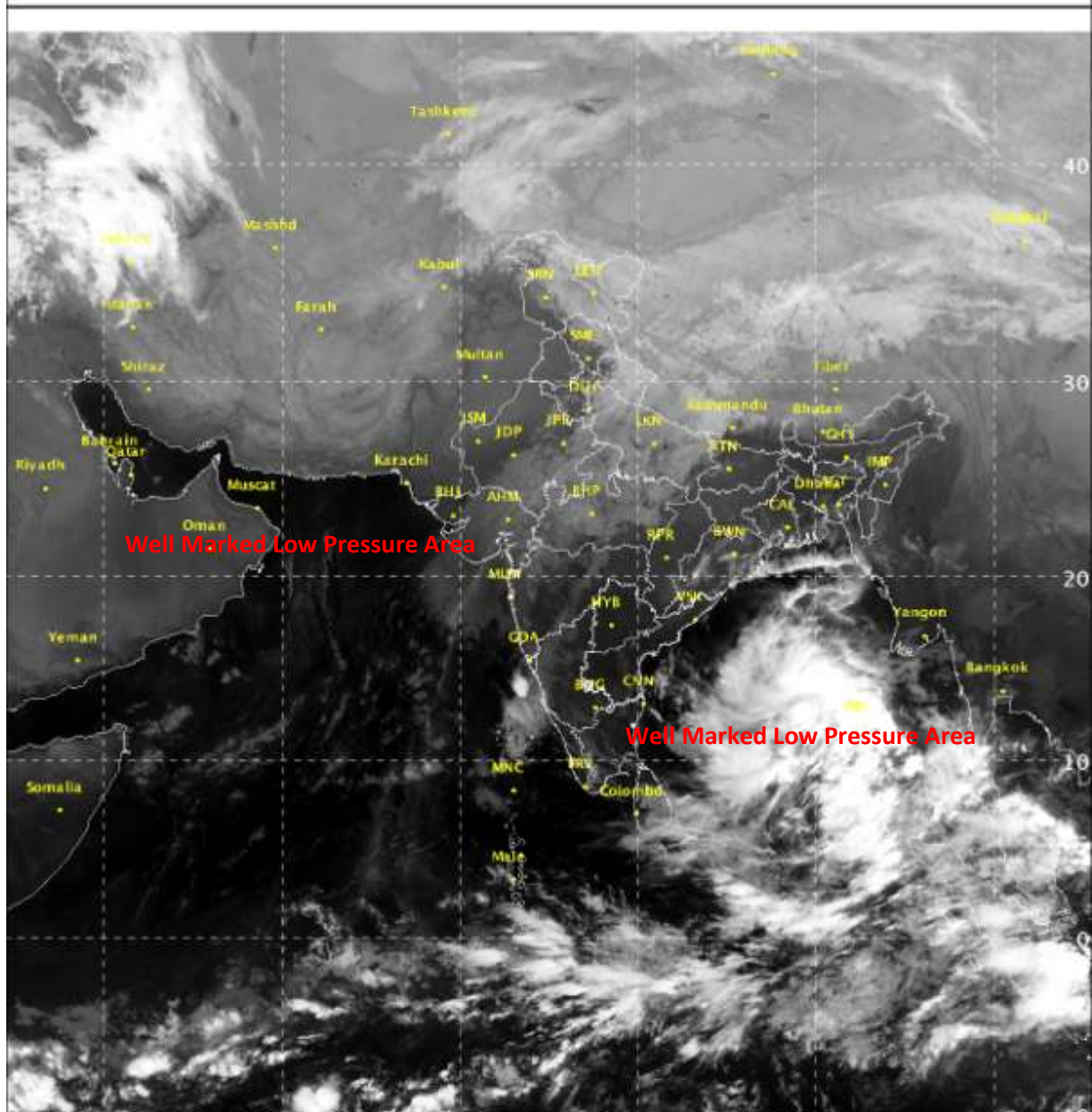
SAT :INSAT-3D IMG

IMG_TIR1 10.8 um

L1C Mercator (LINEAR STRETCH: 1.0%)

05-12-2017/21:30 GMT

06-12-2017/03:00 IST



551

906

IMD/Delhi

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 54 (BOB 07/2017)

TIME OF ISSUE: 1150 HOURS IST

DATED: 06.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS

CONTROL ROOM NDMA

CABINET SECRETARIAT

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES

SECRETARY, MOES,

SECRETARY, DST

H.Q. (INTEGRATED DEFENCE STAFF AND CDS)

DIRECTOR GENERAL, DOORDARSHAN

DIRECTOR GENERAL, AIR

PIB MOES

UNI

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)

CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS

CHIEF SECRETARY, GOVT. OF KARNATAKA

CHIEF ADMINISTRATOR, DAMAN, DIU AND DADRA NAGAR HAVELI

CHIEF SECRETARY, GOVT. OF GOA

CHIEF SECRETARY, GOVT. OF MAHARASHTRA

CHIEF SECRETARY, GOVT. OF GUJARAT

CHIEF SECRETARY, GOVT. OF TAMILNADU

CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

CHIEF SECRETARY, GOVT. OF PUDUCHERRY

CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS

CHIEF ADMINISTRATOR, GOVT. OF ODISHA

**Sub: (1) Low pressure area over south coastal Gujarat
(2) Depression over Southeast Bay of Bengal**

1. Low pressure area over south coastal Gujarat & neighbourhood

The well marked low pressure area over north coastal Maharashtra and adjoining south coastal Gujarat & northeast Arabian Sea weakened further and lay as a low pressure area over south coastal Gujarat and neighbourhood at 0830 hours IST of today, the 06th December 2017.

No adverse weather likely due to this system.

This is the last bulletin for this system.

2. Depression over Southeast Bay of Bengal:

Latest observations and satellite imageries indicate that the well marked low pressure area over southeast Bay of Bengal & neighbourhood concentrated into a **Depression** and lay centred at 0830 hrs IST of today, the 06 December, 2017 near Latitude 8.5° N and Longitude 88.5 °E, about 1160 km to the southeast of Machillipatnam and 1250 km south-southeast of Gopalpur. The system is very likely to move northwestwards and reach Andhra Pradesh coast around 8th December evening. The system is likely to intensify further into a deep depression during next 48 hours. However, there is a probability of slight weakening of the system when it reaches near Andhra Pradesh coast.

Warnings:

➤ Heavy Rainfall:

- Rainfall at most places with isolated heavy rainfall very likely over Nicobar Islands and rainfall at many places over Andaman Islands during next 2 days
- Rainfall at many places very likely over north Andhra Pradesh and south Odisha during 7th to 9th December, 2017 with isolated heavy falls on 8th and 9th.

➤ Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Nicobar Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

➤ Sea Condition:

- Sea condition would be rough to very rough around Nicobar Islands during next 24 hours.
- Sea condition would be rough to very rough along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning.

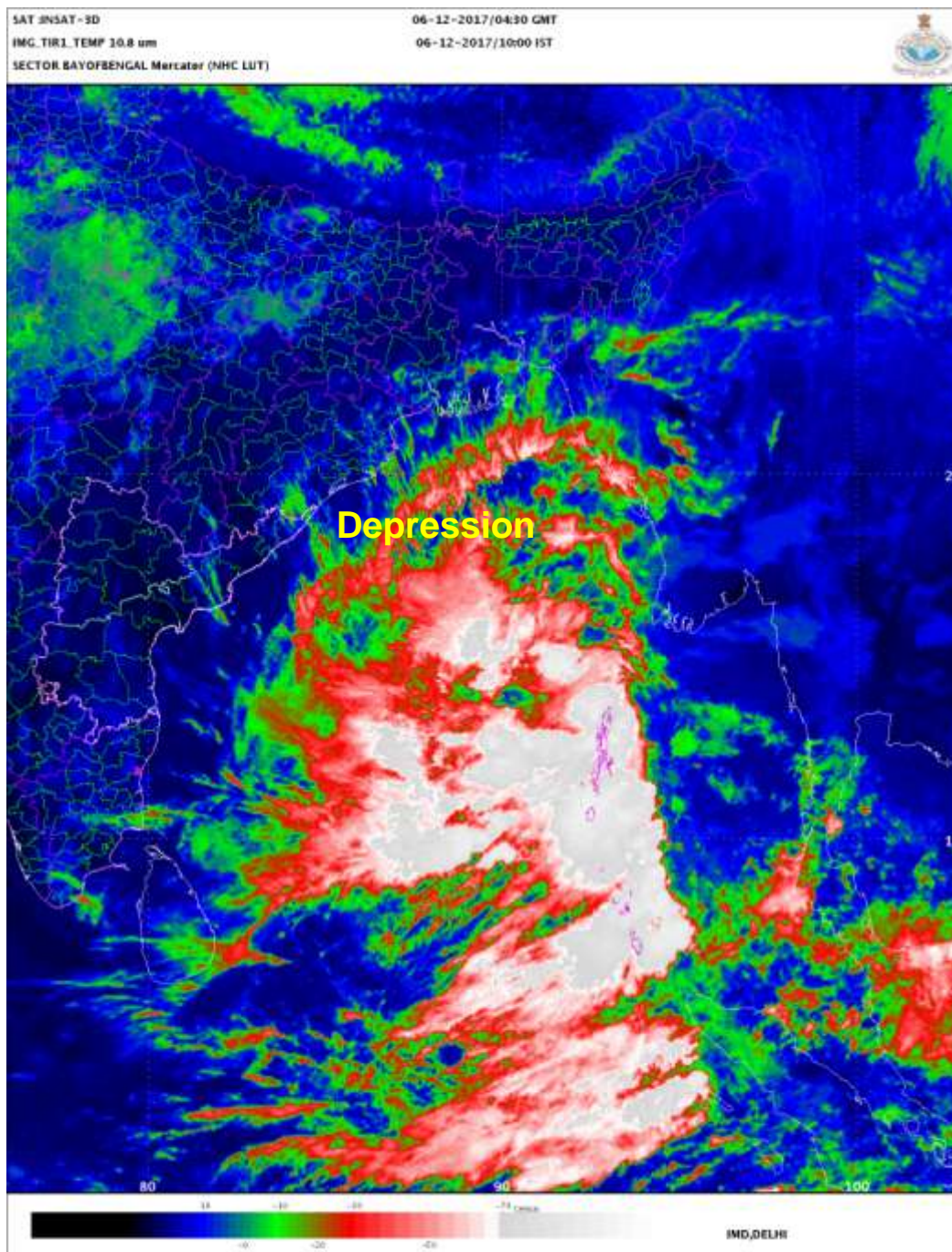
➤ Action suggested:

- Fishermen along and off Nicobar Islands are advised not to venture into sea till the forenoon of 7th December, 2017.
- Fishermen along and off north Tamil Nadu, Andhra Pradesh and south Odisha coasts are advised not to venture into sea till 9th December morning.

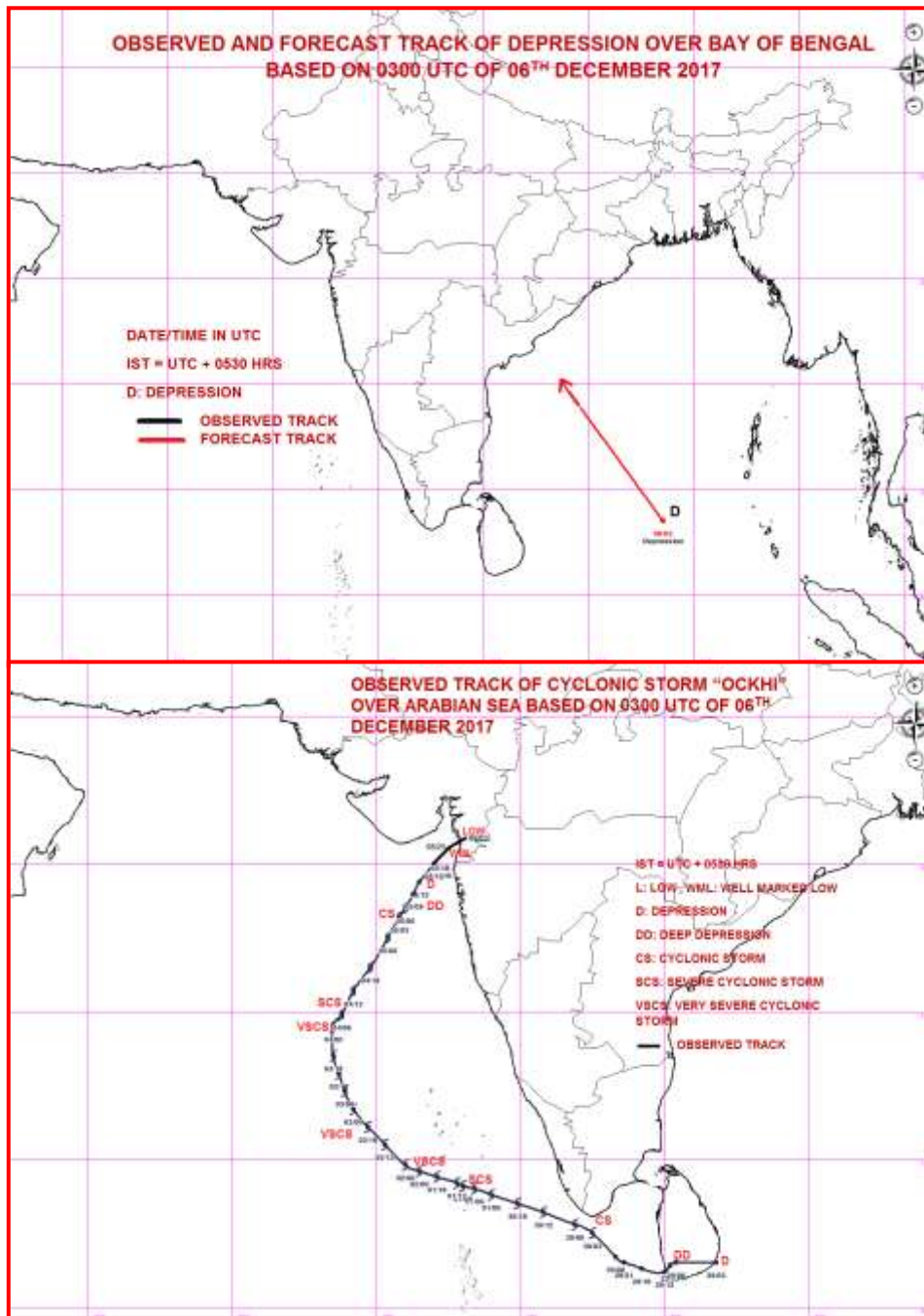
Next bulletin will be issued at 1430 hours IST

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 02 (BOB 08/2017)

TIME OF ISSUE: 1430 HOURS IST

DATED: 06.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
CHIEF ADMINISTRATOR, LAKHADWEEP ISLANDS
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved northwestwards and lay centred at 1130 hrs IST of today, the 06 December, 2017 near Latitude 8.8° N and Longitude 88.3 °E, about 1120 km to the southeast of Machillipatnam and 1200 km south-southeast of Gopalpur. The system is very likely to move northwestwards and reach Andhra Pradesh coast around 8th December evening. The system is likely to intensify further into a deep depression during next 48 hours. However, there is a probability of slight weakening of the system when it reaches near Andhra Pradesh coast.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy to very heavy falls at isolated places very likely over Andaman and Nicobar Islands during next 24 hours.
- Rainfall at many places very likely over north Andhra Pradesh and south Odisha during 7th to 9th December, 2017 with isolated heavy falls on 8th and 9th.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman and Nicobar Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough around Andaman and Nicobar Islands during next 24 hours.
- Sea condition would be rough to very rough along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning.

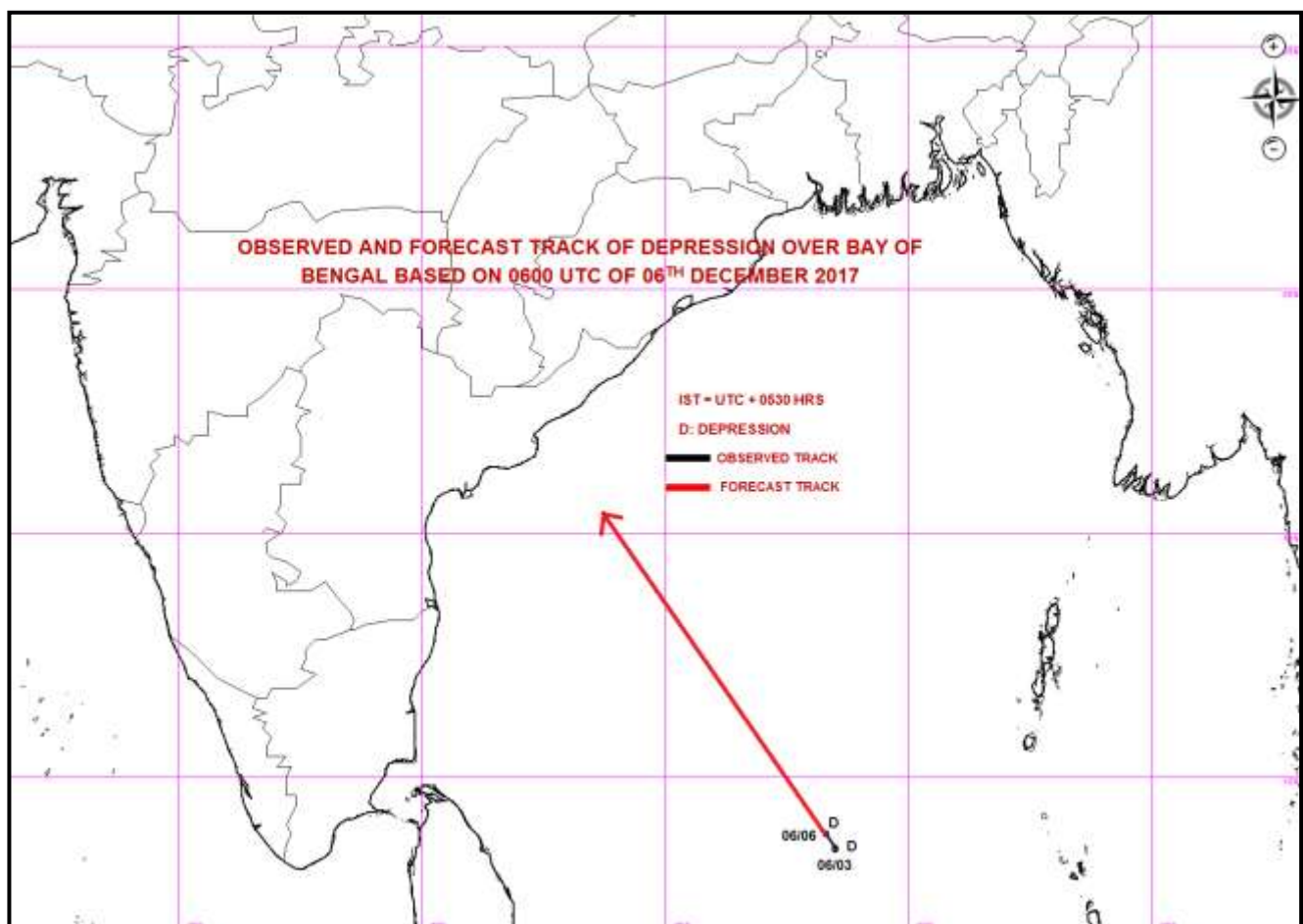
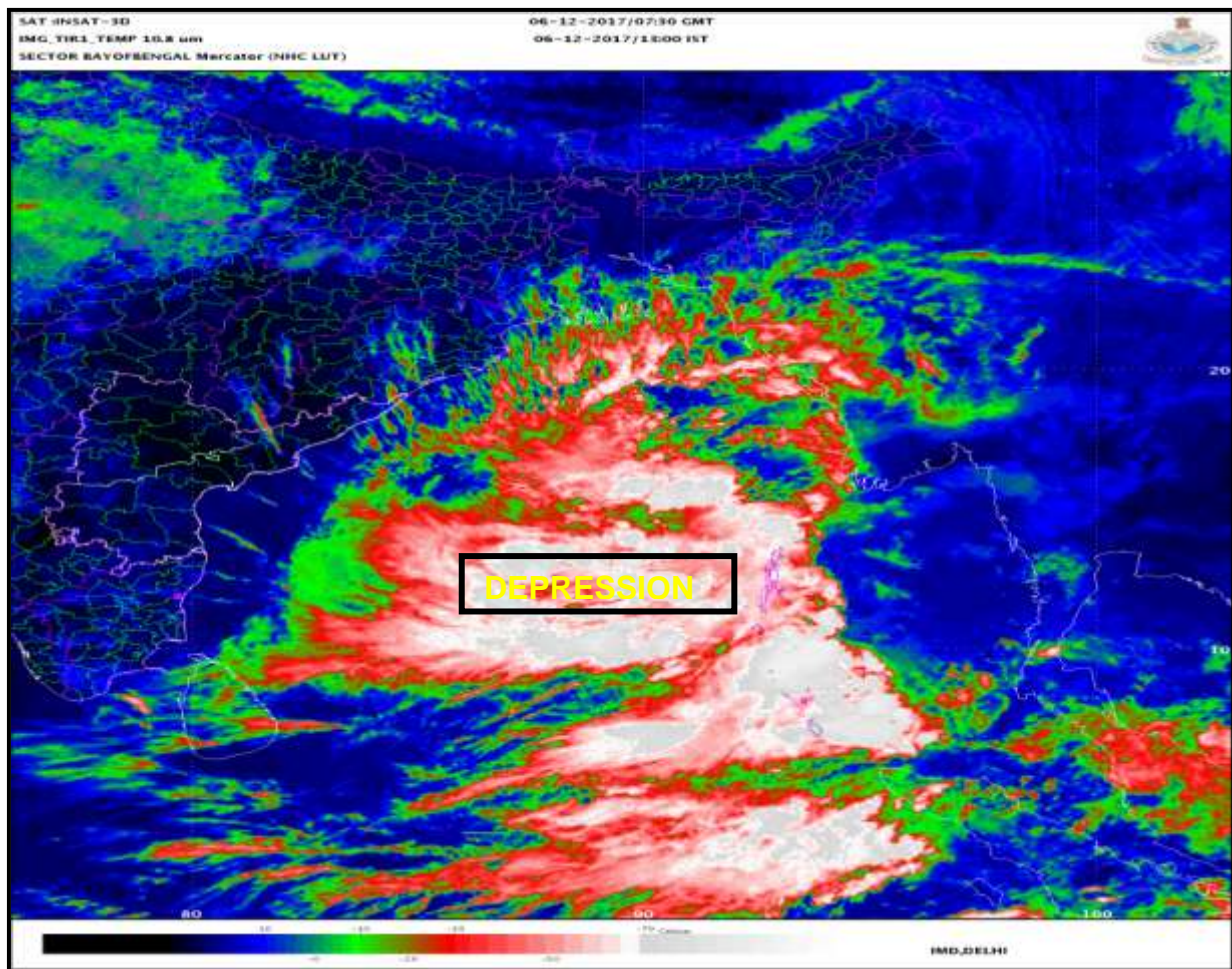
Action suggested:

- Fishermen along and off Andaman and Nicobar Islands are advised not to venture into sea till the forenoon of 7th December, 2017.
- Fishermen along and off north Tamil Nadu, Andhra Pradesh and south Odisha coasts are advised not to venture into sea till 9th December morning.

Next bulletin will be issued at 2030 hours IST of 06th December 2107

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ ACWC Mumbai/ Kolkata/ MC Thiruvananthapuram/ Begaluru/ Goa/ Ahmedabad/ Hyderabad/ Bhubaneshwar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 03 (BOB 08/2017)

TIME OF ISSUE: 1930 HOURS IST

DATED: 06.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved north-northwestwards and lay centred at 1730 hrs IST of today, the 06 December, 2017 near Latitude 9.8° N and Longitude 88.0 °E, about 1020 km to the east-southeast of Machillipatnam and 1100 km south-southeast of Gopalpur. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 8th December evening. The system is likely to intensify further into a deep depression during next 36 hours. However, there is a probability of slight weakening of the system when it reaches near north Andhra Pradesh and south Odisha coasts.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy to very heavy falls at isolated places very likely over Andaman and Nicobar Islands during next 24 hours.
- Rainfall at many places very likely over north Andhra Pradesh and south Odisha during 7th to 9th December, 2017 with isolated heavy falls on 8th and 9th.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman Islands during next 36 hours and Nicobar Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Sea Condition:

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- Sea condition would be rough to very rough around Andaman Islands during next 36 hours and Nicobar Islands during next 24 hours.
- Sea condition would be rough to very rough along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning.

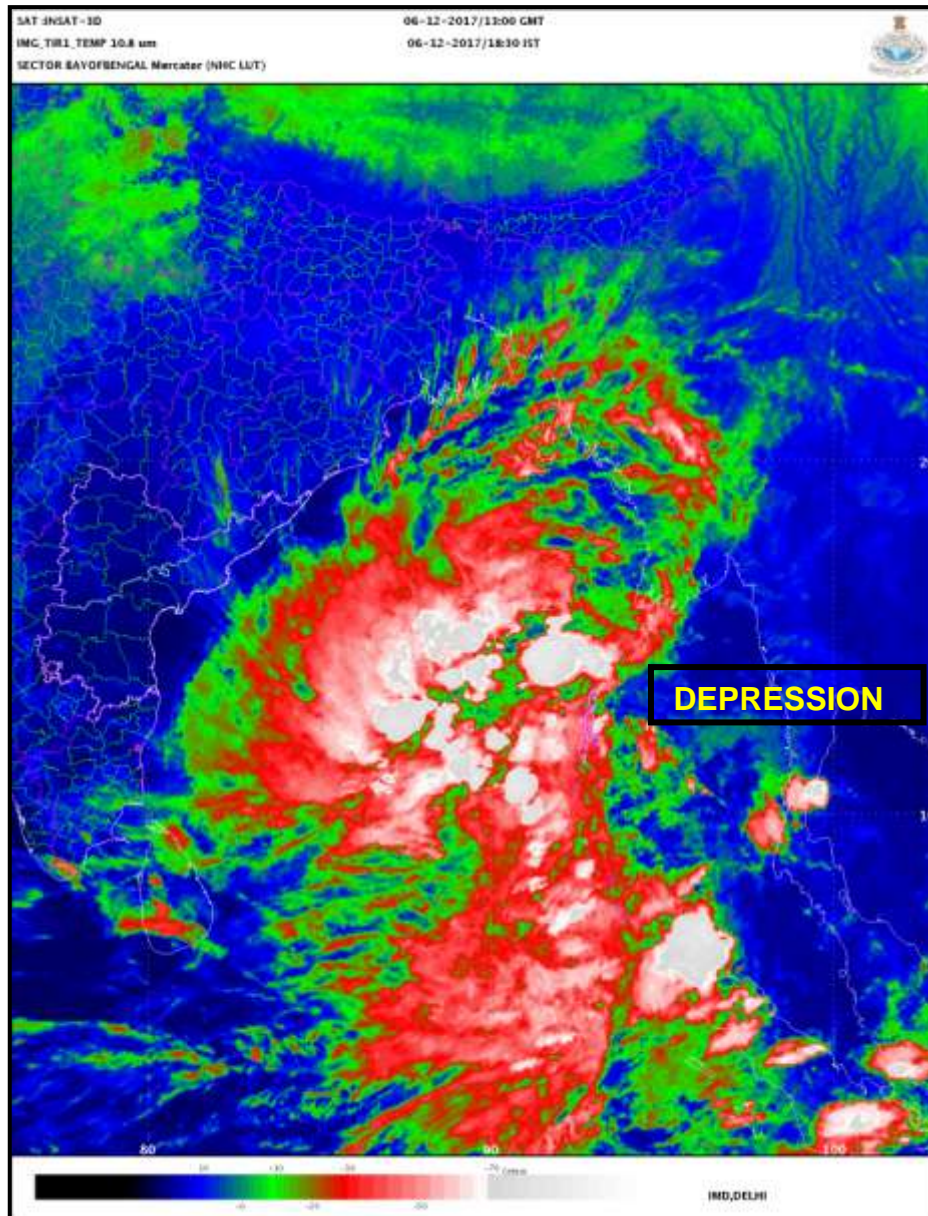
Action suggested:

- Fishermen along and off Andaman Islands till the forenoon of 8th December and Nicobar Islands are advised not to venture into sea till the evening of 7th December, 2017.
- Fishermen along and off north Tamil Nadu, Andhra Pradesh and south Odisha coasts are advised not to venture into sea till 9th December morning.

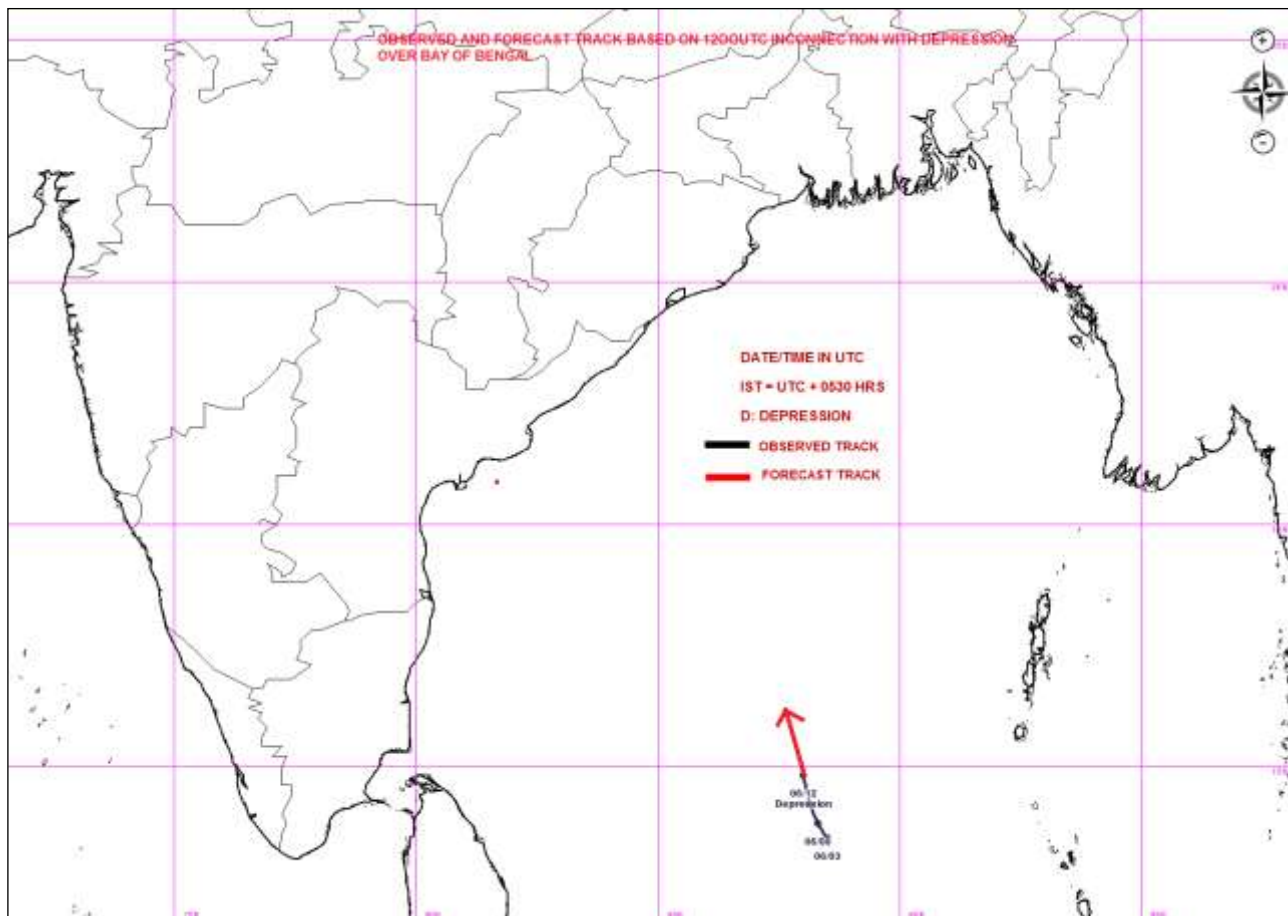
Next bulletin will be issued at 0230 hours IST of 07th December 2107

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 04 (BOB 08/2017)

TIME OF ISSUE: 0100 HOURS IST

DATED: 07.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved likely northwards with a speed of about 04 kmph during past 6 hours and lay centred at 2330 hrs IST of today, the 06 December, 2017 near Latitude 10.0° N and Longitude 88.0 °E, about 1010 km to the east-southeast of Machillipatnam and 1080 km south-southeast of Gopalpur. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 8th December evening. The system is likely to intensify further into a deep depression during next 36 hours. However, there is a probability of slight weakening of the system when it reaches near north Andhra Pradesh and south Odisha coasts.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy to very heavy falls at isolated places very likely over Andaman and Nicobar Islands during next 24 hours.
- Rainfall at many places very likely over north Andhra Pradesh and south Odisha during 7th to 9th December, 2017 with isolated heavy falls on 8th and 9th.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman Islands during next 36 hours and Nicobar Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough around Andaman Islands during next 36 hours and Nicobar Islands during next 24 hours.
- Sea condition would be rough to very rough along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning.

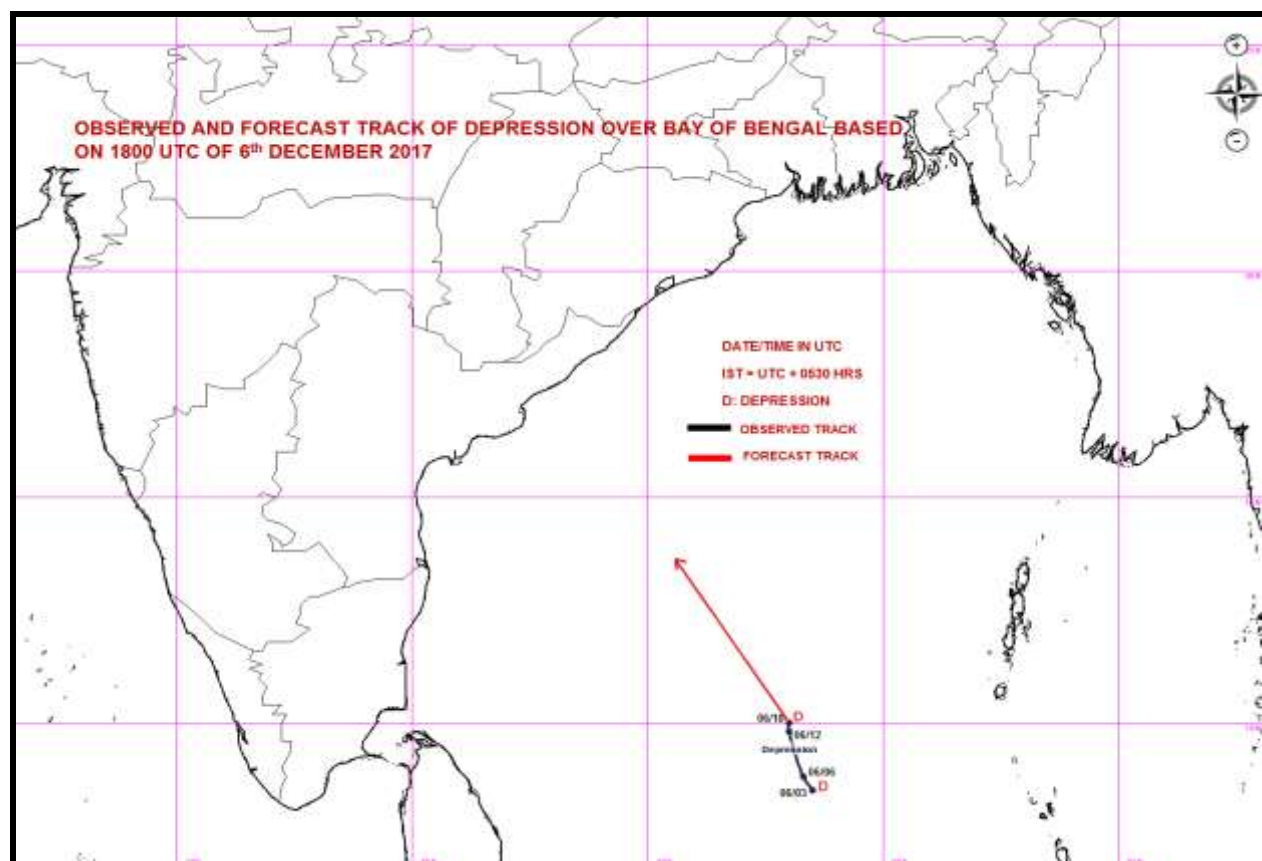
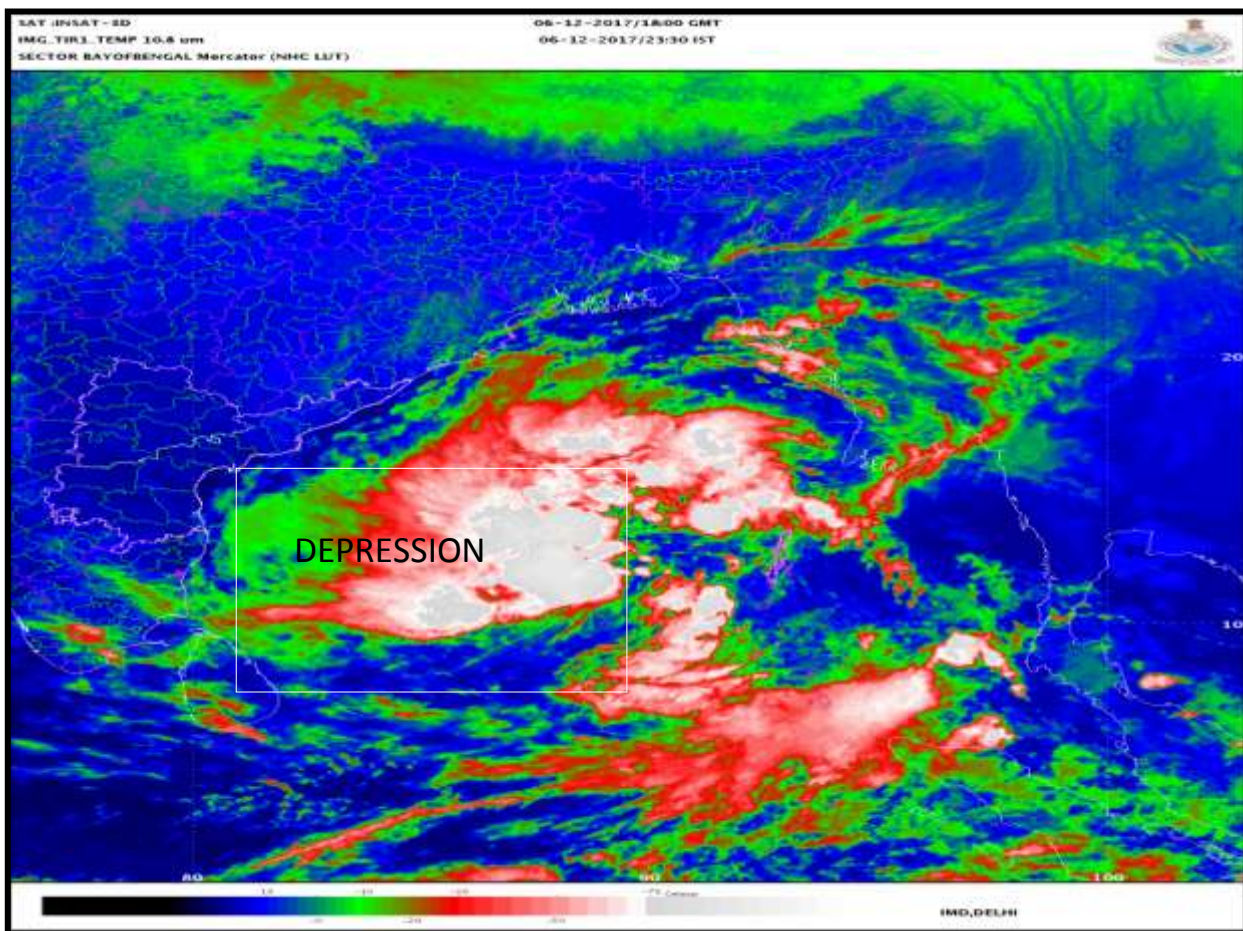
Action suggested:

- Fishermen along and off Andaman Islands till the forenoon of 8th December and Nicobar Islands are advised not to venture into sea till the evening of 7th December, 2017.
- Fishermen along and off north Tamil Nadu, Andhra Pradesh and south Odisha coasts are advised not to venture into sea till 9th December morning.

Next bulletin will be issued at 0830 hours IST of 07th December 2107

**(Shobhit Katiyar)
Scientist-B
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 05 (BOB 08/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 07.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved likely northwards with a speed of about 20 kmph during past 6 hours and lay centred at 0530 hrs IST of today, the 07 December, 2017 near Latitude 11.1° N and Longitude 88.0 °E, about 930 km to the east-southeast of Machillipatnam and 970 km south-southeast of Gopalpur. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning. The system is likely to intensify further into a deep depression during next 24 hours. However, there is a probability of slight weakening of the system when it reaches near north Andhra Pradesh and south Odisha coasts.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy falls at isolated places very likely over Andaman and Nicobar Islands during next 24 hours.
- Rainfall at many places with heavy falls at isolated places very likely over north Andhra Pradesh and Odisha during 8th to 10th December, 2017.
- **Wind:**
 - Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman and Nicobar Islands during next 24 hours and decrease thereafter.
 - Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough around Andaman Islands during next 36 hours and Nicobar Islands during next 24 hours.
- Sea condition would be rough to very rough along and off Andhra Pradesh and south Odisha coasts from 7th evening to 9th December morning.

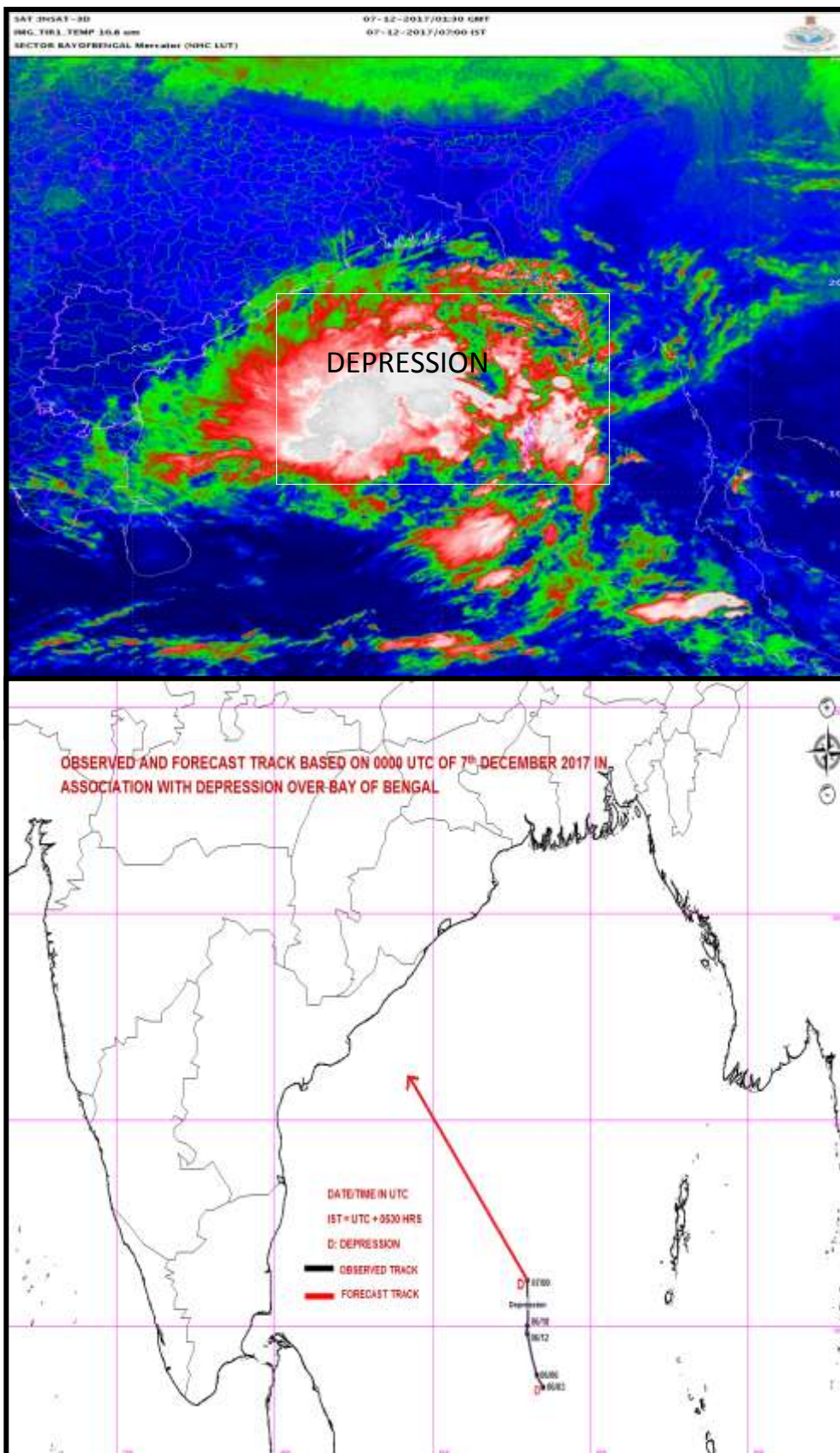
Action suggested:

- Fishermen along and off Andaman Islands till the forenoon of 8th December and Nicobar Islands are advised not to venture into sea till the evening of 7th December, 2017.
- Fishermen along and off north Tamil Nadu, Andhra Pradesh and south Odisha coasts are advised not to venture into sea till 9th December morning.

Next bulletin will be issued at 1130 hours IST of 07th December 2107

**(Shobhit Katiyar)
Scientist-B
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 06 (BOB 08/2017)

TIME OF ISSUE: 1130 HOURS IST

DATED: 07.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved northwards with a speed of about 35 kmph during past 6 hours and lay centred at 0830 hrs IST of today, the 07 December, 2017 near Latitude 12.0° N and Longitude 88.0 °E, about 870 km southeast of Gopalpur and 875 km to the east-southeast of Machillipatnam. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning. The system is likely to intensify further into a deep depression during next 24 hours. However, there is a probability of slight weakening of the system when it reaches near north Andhra Pradesh and south Odisha coasts.

Warnings:

Heavy Rainfall:

- Light to moderate rainfall at most places over Andaman Islands and at a few places over Nicobar Islands very likely during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over north Andhra Pradesh on 8th and 9th, over Odisha during 8th to 10th, over coastal districts of West Bengal on 8th December, 2017.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough around Andaman Islands during next 24 hours.
- Sea condition would be rough to very rough along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning.

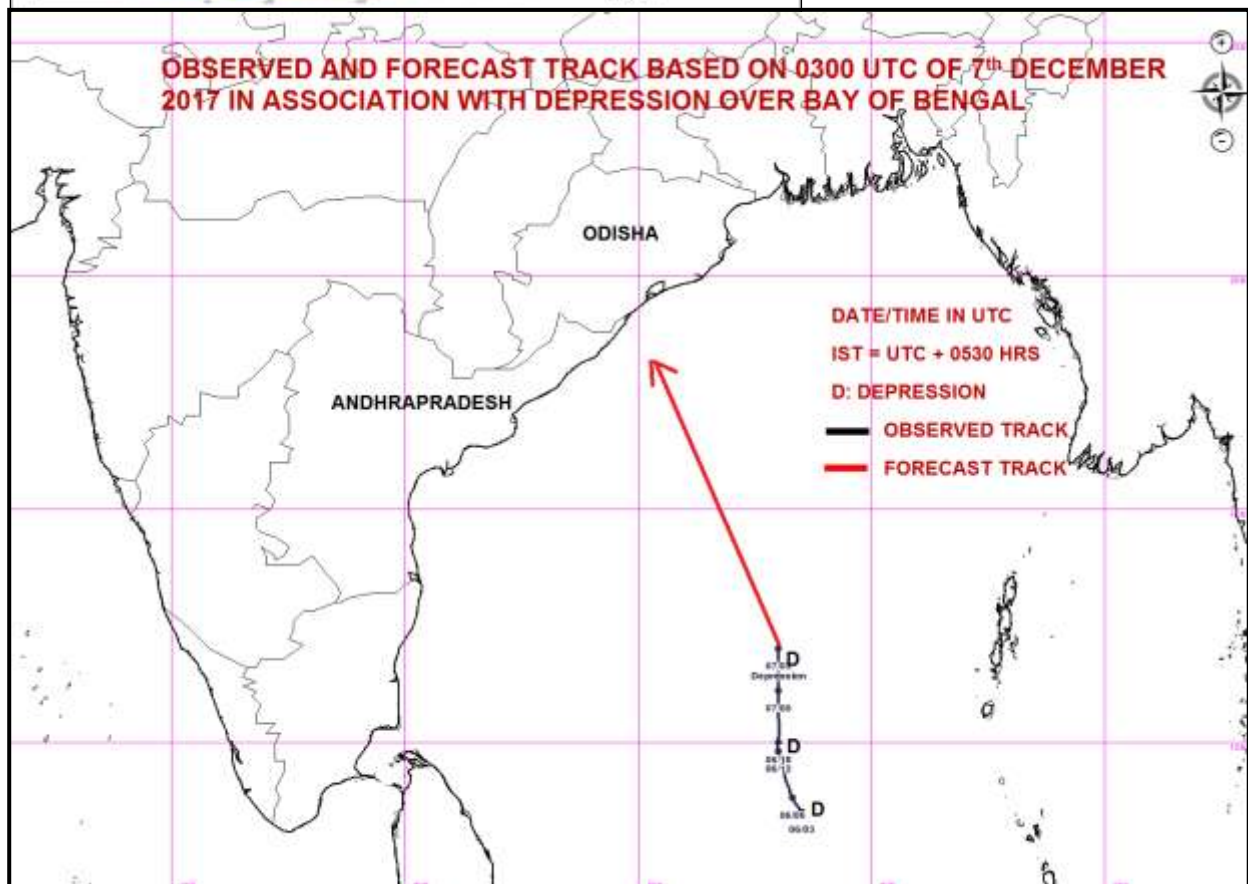
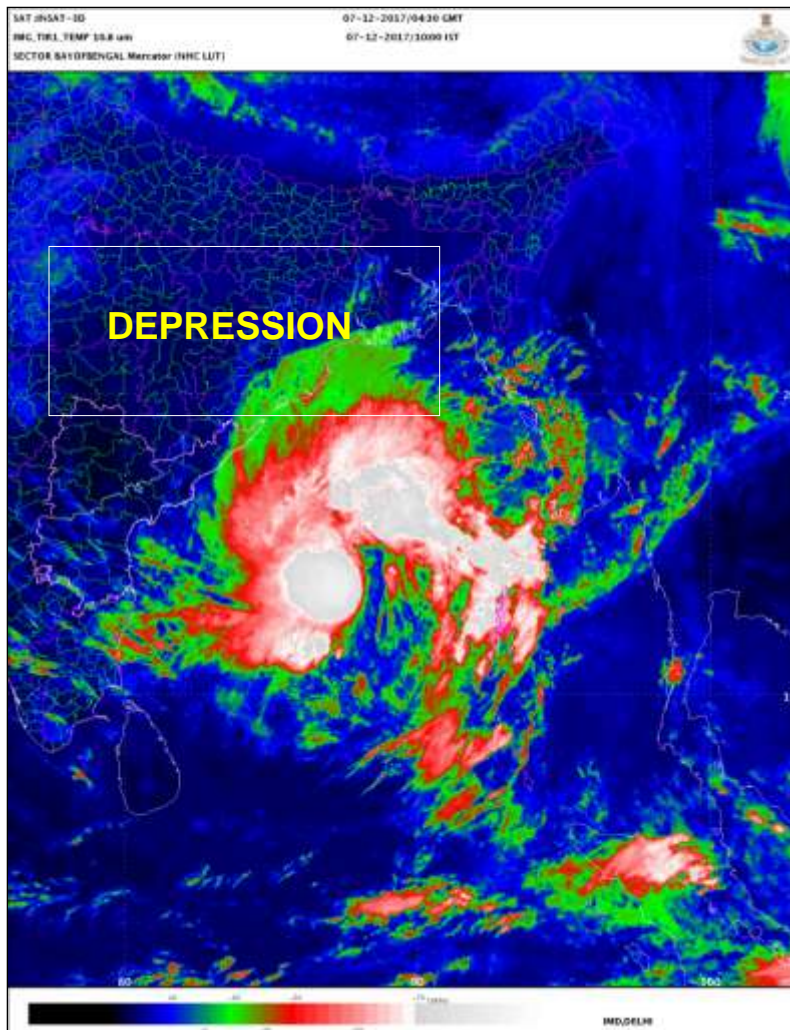
Action suggested:

- Fishermen along and off Andaman Islands are advised not to venture into sea till the forenoon of 8th December and fishermen along and off Nicobar Islands are advised not to venture into deep sea during the same period.
- Fishermen along and off north Tamil Nadu and south Andhra Pradesh coasts are advised not to venture into deep sea during 7th to 8th December and fishermen along and off north Andhra Pradesh and Odisha coasts are advised not to venture into sea till 9th December morning.

Next bulletin will be issued at 1430 hours IST of 07th December 2107

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneshwar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 07 (BOB 08/2017)

TIME OF ISSUE: 1415 HOURS IST

DATED: 07.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved north-northwestwards with a speed of about 20 kmph during past 6 hours and lay centred at 1130 hrs IST of today, the 07 December, 2017 near Latitude 12.2° N and Longitude 87.9 °E, about 840 km south-southeast of Gopalpur and 850 km to the east-southeast of Machillipatnam. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning. The system is likely to intensify further into a deep depression during next 24 hours. However, there is a probability of slight weakening of the system when it reaches near north Andhra Pradesh and south Odisha coasts around 9th December morning.

Warnings:

Heavy Rainfall:

- Light to moderate rainfall at most places over Andaman Islands and at a few places over Nicobar Islands very likely during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over north Andhra Pradesh on 8th and 9th, over Odisha during 8th to 10th, over coastal districts of West Bengal on 8th December, 2017.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough around Andaman Islands during next 24 hours.
- Sea condition would be rough to very rough along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning.

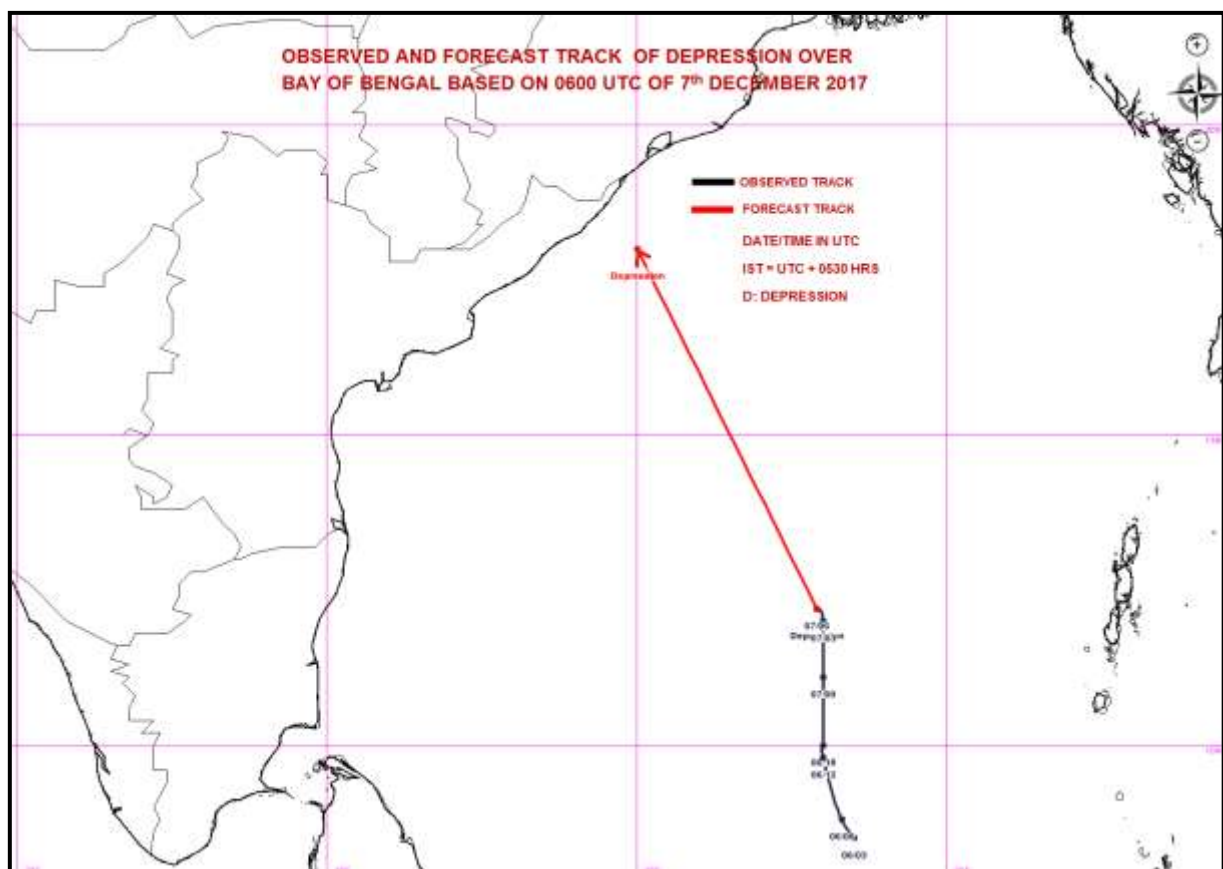
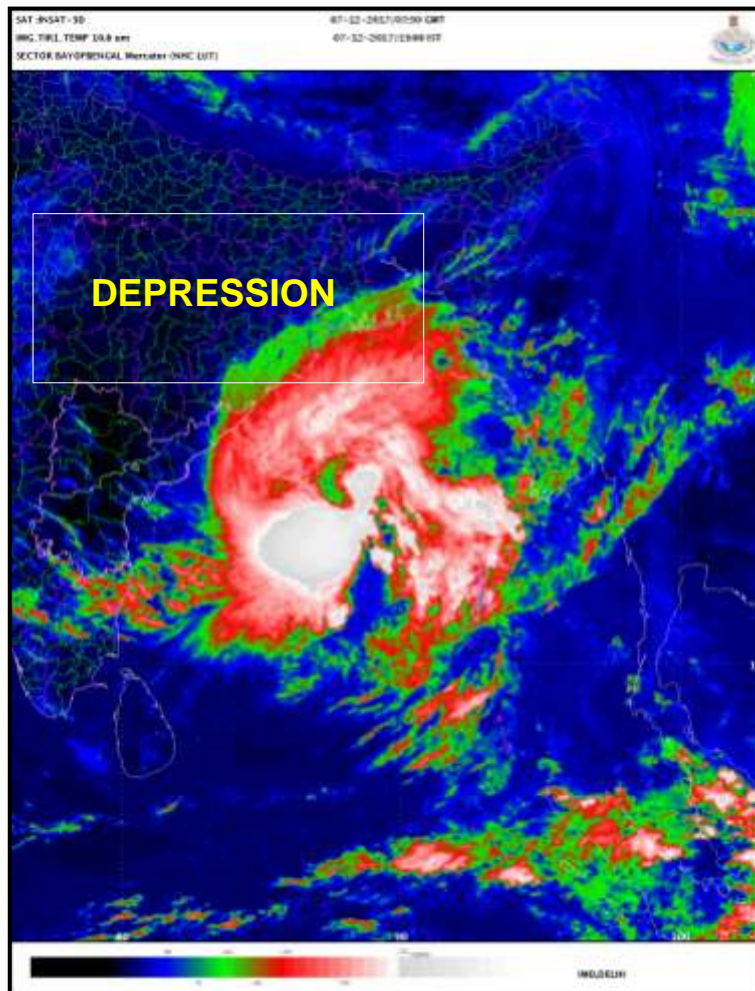
Action suggested:

- Fishermen along and off Andaman Islands are advised not to venture into sea till the forenoon of 8th December and fishermen along and off Nicobar Islands are advised not to venture into deep sea during the same period.
- Fishermen along and off north Tamil Nadu and south Andhra Pradesh coasts are advised not to venture into deep sea during 7th to 8th December and fishermen along and off north Andhra Pradesh and Odisha coasts are advised not to venture into sea till 9th December morning.

Next bulletin will be issued at 2030 hours IST of 07th December 2107

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneshwar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 08 (BOB 08/2017)

TIME OF ISSUE: 1915 HOURS IST

DATED: 07.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast and adjoining central Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved further north-northwestwards with a speed of about 11 kmph during past 6 hours and lay centred at 1730 hrs IST of today, the 07 December, 2017 over southeast and adjoining central Bay of Bengal near Latitude 12.8° N and Longitude 87.7 °E, about 770 km south-southeast of Gopalpur and 800 km to the east-southeast of Machilipatnam. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning. The system is likely to intensify further into a deep depression during next 24 hours. However, there is a probability of slight weakening of the system when it reaches near north Andhra Pradesh and south Odisha coasts around 9th December morning.

Warnings:

Heavy Rainfall:

- Light to moderate rainfall at most places over Andaman Islands and at a few places over Nicobar Islands very likely during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over north Andhra Pradesh on 8th and 9th, over Odisha during 8th to 10th, over coastal districts of West Bengal on 8th December, 2017.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough around Andaman Islands during next 24 hours.
- Sea condition would be rough to very rough along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning.

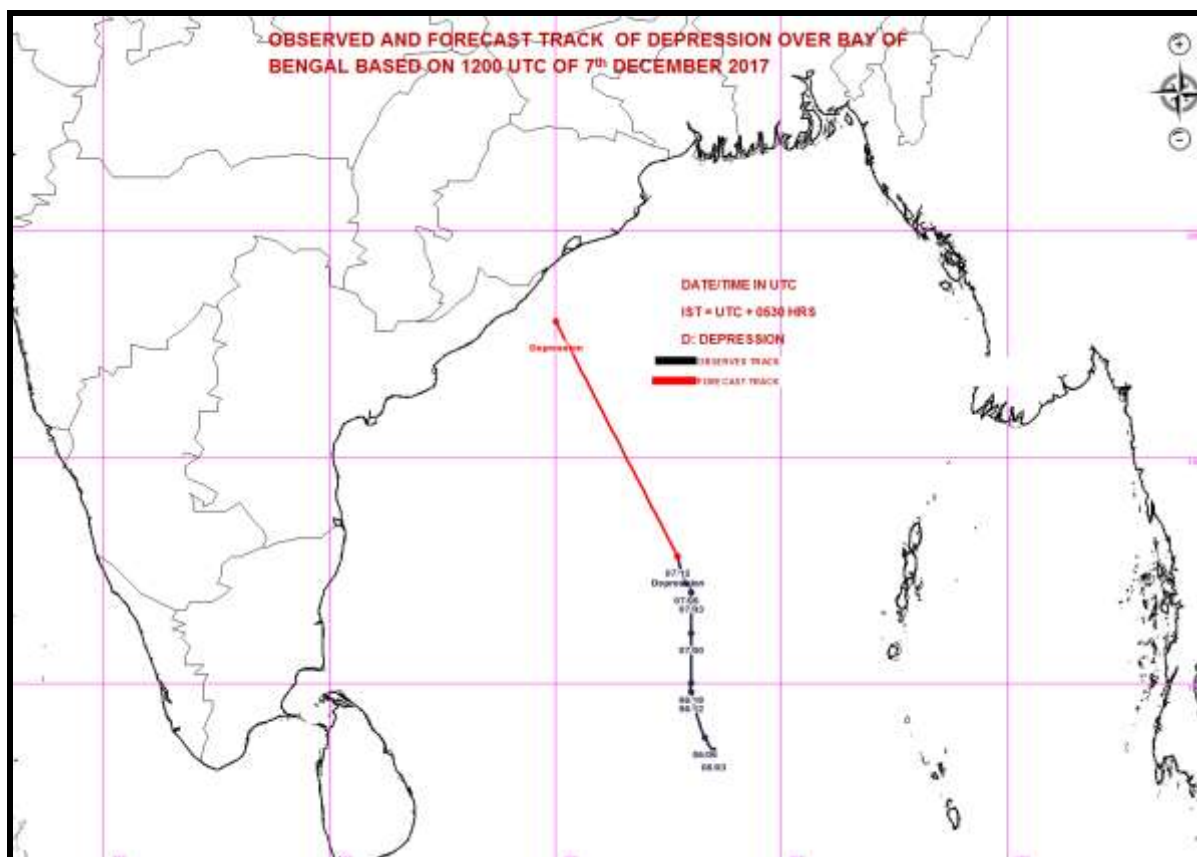
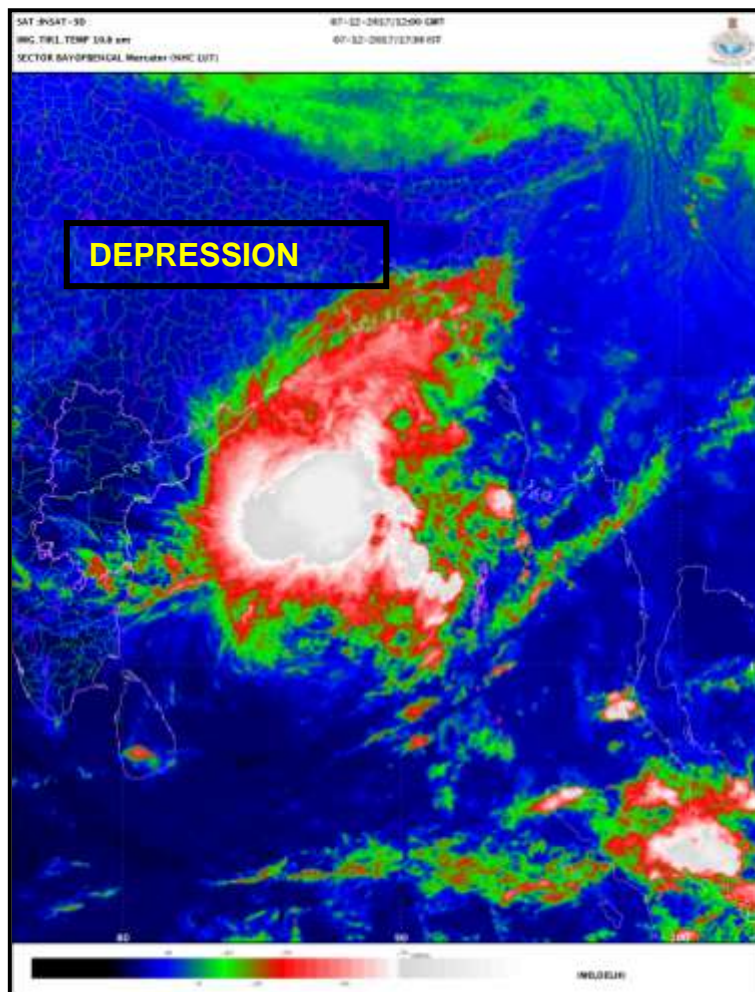
Action suggested:

- Fishermen along and off Andaman Islands are advised not to venture into sea till the forenoon of 8th December and fishermen along and off Nicobar Islands are advised not to venture into deep sea during the same period.
- Fishermen along and off north Tamil Nadu and south Andhra Pradesh coasts are advised not to venture into deep sea during 7th to 8th December and fishermen along and off north Andhra Pradesh and Odisha coasts are advised not to venture into sea till 9th December morning.

Next bulletin will be issued at 0230 hours IST of 08th December 2107

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 09 (BOB 08/2017)

TIME OF ISSUE: 0115 HOURS IST

DATED: 08.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL**

Sub: Depression over Southeast and adjoining central Bay of Bengal

The **Depression** over southeast Bay of Bengal & neighbourhood moved further north-northwestwards with a speed of about 11 kmph during past 6 hours and lay centred at 2330 hrs IST of yesterday, the 07 December, 2017 over southeast and adjoining central Bay of Bengal near Latitude 13.4 °N and Longitude 87.6 °E, about 710 km south-southeast of Gopalpur and 760 km to the east-southeast of Machilipatnam. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning. The system is likely to intensify further into a deep depression during next 24 hours. However, there is a probability of slight weakening of the system when it reaches near north Andhra Pradesh and south Odisha coasts around 9th December morning.

Warnings:

Heavy Rainfall:

- Light to moderate rainfall at most places over Andaman Islands and at a few places over Nicobar Islands very likely during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over north Andhra Pradesh on 8th and 9th, over Odisha during 8th to 10th, over coastal districts of West Bengal on 8th December, 2017.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman Islands during next 24 hours and decrease thereafter.
- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning and decrease thereafter.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough around Andaman Islands during next 24 hours.
- Sea condition would be rough to very rough along and off north Andhra Pradesh and Odisha coasts from 7th evening to 9th December morning.

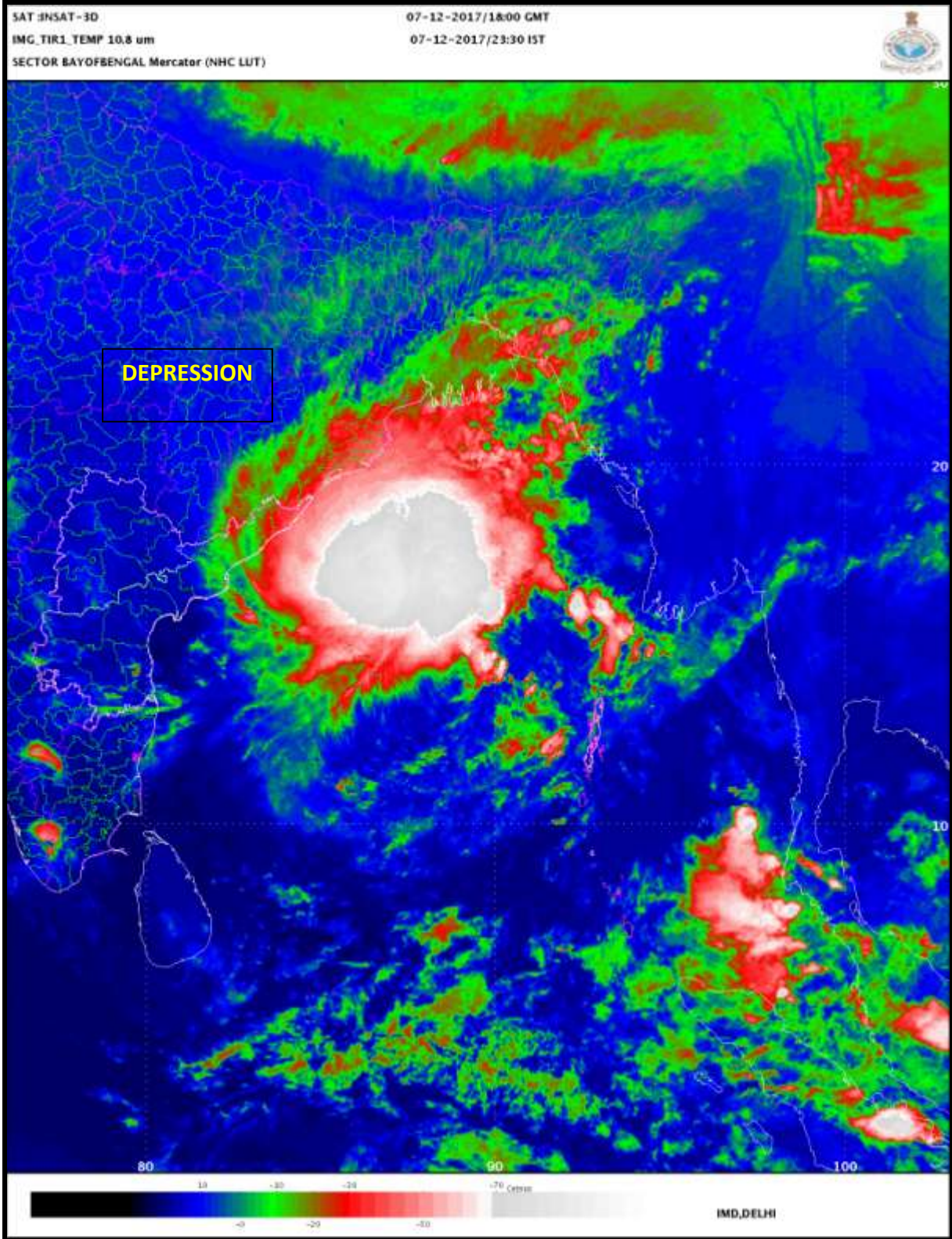
Action suggested:

- Fishermen along and off Andaman Islands are advised not to venture into sea till the forenoon of 8th December and fishermen along and off Nicobar Islands are advised not to venture into deep sea during the same period.
- Fishermen along and off north Tamil Nadu and south Andhra Pradesh coasts are advised not to venture into deep sea during 7th to 8th December and fishermen along and off north Andhra Pradesh and Odisha coasts are advised not to venture into sea till 9th December morning.

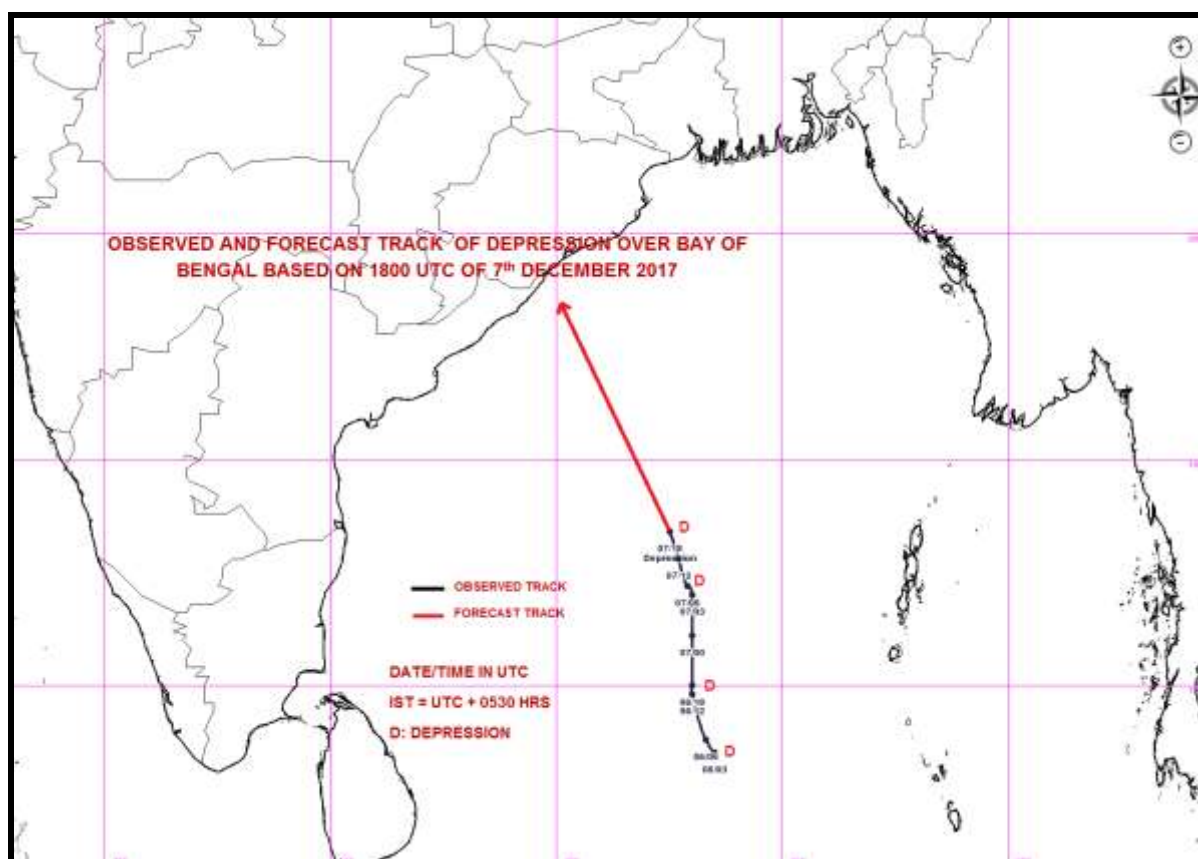
Next bulletin will be issued at 0830 hours IST of 08th December 2107

**(SHIBIN B)
Scientist-B
RSMC New Delhi**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 10 (BOB 08/2017)

TIME OF ISSUE: 0830 HOURS IST

DATED: 08.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS**

Sub: Deep Depression over central Bay of Bengal

The **Depression** over southeast and adjoining central Bay of Bengal moved further north-northwestwards with a speed of about 20 kmph during past 6 hours, intensified into a **deep depression** and lay centred at 0530 hrs IST of today, the 08th December, 2017 over central Bay of Bengal near Latitude 14.3 °N and Longitude 87.0 °E, about 590 km south-southeast of Gopalpur and 660 km east-southeast of Machilipatnam. It is likely to maintain intensity of deep depression for about 12 hrs and weaken gradually into a depression during subsequent 12 hrs. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning as a depression.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy falls at isolated places very likely over north Andhra Pradesh (Visakhapatnam, Vijaynagaram, Srikakulam districts) during next 24 hrs, over Odisha during 8th to 10th and over coastal districts of West Bengal on 8th and 9th.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, Meghalaya, Mizoram and Tripura during 9th to 11th December 2017.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off north Andhra Pradesh and Odisha coasts during next 36 hrs.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Sea Condition:

- Sea condition would be rough to very rough along and off north Andhra Pradesh and Odisha coasts during next 36 hrs.

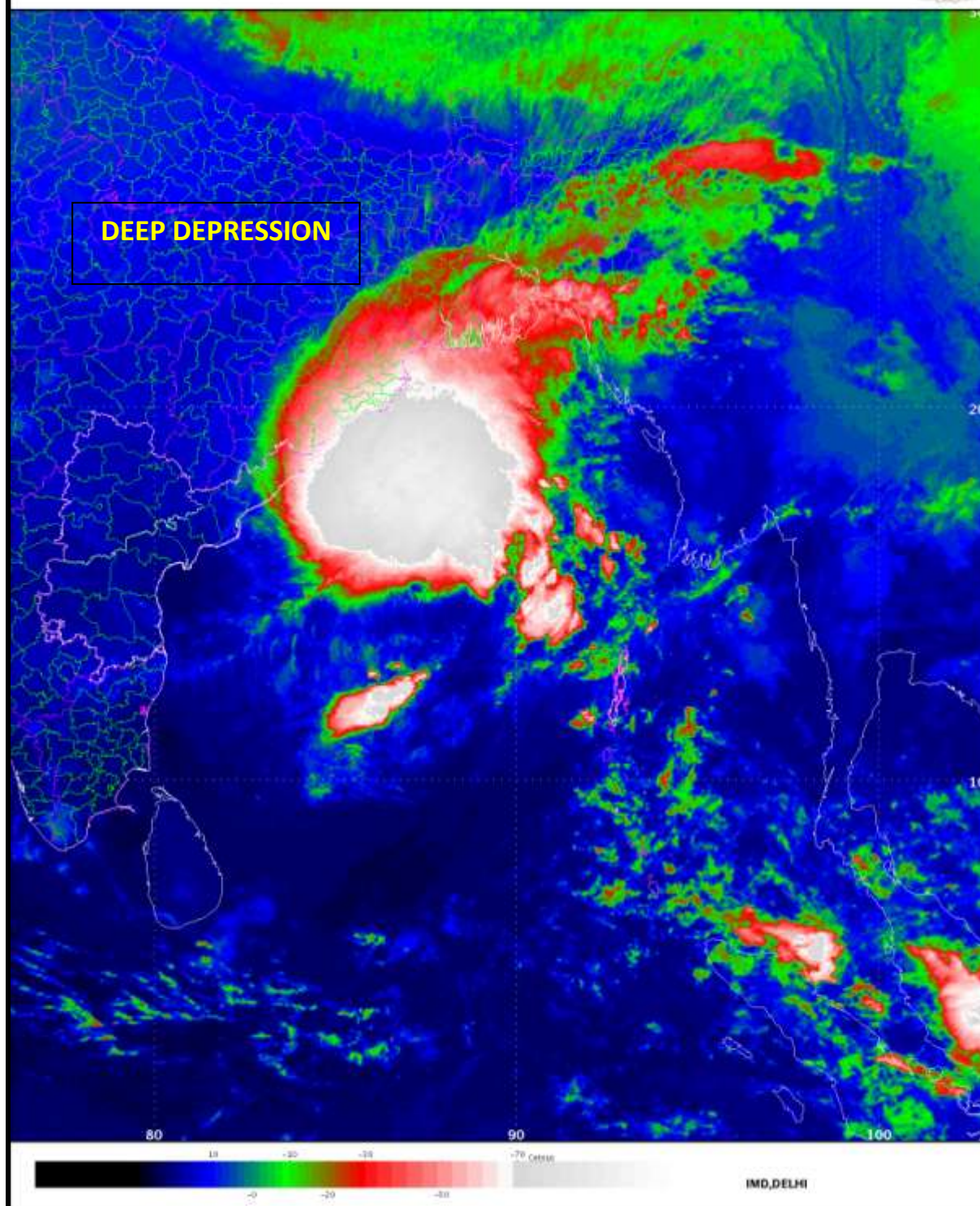
Action suggested:

- Fishermen along and off north Andhra Pradesh, Odisha and West Bengal coasts are advised not to venture into sea during next 36 hrs and along and off south Andhra Pradesh coast during next 24 hrs.

Next bulletin will be issued at 1130 hours IST of 08th December 2107

**(SHIBIN B)
Scientist-B
RSMC New Delhi**

*Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar
/Agartala/RMC Guwahati.*



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 11 (BOB 08/2017)

TIME OF ISSUE: 1145 HOURS IST

DATED: 08.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
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DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
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CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA
CHIEF ADMINISTRATOR, ANDAMAN AND NICOBAR ISLANDS**

Sub: Deep Depression over westcentral Bay of Bengal

The **Deep Depression** over central Bay of Bengal moved further north-northwestwards with a speed of about 33 kmph during past 6 hours, and lay centred at 0830 hrs IST of today, the 08th December, 2017 over westcentral Bay of Bengal near Latitude 15.0 °N and Longitude 86.8 °E, about 510 km south-southeast of Gopalpur and 610 km east-southeast of Machilipatnam. It is likely to maintain intensity of deep depression for about 12 hrs and weaken gradually into a depression during subsequent 12 hrs. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning as a depression.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy falls at isolated places very likely over north Andhra Pradesh (Visakhapatnam, Vijayanagaram, Srikakulam districts) during next 24 hrs, over coastal and adjoining interior districts of Odisha during 8th to 9th and over coastal districts of West Bengal during 8th to 10th.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, Meghalaya, Mizoram and Tripura during 9th to 11th December 2017.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off south Andhra Pradesh coast during next 24 hours, along and off north Andhra Pradesh Odisha and West Bengal coasts during next 36 hrs.

Sea Condition:

- Sea condition would be rough to very rough along and off south Andhra Pradesh coast during next 24 hours, along and off north Andhra Pradesh, Odisha and West Bengal coasts during next 36 hrs.

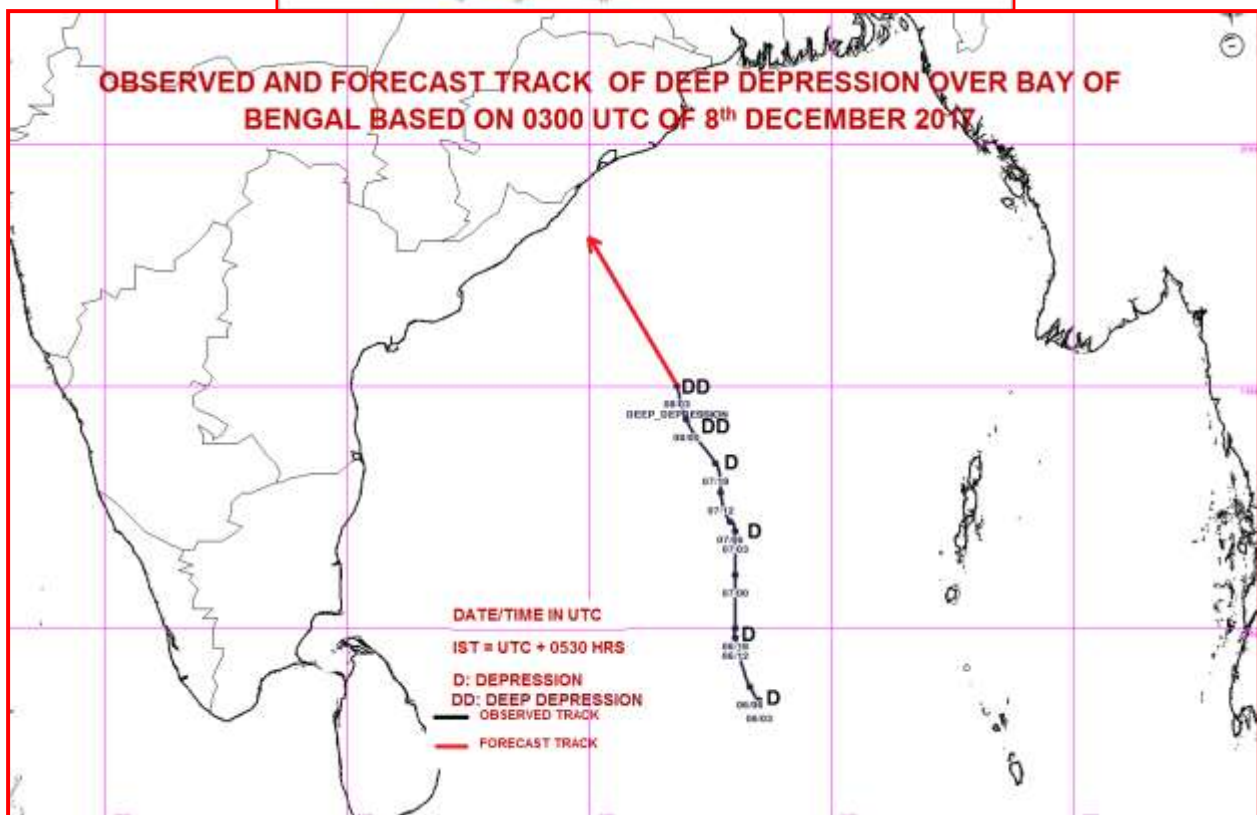
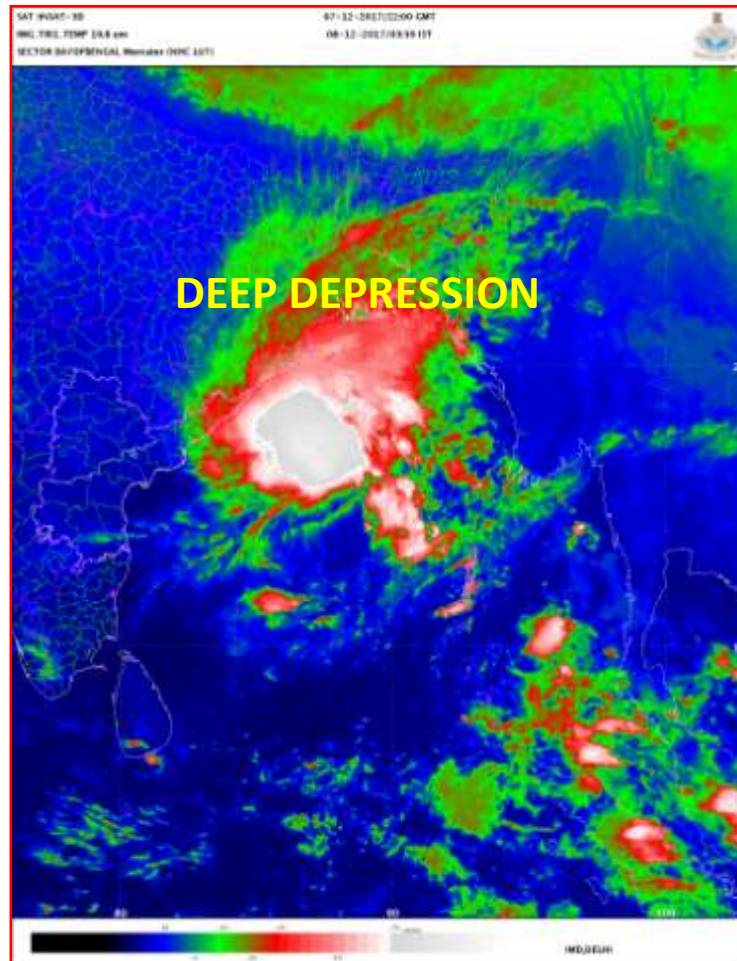
Action suggested:

- Fishermen along and off south Andhra Pradesh coast are advised not to venture into sea during next 24 hours, along and off north Andhra Pradesh, Odisha and West Bengal coasts are advised not to venture into sea during next 36 hrs.

Next bulletin will be issued at 1430 hours IST of 08th December 2107

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

*Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneshwar
/Agartala/RMC Guwahati.*



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
 Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 12 (BOB 08/2017)

TIME OF ISSUE: 1400 HOURS IST

DATED: 08.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
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DIRECTOR GENERAL, DOORDARSHAN
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA**

Sub: Deep Depression over westcentral Bay of Bengal

The **Deep Depression** over westcentral Bay of Bengal moved further north-northwestwards with a speed of about 23 kmph during past 6 hours, and lay centred at 1130 hrs IST of today, the 08th December, 2017 over westcentral Bay of Bengal near Latitude 15.5 °N and Longitude 86.7 °E, about 460 km south-southeast of Gopalpur and 590 km east-southeast of Machilipatnam. It is likely to maintain intensity of deep depression for about 12 hrs and weaken gradually into a depression during subsequent 12 hrs. The system is very likely to move north-northwestwards and reach north Andhra Pradesh and south Odisha coasts around 9th December morning as a depression.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy falls at isolated places very likely over north Andhra Pradesh (Visakhapatnam, Vijayanagaram, Srikakulam districts) during next 24 hrs, over coastal and adjoining interior districts of Odisha during 8th to 9th and over coastal districts of West Bengal during 8th to 10th.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, Meghalaya, Mizoram and Tripura during 9th to 11th December 2017.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off south Andhra Pradesh coast during next 24 hours, along and off north Andhra Pradesh Odisha and West Bengal coasts during next 36 hrs.

Sea Condition:

- Sea condition would be rough to very rough along and off south Andhra Pradesh coast during next 24 hours, along and off north Andhra Pradesh, Odisha and West Bengal coasts during next 36 hrs.

Action suggested:

- Fishermen along and off south Andhra Pradesh coast are advised not to venture into sea during next 24 hours, along and off north Andhra Pradesh, Odisha and West Bengal coasts are advised not to venture into sea during next 36 hrs.

Next bulletin will be issued at 2030 hours IST of 08th December 2107

**(Neetha K Gopal)
Scientist-E
RSMC New Delhi**

*Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneshwar
/Agartala/RMC Guwahati.*



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 13 (BOB 08/2017)

TIME OF ISSUE: 1945 HOURS IST

DATED: 08.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
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CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA**

Sub: Deep Depression over westcentral Bay of Bengal

The **Deep Depression** over westcentral Bay of Bengal moved further north-northwestwards with a speed of about 20 kmph during past 6 hours, and lay centred at 1730 hrs IST of today, the 08th December, 2017 over westcentral Bay of Bengal near Latitude 16.5 °N and Longitude 86.3 °E, about 330 km southeast of Gopalpur and 550 km east-northeast of Machilipatnam. The system is very likely to move north-northwestwards and weaken gradually and reach Odisha coast around 9th December morning as a depression. Thereafter it is likely to move north-northeastwards along and off Odisha coast and weaken further into a low pressure area during subsequent 24 hours.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy falls at isolated places very likely over coastal and adjoining interior districts of Odisha during next 36 hours and over coastal districts of West Bengal during next 48 hours.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, Meghalaya, Mizoram and Tripura during 9th to 11th December 2017.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off north Andhra Pradesh coast during next 12 hours and along & off Odisha and West Bengal coasts during next 36 hours.

Sea Condition:

- Sea condition would be rough to very rough along and off north Andhra Pradesh coast during next 12 hours and along & off Odisha and West Bengal coasts during next 36 hrs.

Action suggested:

- Fishermen along and off north Andhra Pradesh coast are advised not to venture into sea during next 12 hours; along and off Odisha and West Bengal coasts during next 36 hrs.

Next bulletin will be issued at 0230 hours IST of 09th December 2107

**(Shobhit Katiyar)
Scientist-B
NWFC**

*Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneshwar
/Agartala/RMC Guwahati.*



**India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)**

BULLETIN NO. : 14 (BOB 08/2017)

TIME OF ISSUE: 0130 HOURS IST

DATED: 09.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA**

Sub: Deep Depression over westcentral Bay of Bengal weakened into a Depression

The **Deep Depression** over westcentral Bay of Bengal moved further north-northwestwards with a speed of about 17 kmph during past 6 hours and weakened into a depression and lay centred at 2330 hrs IST of today, the 08th December, 2017 over westcentral and adjoining northwest Bay of Bengal near Latitude 18.0 °N and Longitude 86.2 °E, about 190 km southeast of Gopalpur and 260 km south-southwest of Paradip. The system is very likely to move northwards for some time and then north-northeastwards along and off Odisha coast and weaken gradually into a well marked low during next 24 hours.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy falls at isolated places very likely over coastal and adjoining interior districts of Odisha during next 24 hours and over coastal districts of West Bengal during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, eastern Meghalaya, Mizoram and Tripura during 9th to 10th December 2017.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Wind:

- Squally winds speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail along and off north Andhra Pradesh coast during next 12 hours and along & off Odisha and West Bengal coasts during next 24 hours.

Sea Condition:

- Sea condition would be rough to very rough along and off north Andhra Pradesh coast during next 12 hours and along & off Odisha and West Bengal coasts during next 24 hrs.

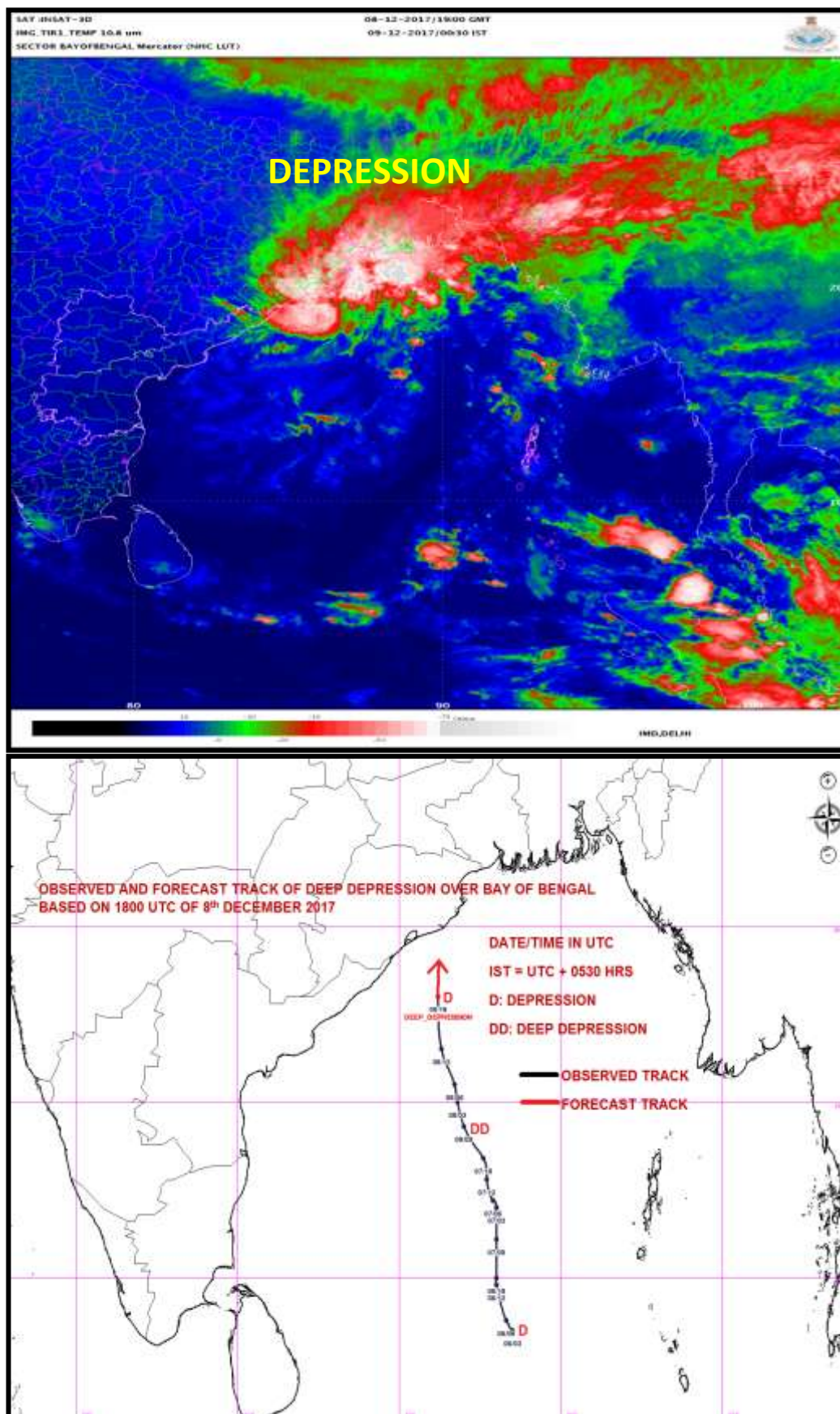
Action suggested:

- Fishermen along and off north Andhra Pradesh coast are advised not to venture into sea during next 12 hours; along and off Odisha and West Bengal coasts during next 24 hrs.

Next bulletin will be issued at 0830 hours IST of 09th December 2107

**(Shobhit Katiyar)
Scientist-B
NWFC**

*Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneshwar
/Agartala/RMC Guwahati.*



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 15 (BOB 08/2017)

TIME OF ISSUE: 0800 HOURS IST

DATED: 09.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF TAMILNADU
CHIEF SECRETARY, GOVT. OF PUDUCHERRY
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA**

Sub: Depression over northwest Bay of Bengal

The **Depression** over westcentral and adjoining northwest Bay of Bengal moved north-northeastwards with a speed of about 18 kmph during past 6 hours and lay centred at 0530 hrs IST of today, the 09th December, 2017 over northwest Bay of Bengal near Latitude 19.0 °N and Longitude 86.3 °E, about 150 km south-southeast of Gopalpur and 150 km south-southwest of Paradip and 330 km south-southwest of Digha. The system is very likely to move north-northeastwards along & off Odisha coast towards West Bengal and adjoining Bangladesh coast. It is very likely to maintain its intensity during 24 hours & weaken gradually into a well marked low during subsequent 12 hours.

Warnings:

Heavy Rainfall:

- Rainfall at most places with heavy falls at isolated places very likely over north coastal districts of Odisha during next 12 hours.
- Rainfall at most places with heavy to very heavy falls at isolated places very likely over coastal districts of West Bengal during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, eastern Meghalaya, Mizoram and Tripura during next 48 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Wind:

- Squally winds speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail along & off north Odisha and West Bengal coasts during next 12 hours and 35-45 kmph gusting to 55 kmph during subsequent 12 hours.
- Squally winds speed reaching 30-40 kmph gusting to 50 kmph is also very likely to prevail along & off south Odisha coast during next 12 hours.

Sea Condition:

- Sea condition would be rough to very rough along & off south Odisha coast during next 12 hours and very rough along & off north Odisha and West Bengal coasts during next 24 hrs.

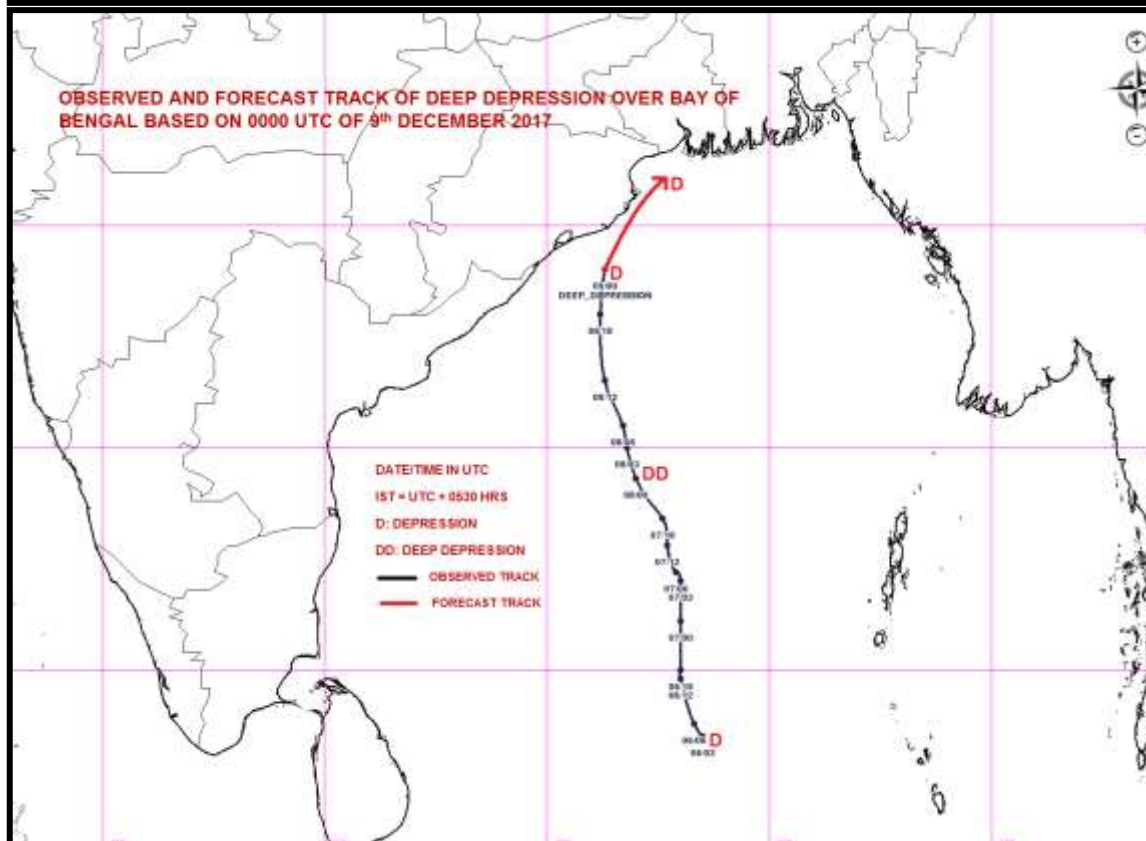
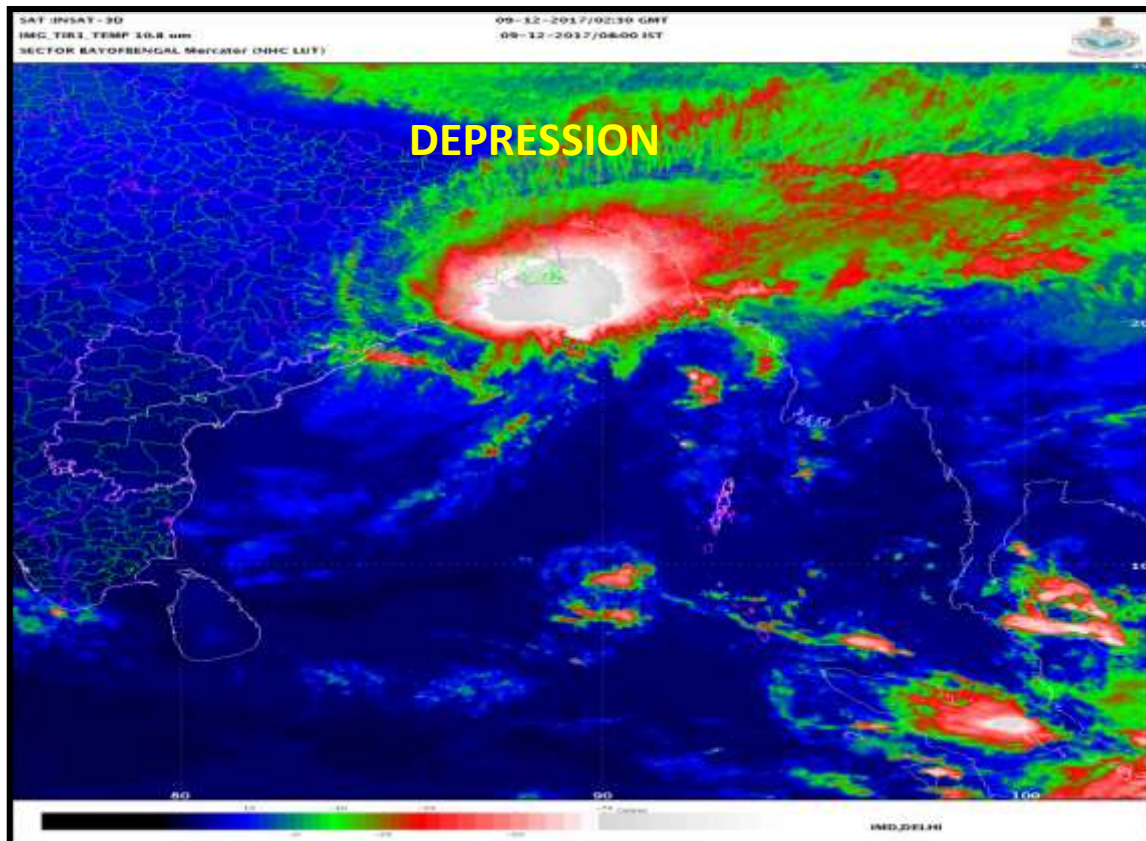
Action suggested:

- Fishermen along and off south Odisha coast are advised not to venture into sea during next 12 hours and along and off north Odisha and West Bengal coasts during next 24 hrs.

Next bulletin will be issued at 1130 hours IST of 09th December 2107

**(Shobhit Katiyar)
Scientist-B
NWFC**

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar /Agartala/RMC Guwahati.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 16 (BOB 08/2017) (Modified)

TIME OF ISSUE: 1130 HOURS IST

DATED: 09.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
DIRECTOR GENERAL, AIR
PIB MOES
UNI
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA**

Sub: Depression over northwest Bay of Bengal

The **Depression** over northwest Bay of Bengal moved north-northeastwards with a speed of about 15 kmph during past 6 hours and lay centred at 0830 hrs IST of today, the 09th December, 2017 over northwest Bay of Bengal near Latitude 19.2 °N and Longitude 86.5 °E, about 170 km east of Gopalpur, 120 km south-southwest of Paradip and 320 km south-southwest of Digha. The system is very likely to move north-northeastwards along & off Odisha coast towards West Bengal and adjoining Bangladesh coast. It is very likely to maintain its intensity during 24 hours & weaken gradually into a well marked low during subsequent 12 hours.

Warnings:

Heavy Rainfall:

- Light to moderate rainfall at many places very likely over coastal districts of north Odisha during next 12 hours.
- Rainfall at most places with heavy to very heavy falls at isolated places very likely over north and south 24 Pargana districts of West Bengal and heavy falls at isolated places over the remaining coastal districts of West Bengal during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, eastern Meghalaya, Mizoram and Tripura during next 48 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Wind:

- Squally winds speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail along & off north Odisha and West Bengal coasts during next 24 hours and 35-45 kmph gusting to 55 kmph during subsequent 12 hours.
- Squally winds speed reaching 30-40 kmph gusting to 50 kmph is also very likely to prevail along & off south Odisha coast during next 12 hours.

Sea Condition:

- Sea condition would be rough to very rough along & off south Odisha coast during next 12 hours and very rough along & off north Odisha and West Bengal coasts during next 36 hrs.

Action suggested:

- Fishermen along and off south Odisha coast are advised not to venture into sea during next 12 hours and along and off north Odisha and West Bengal coasts during next 36 hrs.

Next bulletin will be issued at 1430 hours IST of 09th December 2107

**(Neetha K Gopal)
Scientist-E
NWFC**

*Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar /Agartala/
RMC Guwahati.*



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 17 (BOB 08/2017)

TIME OF ISSUE: 1430 HOURS IST

DATED: 09.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA**

Sub: Depression over northwest Bay of Bengal

The **Depression** over northwest Bay of Bengal moved north-northeastwards with a speed of about 11 kmph during past 6 hours and lay centred at 1130 hrs IST of today, the 09th December, 2017 over northwest Bay of Bengal near Latitude 19.5 °N and Longitude 86.7 °E, about 90 km south of Paradip and 280 km south-southwest of Digha. The system is very likely to move north-northeastwards along & off Odisha coast towards West Bengal and adjoining Bangladesh coast. It is very likely to maintain its intensity during 24 hours & weaken gradually into a well marked low during subsequent 12 hours.

Warnings:

Heavy Rainfall:

- Light to moderate rainfall at many places very likely over coastal districts of north Odisha during next 12 hours.
- Rainfall at most places with heavy to very heavy falls at isolated places very likely over north and south 24 Pargana districts of West Bengal and heavy falls at isolated places over the remaining coastal districts of West Bengal during next 24 hours.
- Rainfall at most places with heavy falls at isolated places very likely over south Assam, eastern Meghalaya, Mizoram and Tripura during next 48 hours.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Wind:

- Squally winds speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail along & off north Odisha and West Bengal coasts during next 24 hours and 35-45 kmph gusting to 55 kmph during subsequent 12 hours.
- Squally winds speed reaching 30-40 kmph gusting to 50 kmph is also very likely to prevail along & off south Odisha coast during next 12 hours.

Sea Condition:

- Sea condition would be rough to very rough along & off south Odisha coast during next 12 hours and very rough along & off north Odisha and West Bengal coasts during next 36 hrs.

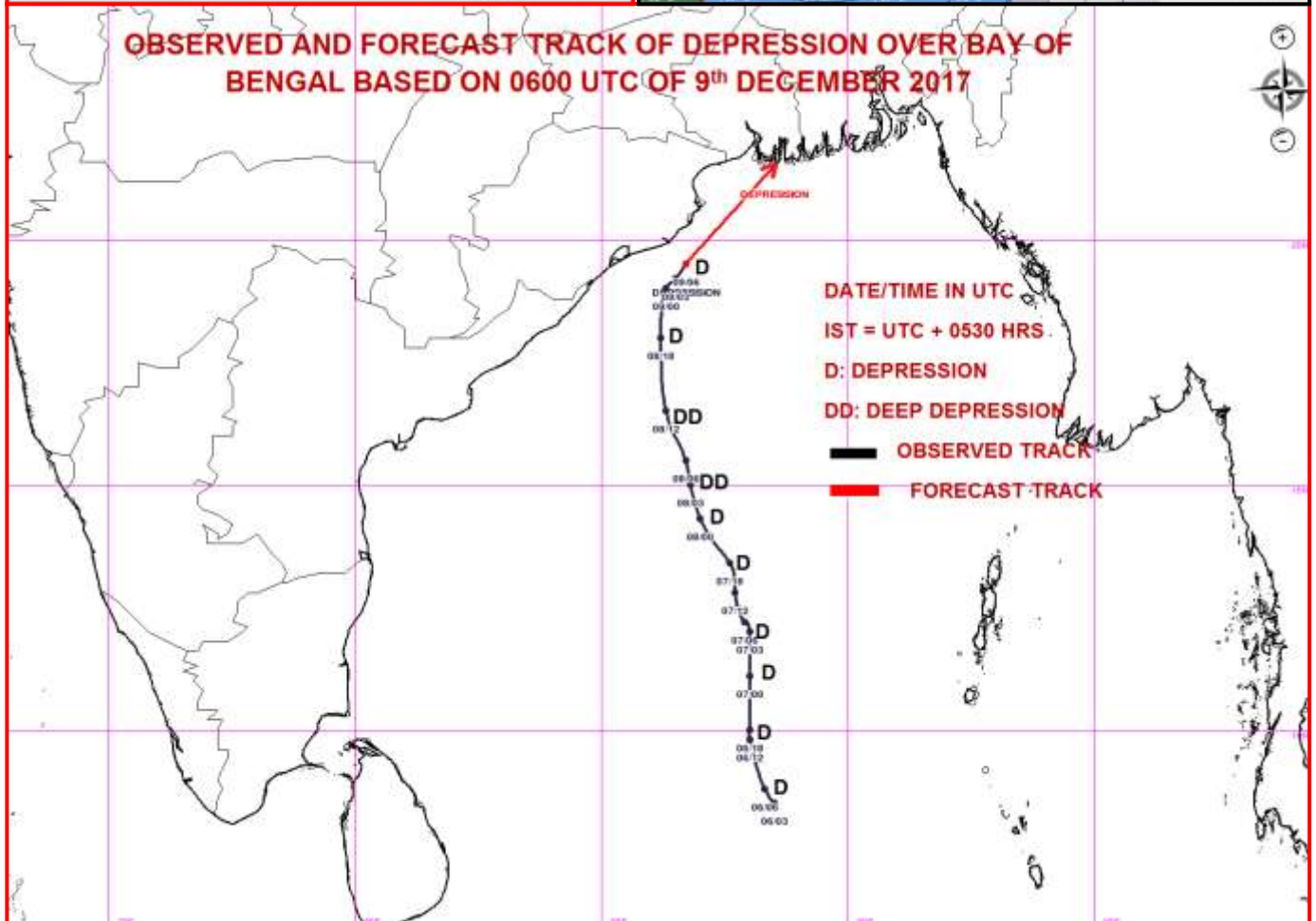
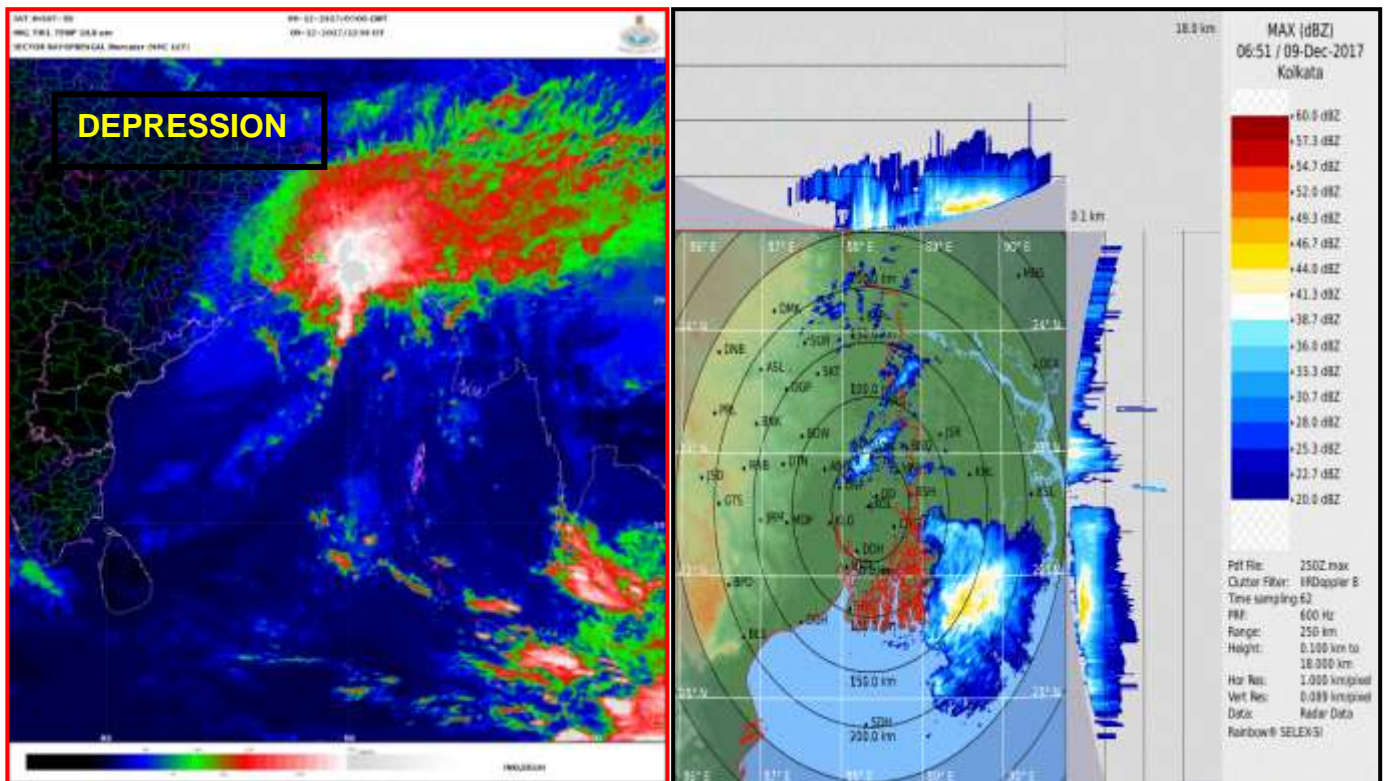
Action suggested:

- Fishermen along and off south Odisha coast are advised not to venture into sea during next 12 hours and along and off north Odisha and West Bengal coasts during next 36 hrs.

Next bulletin will be issued at 2030 hours IST of 09th December 2107

**(Neetha K Gopal)
Scientist-E
NWFC**

*Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar /Agartala/
RMC Guwahati.*



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



India Meteorological Department
Earth System Science Organisation
(Ministry of Earth Sciences)

BULLETIN NO. : 18 (BOB 08/2017)

TIME OF ISSUE: 2000 HOURS IST

DATED: 09.12.2017

FROM: INDIA METEOROLOGICAL DEPARTMENT

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS
CONTROL ROOM NDMA
CABINET SECRETARIAT
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES
SECRETARY, MOES,
SECRETARY, DST
H.Q. (INTEGRATED DEFENCE STAFF AND CDS)
DIRECTOR GENERAL, DOORDARSHAN
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D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS
CHIEF SECRETARY, GOVT. OF ODISHA
CHIEF SECRETARY, GOVT. OF WEST BENGAL
CHIEF SECRETARY, GOVT. OF ASSAM
CHIEF SECRETARY, GOVT. OF MEGHALAYA
CHIEF SECRETARY, GOVT. OF MIZORAM
CHIEF SECRETARY, GOVT. OF TRIPURA**

Sub: Depression weakened into a well marked low pressure area over northwest Bay of Bengal

The **Depression** over northwest Bay of Bengal moved north-northeastwards and weakened into a well marked low pressure area over northwest Bay of Bengal at 1730 hrs IST of today, the 09th December, 2017. It is very likely to move northeastwards towards West Bengal and adjoining Bangladesh coasts and weaken further.

Warnings:

Heavy Rainfall:

- Rainfall at many places with heavy falls at isolated places very likely over Mizoram and Tripura during next 24 hours.

Wind:

- Squally winds speed reaching 30-40 kmph gusting to 50 kmph very likely to prevail along & off north Odisha and West Bengal coasts during next 12 hours.

Sea Condition:

- Sea condition would be rough along & off north Odisha and West Bengal coasts during next 12 hrs.

Action suggested:

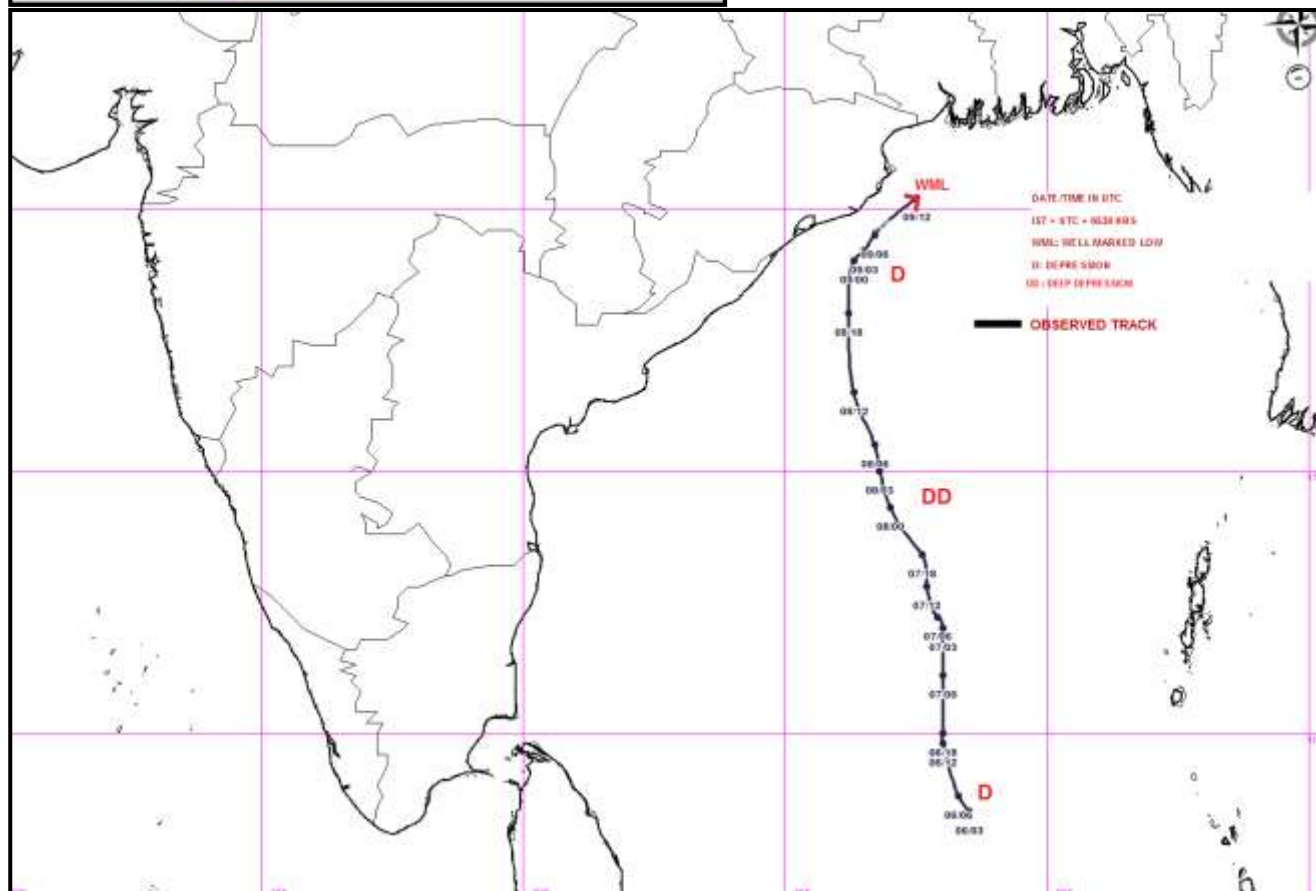
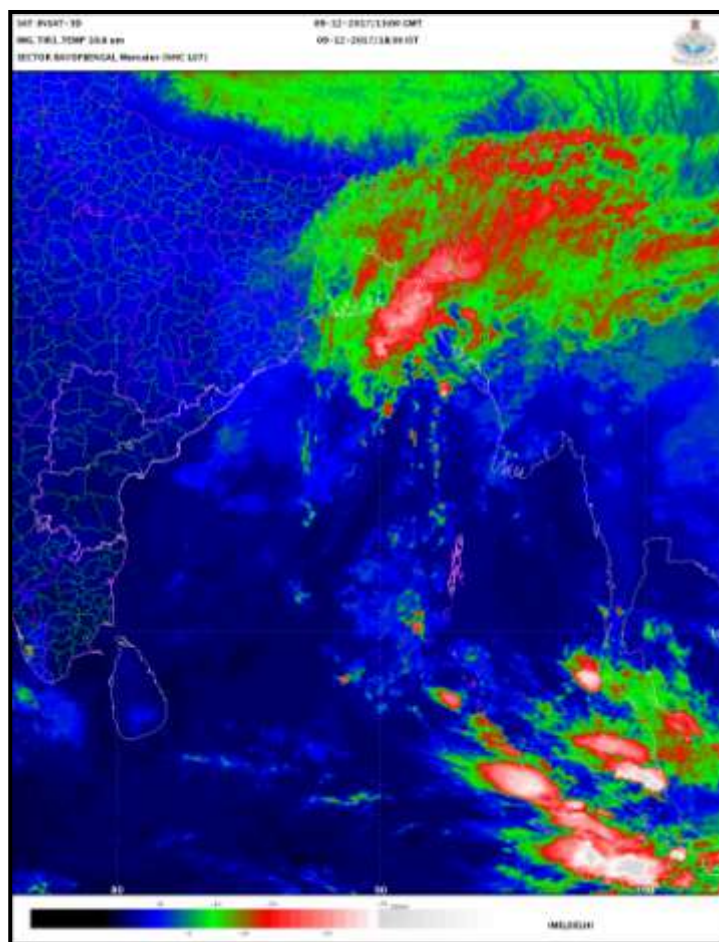
- Fishermen along and off north Odisha and West Bengal coasts are advised not to venture into sea during next 12 hours.

This is the last bulletin for this system. However regular bulletins will continue from National Weather Forecasting Centre, New Delhi, Regional Meteorological Centres Kolkata and Guwahati, Meteorological Centres Agartala and Bhubaneswar

(Neetha K Gopal)
Scientist-E, NWFC

Copy to: CRS Pune/ ACWC Chennai/ Kolkata/ MC Hyderabad/ Bhubaneswar /Agartala/ RMC Guwahati.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.