



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

BULLETIN NO. : 01 (ARB/03/2019)

TIME OF ISSUE: 1230 HOURS IST

DATED: 24.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Depression over eastcentral Arabian Sea

Latest satellite imageries and Ship & Buoy observations indicate that a depression has formed over eastcentral Arabian Sea and lay centred at 0830 hrs IST of today, the 24th October, 2019 near latitude 15.4°N and longitude 70.4°E, about 360 km west-southwest of Ratnagiri (Maharashtra), 490 km southwest of Mumbai (Maharashtra) and 1750 km east-southeast of Salalah (Oman). It is very likely to intensify further into a deep depression during next 12 hours and into a cyclonic storm during subsequent 12 hours. It is very likely to move east-northeastwards till 25th October evening. Then it is very likely to re-curve and move nearly westwards towards south Oman and adjoining Yemen coast with gradual intensification during subsequent 72 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places & extremely heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 24 hours. Light to moderate rainfall at many places with heavy to very heavy falls at isolated places is very likely over coastal districts of Konkan & Goa during subsequent 24 hours and reduction in rainfall thereafter.

(ii) Wind warning

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and 40 – 50 kmph gusting to 60 kmph along & off south Karnataka coast, Lakshadweep area and adjoining southeast Arabian Sea during next 24 hours. Strong wind speed reaching 30-40 kmph gusting to 50 kmph very likely to prevail along & off north Maharashtra coast during next 48 hours.
- It is very likely to increase becoming gale force winds, speed reaching 60-70 kmph gusting to 80 kmph over eastcentral Arabian Sea and along & off south Maharashtra – Goa coasts, 50-

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.

60 kmph gusting to 70 kmph along & off north Maharashtra coast and 40 – 50 kmph gusting to 60 kmph over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast during the subsequent 24 hours.

(iii) Sea condition

The sea condition is very likely to be rough to very rough over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts during next 24 hours. It is also very likely to be rough to very rough over eastcentral and adjoining southeast Arabian Sea and Lakshadweep area during next 24 hours. It is likely to become very rough to high over east central Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and rough to very rough over east central Arabian Sea along & off north Maharashtra coast and over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast on 25th October.

(iv) Fishermen Warning

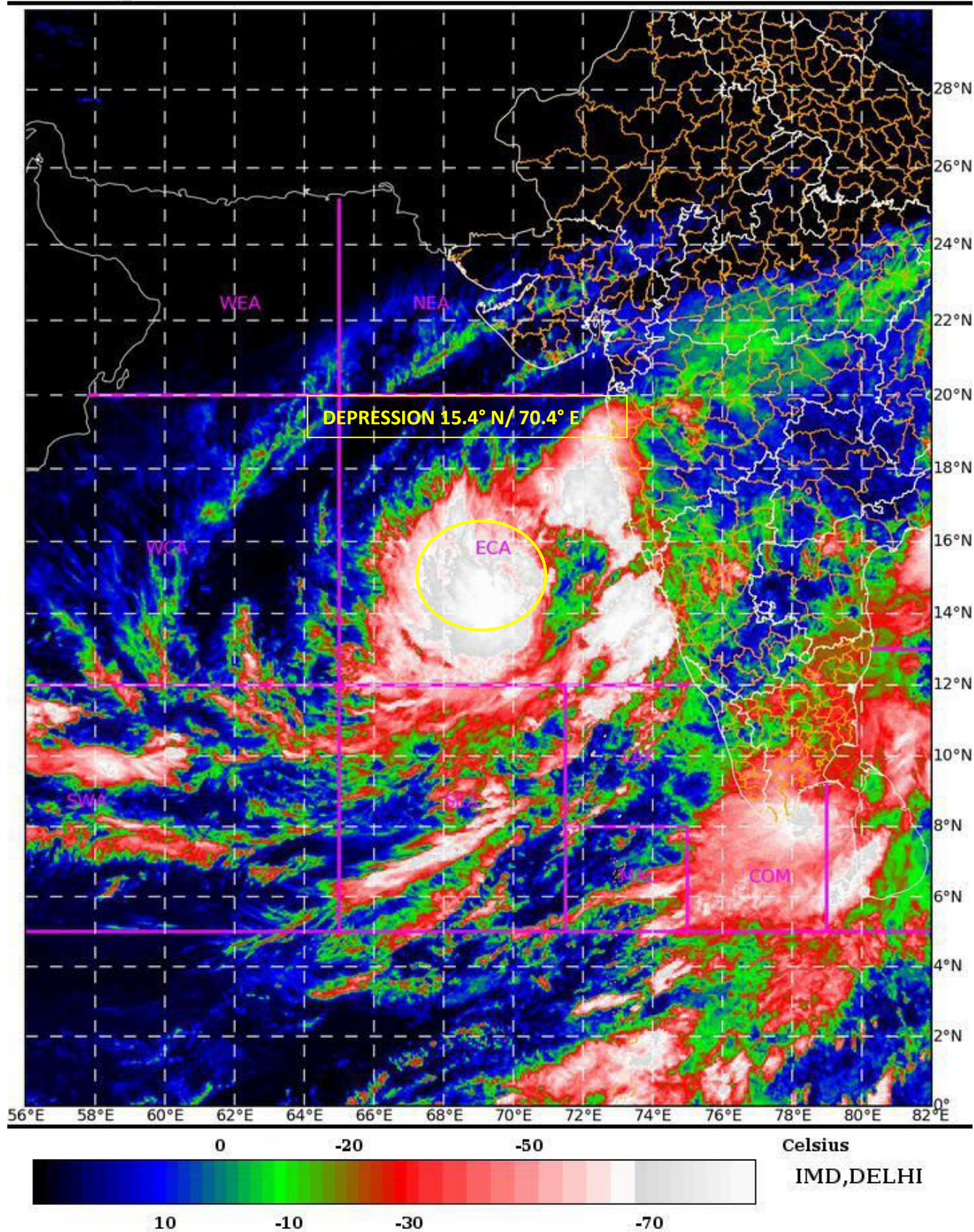
- The fishermen are advised not to venture into eastcentral Arabian Sea & along & off Maharashtra – Goa – Karnataka coasts during next 48 hours and along and off south Gujarat coast & adjoining northeast Arabian on 25th October.
- Fishermen out in the Deep Sea are advised to return to the coast by today evening.

The next bulletin will be issued at 1430 hrs IST of 24th October, 2019.

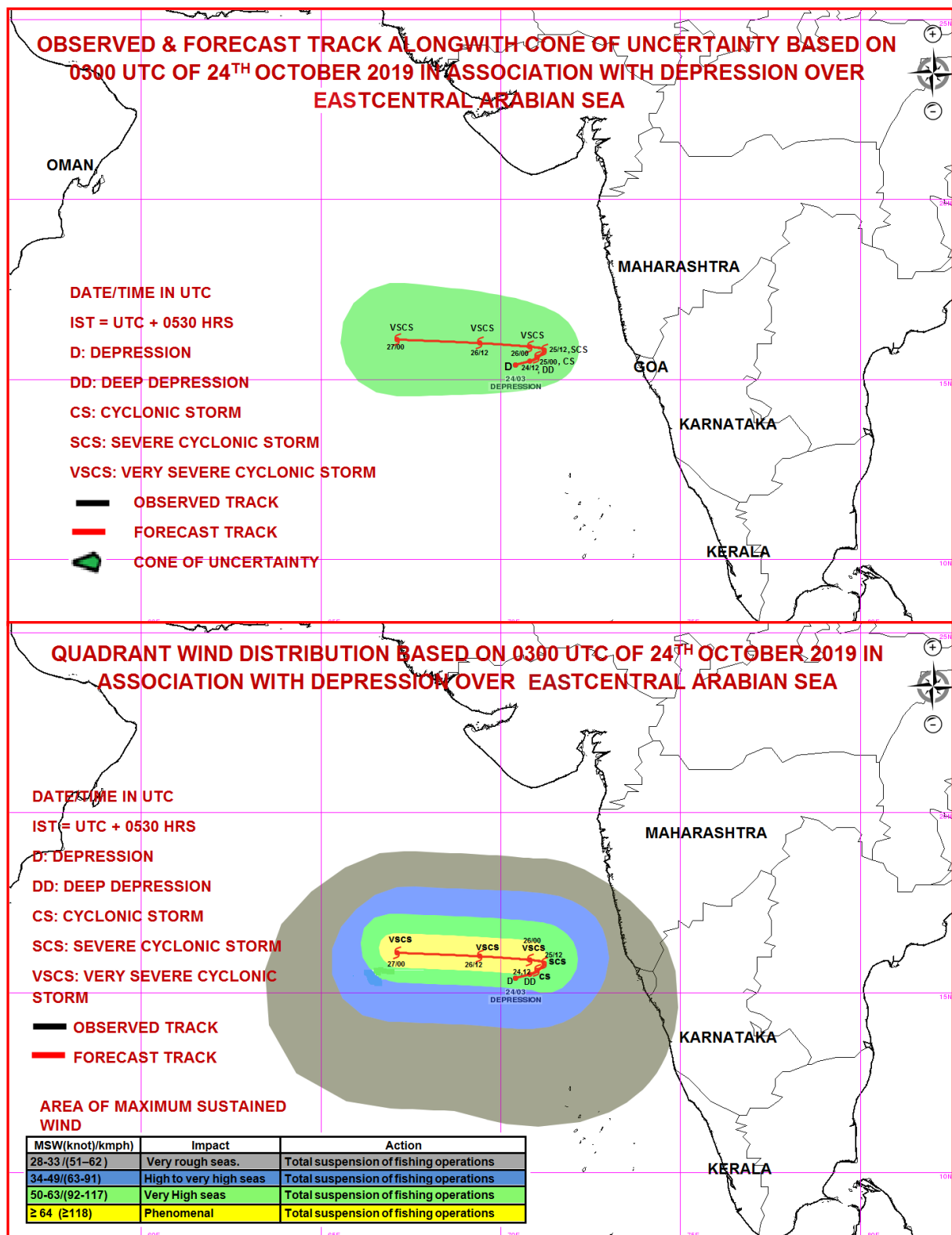
(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3DR IMG 24-10-2019/(0615 to 0641) GMT
 IMG_TIR1_TEMP 10.8 um 24-10-2019/(1145 to 1211) IST
 ARABIAN_SEA



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. : 02 (ARB/03/2019)

TIME OF ISSUE: 1445 HOURS IST

DATED: 24.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

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H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Depression over eastcentral Arabian Sea

The depression over eastcentral Arabian Sea remained practically stationary over the same region during the past 03 hrs and lay centred at 1130 hrs IST of today, the 24th October, 2019 near latitude 15.4°N and longitude 70.4°E, about 360 km west-southwest of Ratnagiri (Maharashtra), 490 km southwest of Mumbai (Maharashtra) and 1750 km east-southeast of Salalah (Oman). It is very likely to intensify further into a deep depression during next 12 hours and into a cyclonic storm during subsequent 12 hours. It is very likely to move east-northeastwards till 25th October evening. Then it is very likely to re-curve and move nearly west-northwestwards towards south Oman and adjoining Yemen coast with gradual intensification during subsequent 72 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24.10.19/1130	15.4/70.4	45-55 gusting to 65	Depression
24.10.19/2330	15.5/70.8	55-65 gusting to 75	Deep Depression
25.10.19/1130	15.7/71.1	70-80 gusting to 90	Cyclonic Storm
25.10.19/2330	15.9/71.0	90-100 gusting to 110	Severe Cyclonic Storm
26.10.19/1130	16.0/70.1	110-120 gusting to 135	Severe Cyclonic Storm
26.10.19/2330	16.2/68.2	120-130 gusting to 145	Very Severe Cyclonic Storm
27.10.19/1130	16.4/66.0	130-140 gusting to 155	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places & extremely heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 24 hours. Light to moderate rainfall at many places with heavy to very heavy falls at isolated places is very likely over coastal districts of Konkan & Goa during subsequent 24 hours and reduction in rainfall thereafter.

(ii) Wind warning

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and 40 – 50 kmph gusting to 60 kmph along & off south Karnataka coast, Lakshadweep area and adjoining southeast Arabian Sea during next 24 hours. Strong wind speed reaching 30-40 kmph gusting to 50 kmph very likely to prevail along & off north Maharashtra coast during next 48 hours.
- It is very likely to increase becoming gale force winds, speed reaching 60-70 kmph gusting to 80 kmph over eastcentral Arabian Sea and along & off south Maharashtra – Goa coasts, 50-60 kmph gusting to 70 kmph along & off north Maharashtra coast and 40 – 50 kmph gusting to 60 kmph over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast during the subsequent 24 hours.

(iii) Sea condition

The sea condition is very likely to be rough to very rough over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts during next 24 hours. It is also very likely to be rough to very rough over eastcentral and adjoining southeast Arabian Sea and Lakshadweep area during next 24 hours. It is likely to become very rough to high over east central Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and rough to very rough over east central Arabian Sea along & off north Maharashtra coast and over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast on 25th October.

(iv) Fishermen Warning

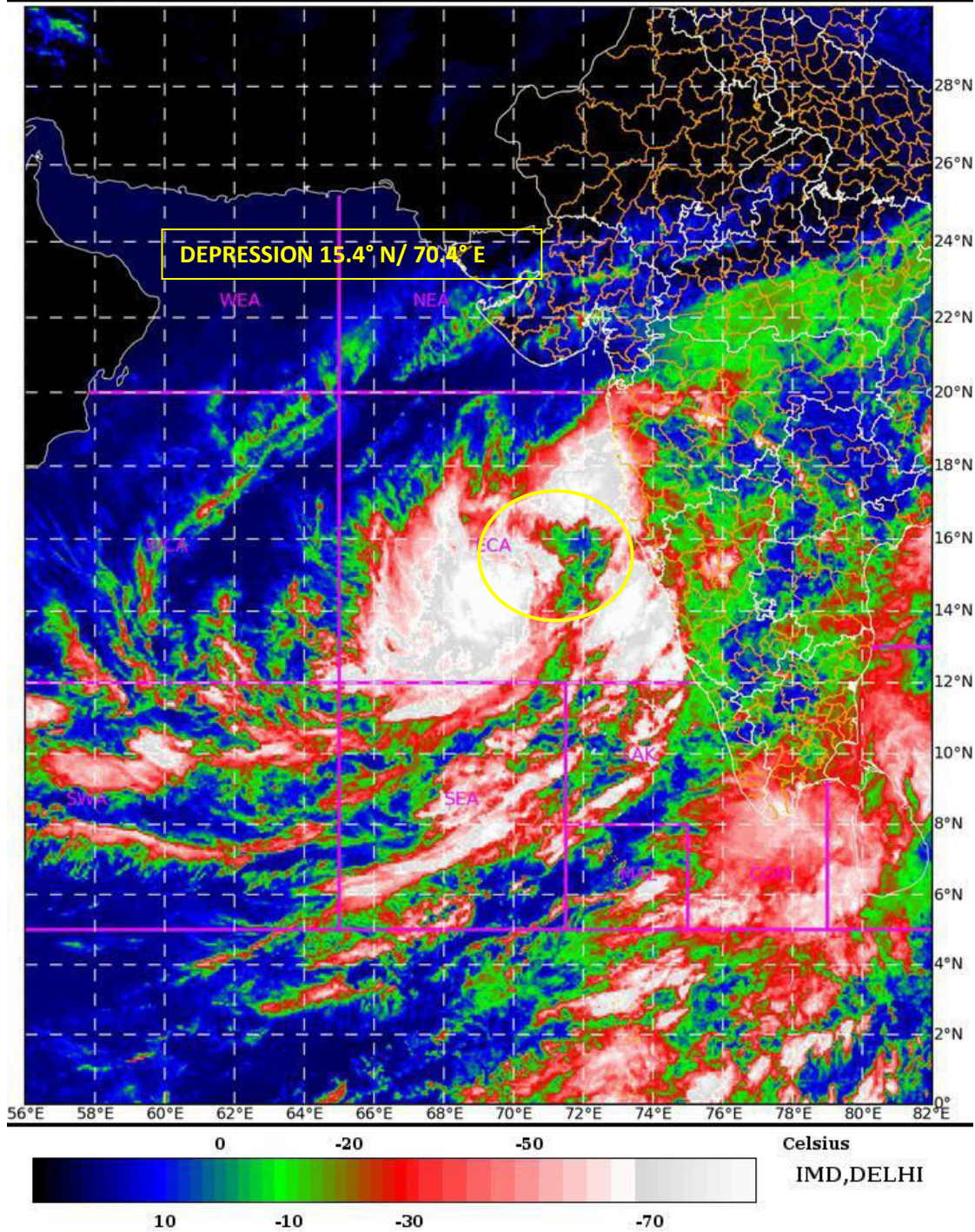
- The fishermen are advised not to venture into eastcentral Arabian Sea & along & off Maharashtra – Goa – Karnataka coasts during next 48 hours and along and off south Gujarat coast & adjoining northeast Arabian on 25th October.
- Fishermen out in the Deep Sea are advised to return to the coast by today evening.

The next bulletin will be issued at 2030 hrs IST of 24th October, 2019.

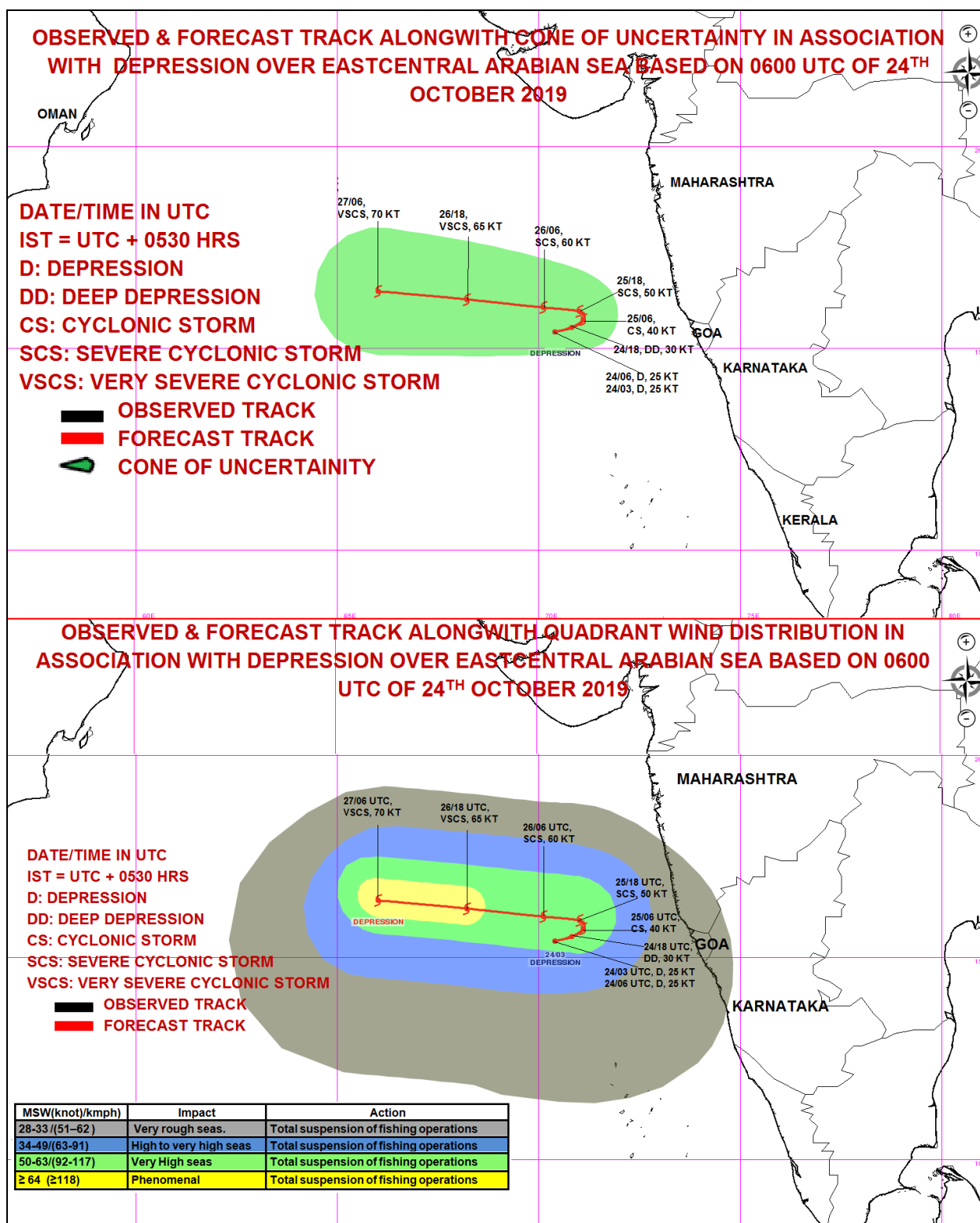
(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 24-10-2019/(0800 to 0827) GMT
 IMG_TIR1_TEMP 10.8 um 24-10-2019/(1330 to 1357) IST
 ARABIAN_SEA



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. : 03 (ARB/03/2019)

TIME OF ISSUE: 2015 HOURS IST

DATED: 24.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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SECRETARY, MOES, (FAX NO. 24629777)

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DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

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CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Depression over eastcentral Arabian Sea intensified into a Deep Depression

The depression over eastcentral Arabian Sea moved east-northeastwards with a speed of 7 Kmph during the past 06 hrs, intensified into a deep depression over eastcentral Arabian Sea and lay centred at 1730 hrs IST of today, the 24th October, 2019 near latitude 15.5°N and longitude 70.8°E, about 310 km west-southwest of Ratnagiri (Maharashtra), 450 km southwest of Mumbai (Maharashtra) and 1790 km east-southeast of Salalah (Oman). It is very likely to intensify further into a cyclonic storm during next 12 hours. It is very likely to move east-northeastwards till 25th October evening. Then it is very likely to re-curve and move nearly westwards towards south Oman and adjoining Yemen coast with gradual intensification during subsequent 72 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24.10.19/1730	15.5/70.8	50-60 gusting to 70	Deep Depression
24.10.19/2330	15.6/71.0	55-65 gusting to 75	Deep Depression
25.10.19/0530	15.7/71.2	65-75 gusting to 85	Cyclonic Storm
25.10.19/1130	15.9/71.2	70-80 gusting to 90	Severe Cyclonic Storm
25.10.19/1730	16.1/71.0	80-90 gusting to 100	Severe Cyclonic Storm
26.10.19/0530	16.3/70.4	100-110 gusting to 125	Very Severe Cyclonic Storm
26.10.19/1730	16.4/68.9	120-130 gusting to 145	Very Severe Cyclonic Storm
27.10.19/0530	16.6/66.9	135-145 gusting to 160	Very Severe Cyclonic Storm
27.10.19/1730	16.8/65.2	150-160 gusting to 175	Very Severe Cyclonic Storm
28.10.19/0530	17.0/63.6	140-150 gusting to 165	Very Severe Cyclonic Storm
28.10.19/1730	17.2/62.1	135-145 gusting to 160	Very Severe Cyclonic Storm
29.10.19/0530	17.2/59.7	130-140 gusting to 155	Very Severe Cyclonic Storm
29.10.19/1730	17.0/58.3	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places & extremely heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 24 hours. Light to moderate rainfall at many places with heavy to very heavy falls at isolated places is very likely over coastal districts of Konkan & Goa during subsequent 24 hours and reduction in rainfall thereafter.

(ii) Wind warning

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and 40 – 50 kmph gusting to 60 kmph along & off south Karnataka coast, Lakshadweep area and adjoining southeast Arabian Sea during next 24 hours. Strong wind speed reaching 30-40 kmph gusting to 50 kmph very likely to prevail along & off north Maharashtra coast during next 48 hours.
- It is very likely to increase becoming gale force winds, speed reaching 60-70 kmph gusting to 80 kmph over eastcentral Arabian Sea and along & off south Maharashtra – Goa coasts, 50-60 kmph gusting to 70 kmph along & off north Maharashtra coast and 40 – 50 kmph gusting to 60 kmph over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast during the subsequent 24 hours.

(iii) Sea condition

The sea condition is very likely to be rough to very rough over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts during next 24 hours. It is also very likely to be rough to very rough over eastcentral and adjoining southeast Arabian Sea and Lakshadweep area during next 24 hours. It is likely to become very rough to high over east central Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and rough to very rough over east central Arabian Sea along & off north Maharashtra coast and over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast on 25th October.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea & along & off Maharashtra – Goa – Karnataka coasts during next 48 hours and along and off south Gujarat coast & adjoining northeast Arabian on 25th October.
- Fishermen out in the Deep Sea are advised to return to the coast by today evening.

The next bulletin will be issued at 0230 hrs IST of 25th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

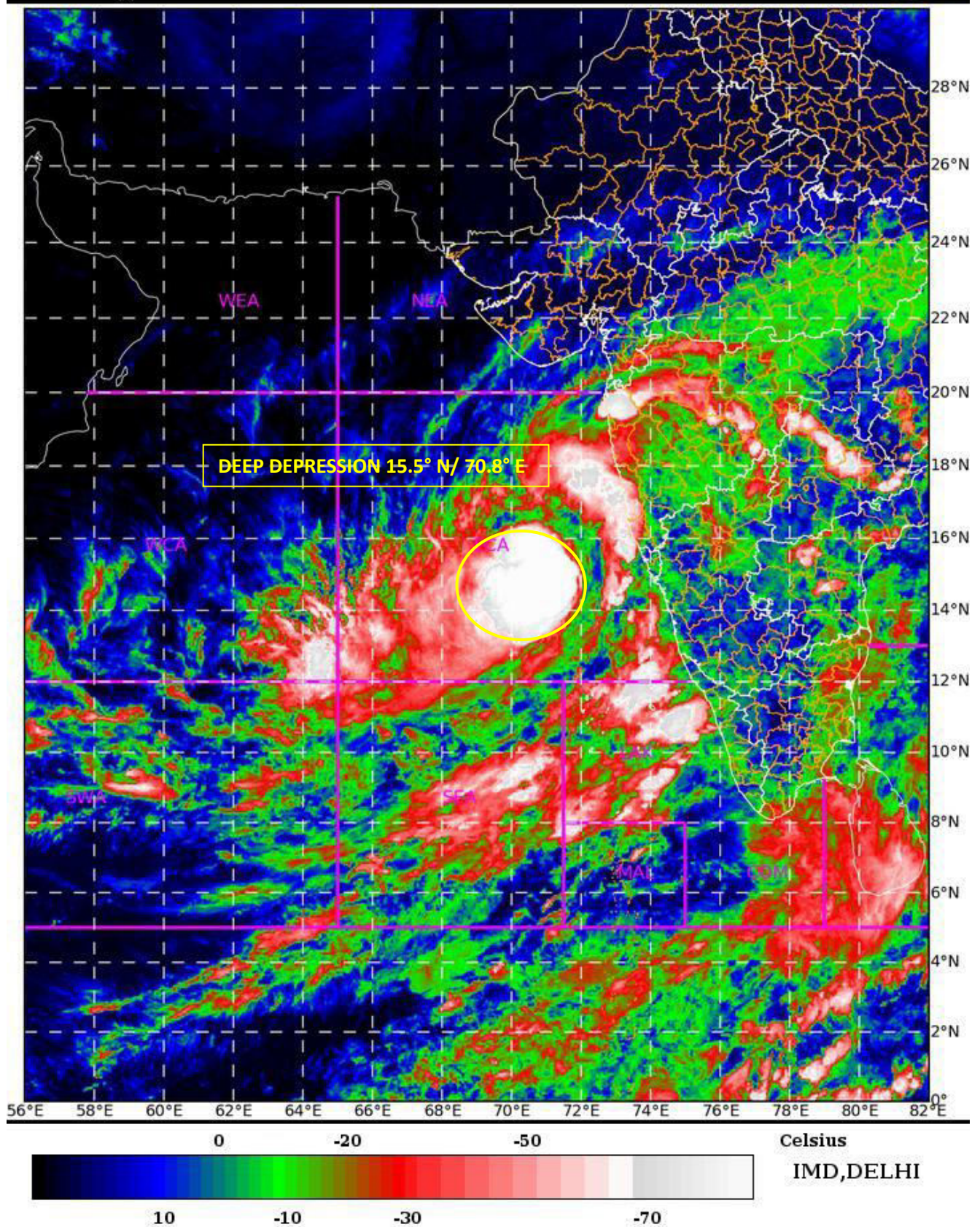
SAT : INSAT-3DR IMG

24-10-2019/(1315 to 1341) GMT

IMG_TIR1_TEMP 10.8 um

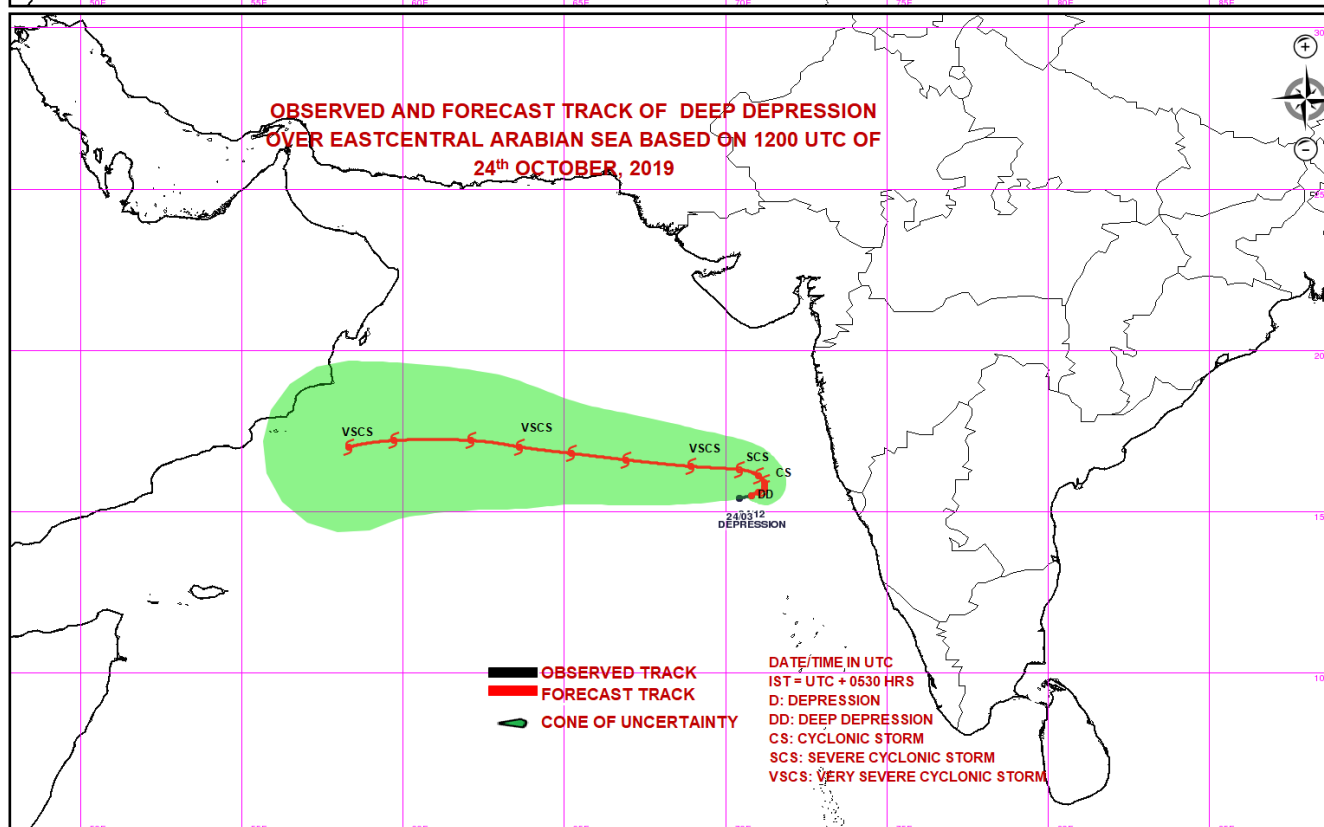
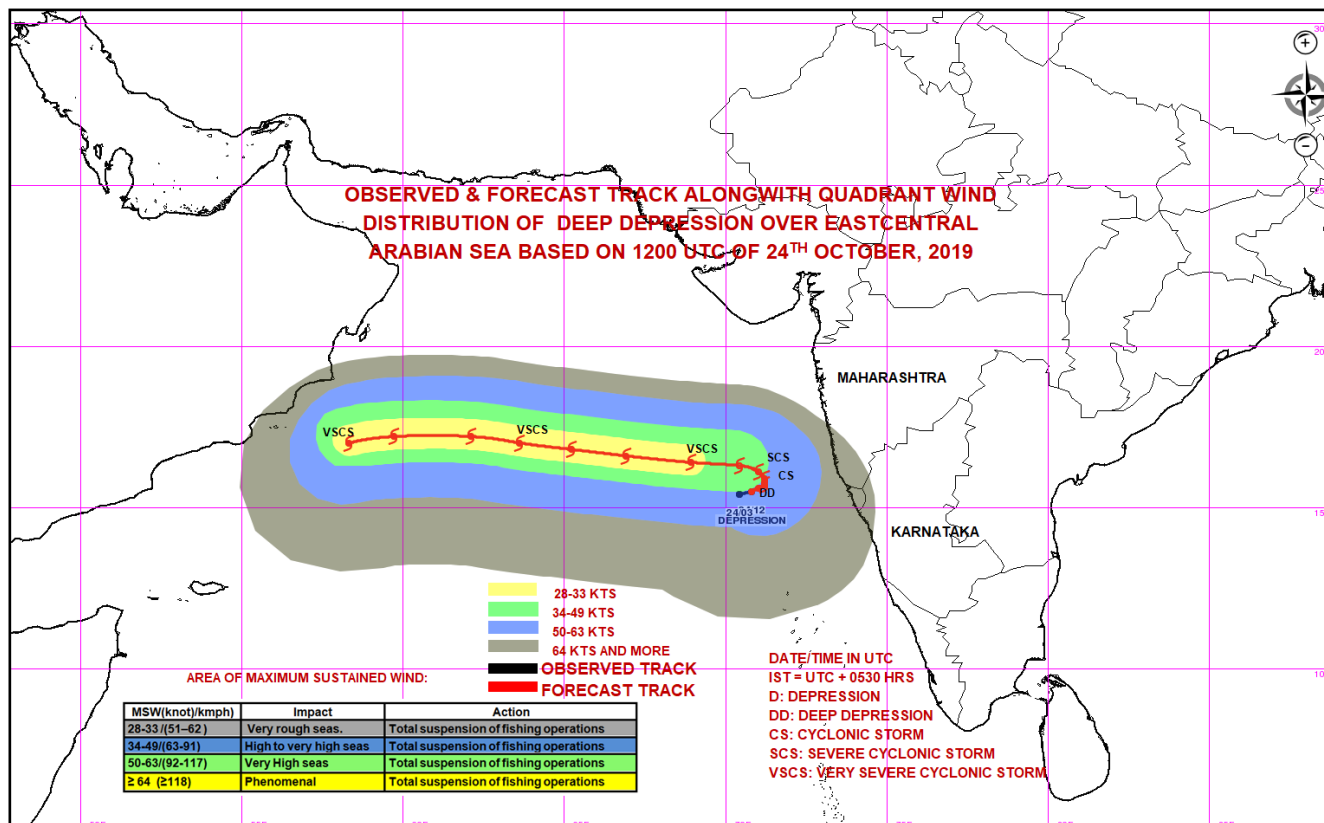
24-10-2019/(1845 to 1911) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0200 HOURS IST

DATED: 25.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Deep Depression over eastcentral Arabian Sea

The Deep Depression over eastcentral Arabian Sea moved east-northeastwards with a speed of 10 Kmph during the past 06 hrs and lay centred at 2330 hrs IST of yesterday, the 24th October, 2019 near latitude 15.7°N and longitude 71.3°E over eastcentral Arabian Sea, about 260 km west-southwest of Ratnagiri (Maharashtra), 410 km south-southwest of Mumbai (Maharashtra) and 1860 km east of Salalah (Oman). It is very likely to intensify further into a cyclonic storm during next 06 hours. It is very likely to move east-northeastwards till 25th October evening. Then it is very likely to re-curve and move nearly westwards towards south Oman and adjoining Yemen coast with gradual intensification during subsequent 72 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24.10.19/2330	15.7/71.3	55-65 gusting to 75	Deep Depression
25.10.19/0530	15.8/71.5	65-75 gusting to 85	Cyclonic Storm
25.10.19/1130	16.0/71.7	70-80 gusting to 90	Cyclonic Storm
25.10.19/1730	16.2/71.7	80-90 gusting to 100	Cyclonic Storm
25.10.19/2330	16.3/71.4	90-100 gusting to 110	Severe Cyclonic Storm
26.10.19/1130	16.4/70.7	110-120 gusting to 130	Severe Cyclonic Storm
26.10.19/2330	16.5/69.1	125-135 gusting to 150	Very Severe Cyclonic Storm
27.10.19/1130	16.7/67.4	140-150 gusting to 165	Very Severe Cyclonic Storm
27.10.19/2330	16.9/65.7	155-165 gusting to 185	Very Severe Cyclonic Storm
28.10.19/1130	17.1/64.0	140-150 gusting to 165	Very Severe Cyclonic Storm
28.10.19/2330	17.1/62.3	130-140 gusting to 155	Very Severe Cyclonic Storm
29.10.19/1130	17.0/60.6	125-135 gusting to 150	Very Severe Cyclonic Storm
29.10.19/2330	16.9/58.9	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 24 hours. Light to moderate rainfall at many places with heavy to very heavy falls at isolated places is very likely over coastal districts of Konkan & Goa during subsequent 24 hours and reduction in rainfall thereafter.

(ii) Wind warning

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and 40 – 50 kmph gusting to 60 kmph along & off south Karnataka coast, Lakshadweep area and adjoining southeast Arabian Sea during next 24 hours. Strong wind speed reaching 30-40 kmph gusting to 50 kmph very likely to prevail along & off north Maharashtra coast during next 48 hours.
- It is very likely to increase becoming gale force winds, speed reaching 60-70 kmph gusting to 80 kmph over eastcentral Arabian Sea and along & off south Maharashtra – Goa coasts, 50-60 kmph gusting to 70 kmph along & off north Maharashtra coast and 40 – 50 kmph gusting to 60 kmph over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast during the subsequent 24 hours.

(iii) Sea condition

The sea condition is very likely to be rough to very rough over eastcentral Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts during next 24 hours. It is also very likely to be rough to very rough over eastcentral and adjoining southeast Arabian Sea and Lakshadweep area during next 24 hours. It is likely to become very rough to high over east central Arabian Sea and along & off south Maharashtra, Goa & north Karnataka coasts and rough to very rough over east central Arabian Sea along & off north Maharashtra coast and over eastcentral and adjoining northeast Arabian Sea off south Gujarat coast on 25th October.

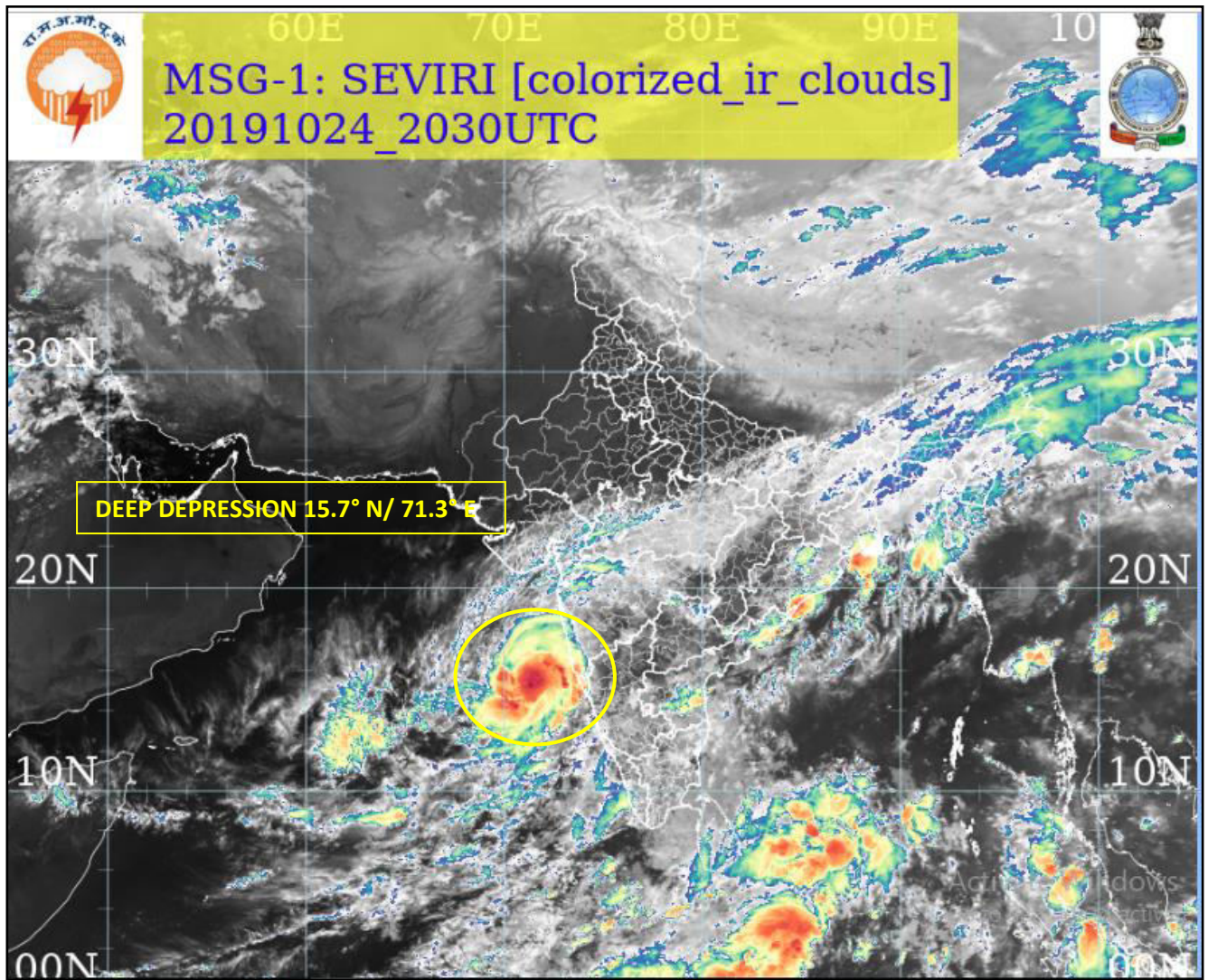
(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea & along & off Maharashtra – Goa – Karnataka coasts during next 48 hours and along and off south Gujarat coast & adjoining northeast Arabian on 25th October.

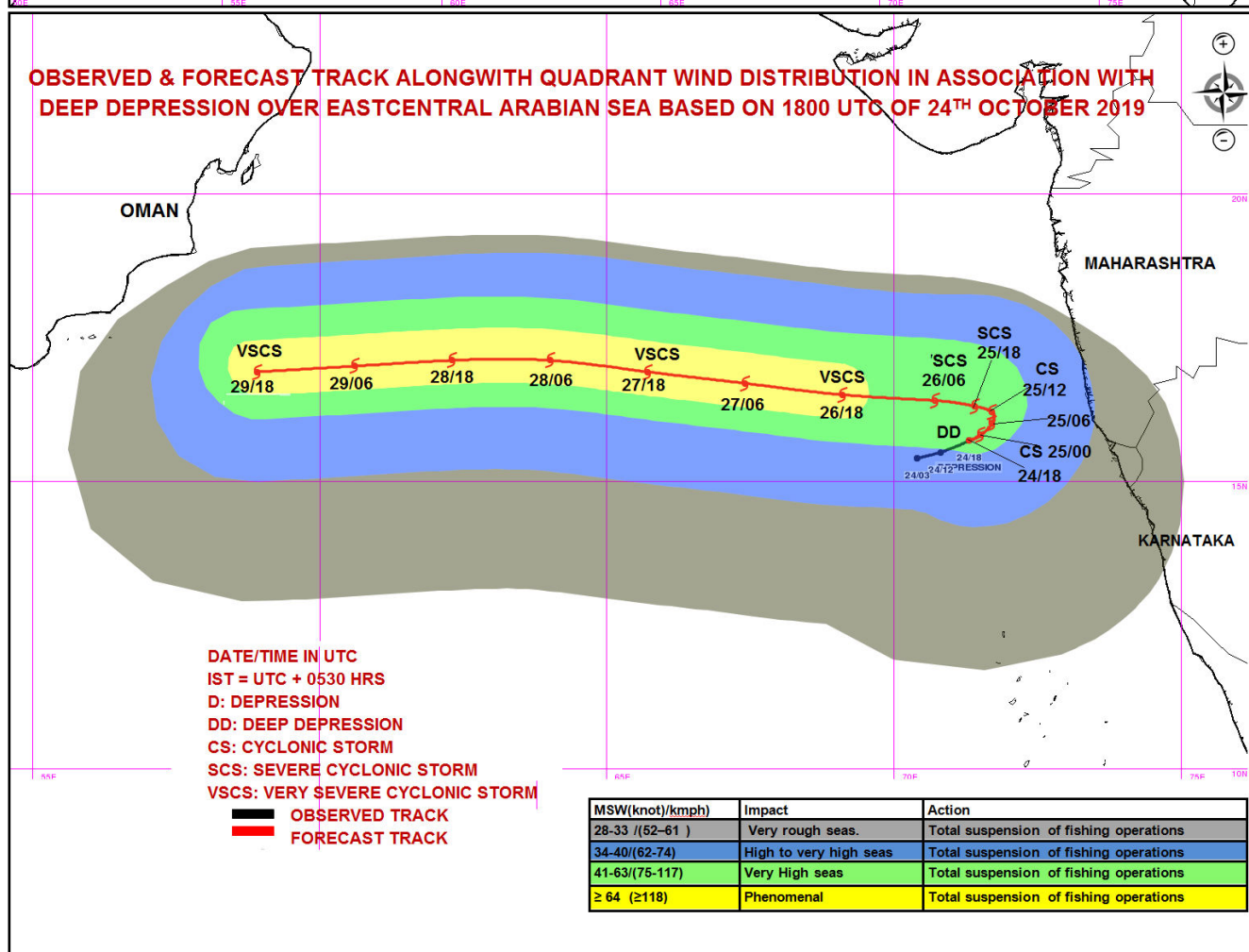
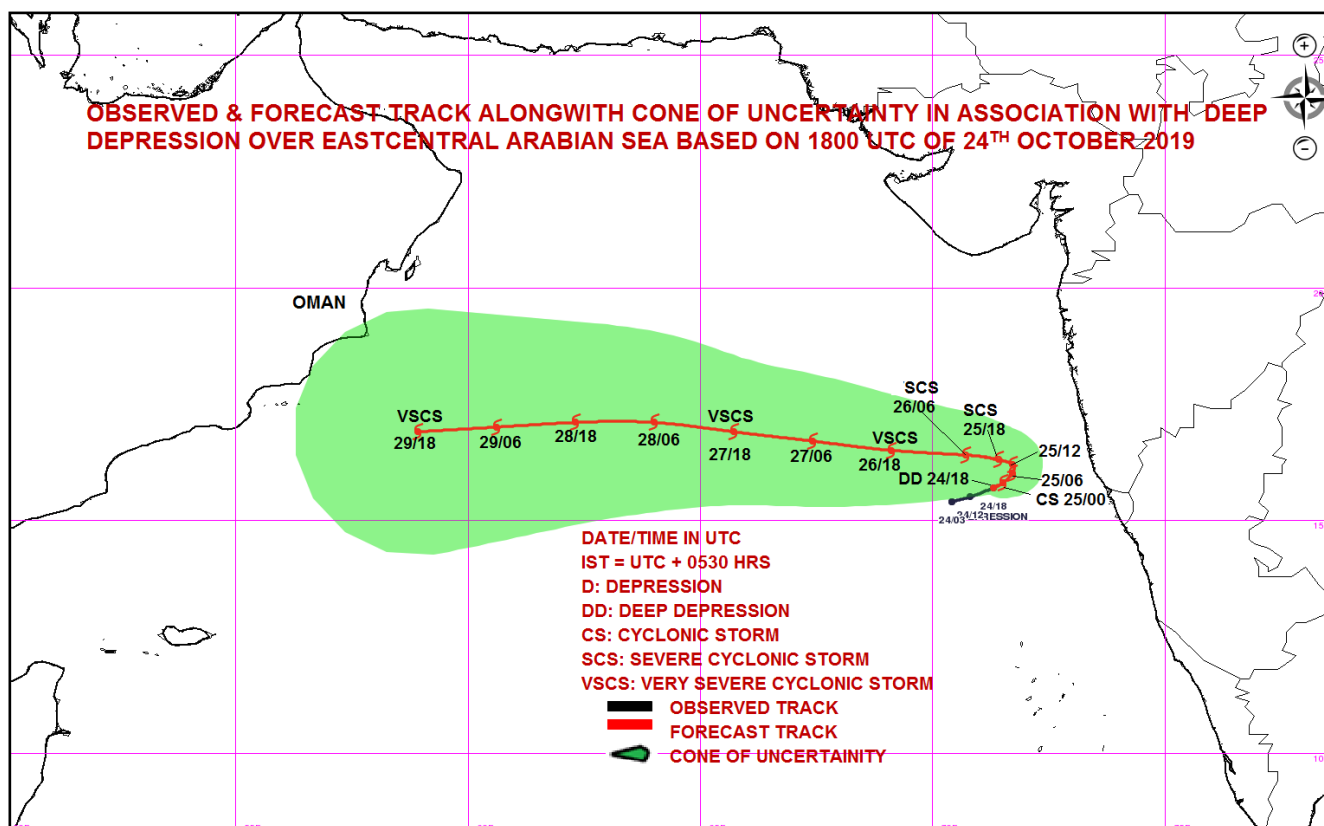
The next bulletin will be issued at 0830 hrs IST of 25th October, 2019.

(VR Durai)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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. : 05 (ARB/03/2019)

TIME OF ISSUE: 0800 HOURS IST

DATED: 25.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The Deep Depression over eastcentral Arabian Sea moved northwards with a speed of 05 Kmph during the past 06 hrs, intensified into a **Cyclonic Storm 'KYARR' (Pronounced as Kyarr)** and lay centred at 0530 hrs IST of today, the 25th October, 2019 near latitude 16.0°N and longitude 71.3°E over eastcentral Arabian Sea, about 240 km west-southwest of Ratnagiri (Maharashtra), 380 km south-southwest of Mumbai (Maharashtra) and 1850 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify into a Severe Cyclonic Storm during next 24 hours and into a Very Severe Cyclonic Storm during subsequent 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.10.19/0530	16.0/71.3	65-75 gusting to 85	Cyclonic Storm
25.10.19/1130	16.1/71.2	70-80 gusting to 90	Cyclonic Storm
25.10.19/1730	16.2/71.1	80-90 gusting to 100	Cyclonic Storm
25.10.19/2330	16.4/70.7	90-100 gusting to 110	Severe Cyclonic Storm
26.10.19/0530	16.6/70.2	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/1730	16.9/69.2	125-135 gusting to 150	Very Severe Cyclonic Storm
27.10.19/0530	17.3/68.0	150-160 gusting to 175	Very Severe Cyclonic Storm
27.10.19/1730	17.8/66.5	170-180 gusting to 200	Very Severe Cyclonic Storm
28.10.19/0530	18.3/65.1	170-180 gusting to 200	Very Severe Cyclonic Storm
28.10.19/1730	18.8/64.0	160-170 gusting to 190	Very Severe Cyclonic Storm
29.10.19/0530	19.2/62.9	150-160 gusting to 175	Very Severe Cyclonic Storm
29.10.19/1730	19.6/62.1	140-150 gusting to 165	Very Severe Cyclonic Storm
30.10.19/0530	20.0/61.4	125-135 gusting to 150	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 65-75 kmph gusting to 85 kmph is prevailing around the system centre over Eastcentral Arabian Sea. It is very likely to increase gradually becoming 90-100 kmph gusting to 110 kmph by 26th morning and 170-180 kmph gusting to 200 kmph by 27th evening over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail along & off Maharashtra & Goa coast during next 24 hours and decrease thereafter. Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, is likely to prevail along & off north Karnataka coast and northeast Arabian Sea off Gujarat coast during next 24 hours.

(iii) Sea condition

- The sea condition is very likely to be high to very high over eastcentral Arabian Sea around the system centre and very rough to high along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 24 hours. It is very likely to become phenomenal around the system centre over eastcentral & adjoining westcentral Arabian Sea during the subsequent 12 hours.
- It is also very likely to be rough to very rough over eastcentral Arabian Sea off north Karnataka coast and over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

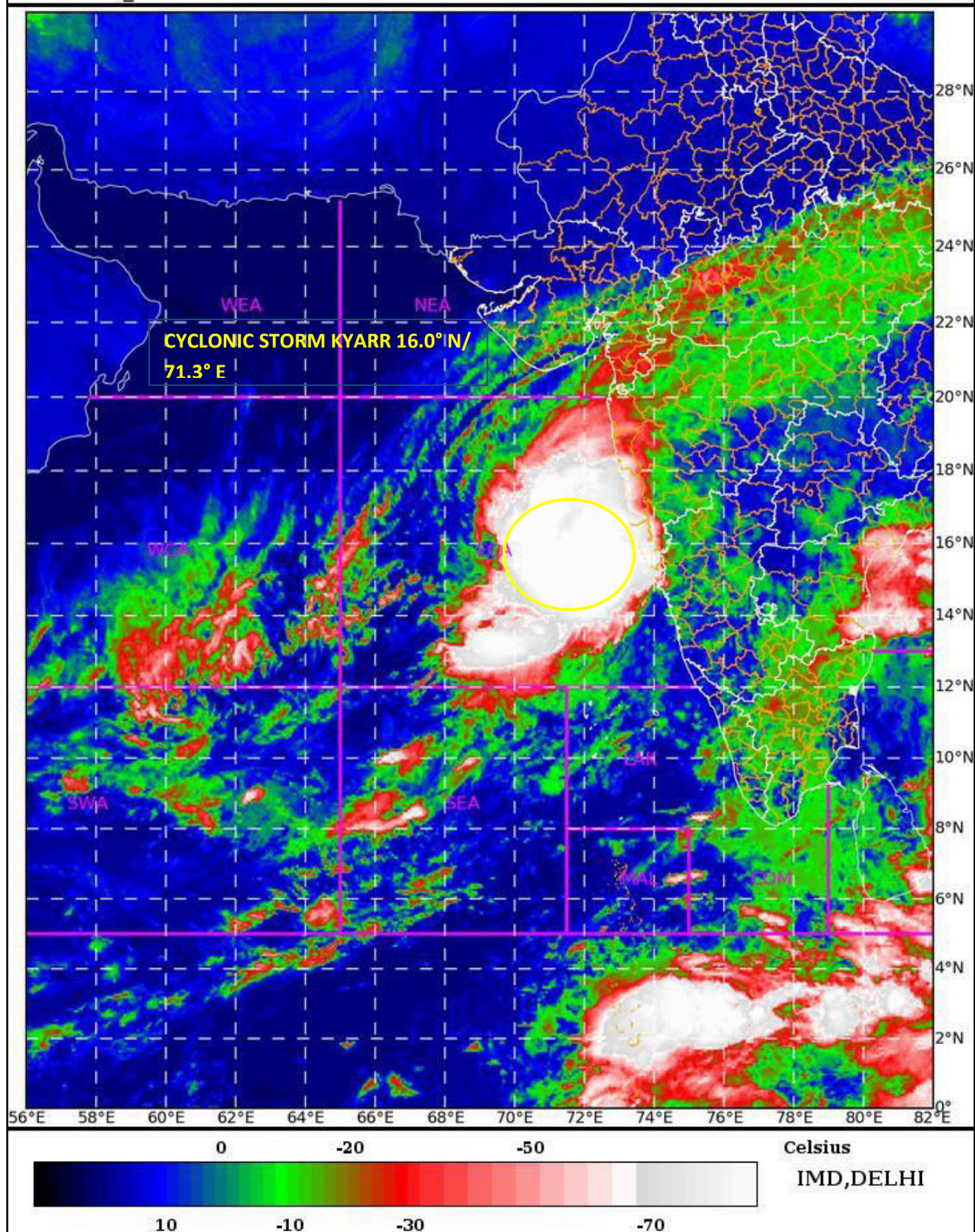
- The fishermen are advised not to venture into eastcentral Arabian Sea during next 72 hours and along & off Maharashtra- Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.

The next bulletin will be issued at 1130 hrs IST of today, the 25th October, 2019.

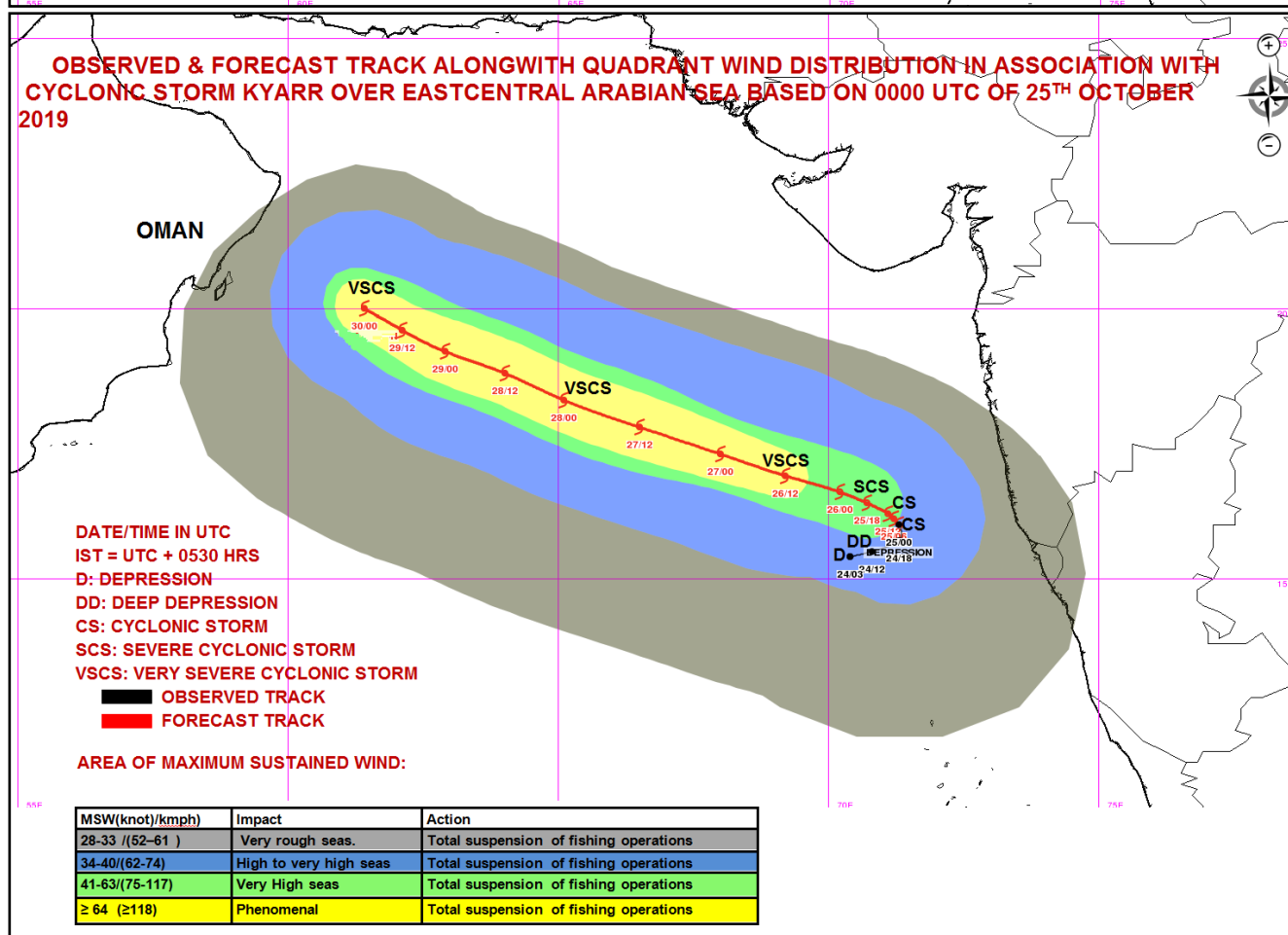
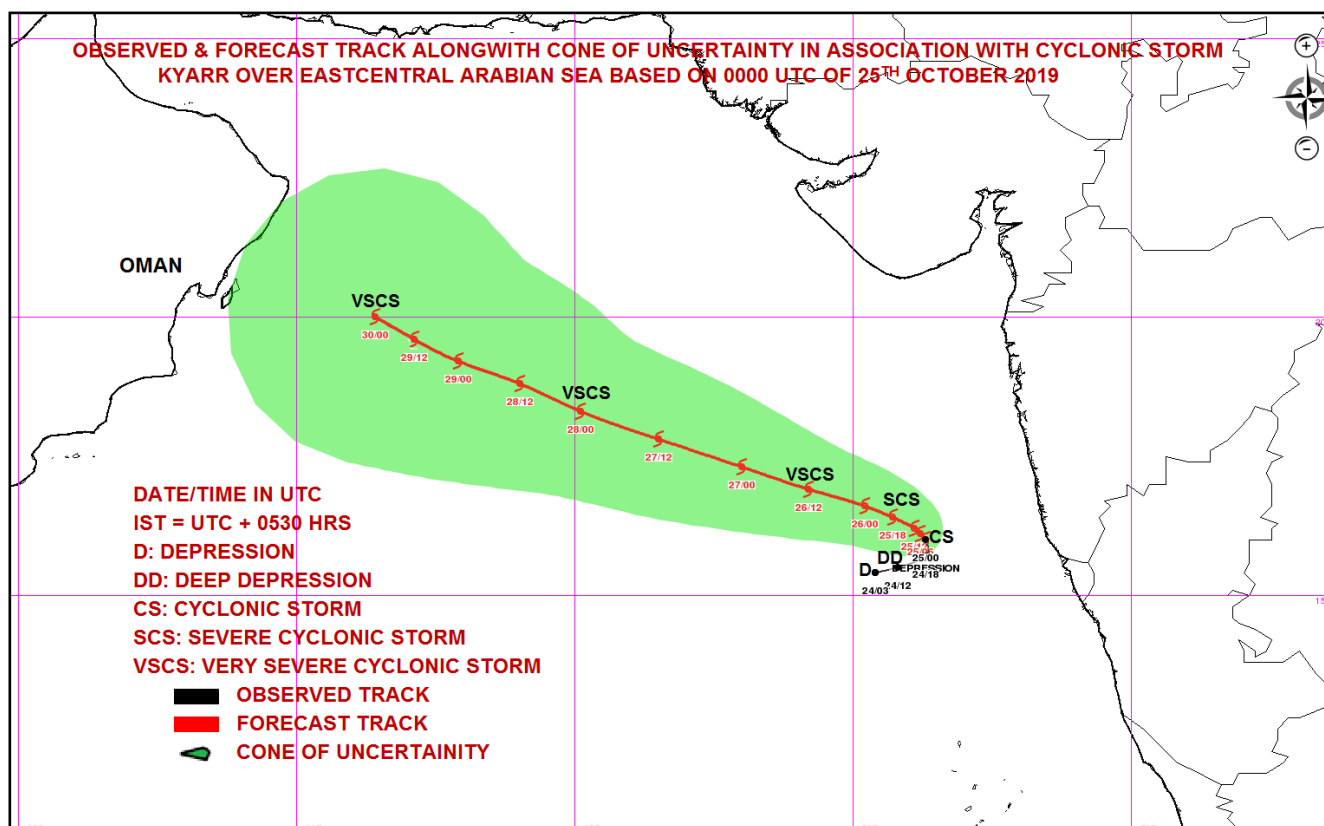
(VR Durai)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 25-10-2019/(0230 to 0257) GMT
 IMG_TIR1_TEMP 10.8 um 25-10-2019/(0800 to 0827) IST
 ARABIAN_SEA



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. : 06 (ARB/03/2019)

TIME OF ISSUE: 1100 HOURS IST

DATED: 25.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Cyclonic Storm 'KYARR'** (Pronounced as Kyarr) over eastcentral Arabian Sea moved north-northeastwards with a speed of 07 Kmph during the past 06 hrs, and lay centred at 0830 hrs IST of today, the 25th October, 2019 near latitude 16.0°N and longitude 71.6°E over eastcentral Arabian Sea, about 210 km west-southwest of Ratnagiri (Maharashtra), 370 km south-southwest of Mumbai (Maharashtra) and 1870 km east-southeast of Salalah (Oman). It is very likely to move nearly northwards during next 12 hours and then move west-northwestwards towards Oman coast during subsequent 5 days. It is very likely to intensify into a Severe Cyclonic Storm during next 12 hours and into a Very Severe Cyclonic Storm during subsequent 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.10.19/0830	16.0/71.6	70-80 gusting to 90	Cyclonic Storm
25.10.19/1130	16.1/71.8	80-90 gusting to 100	Cyclonic Storm
25.10.19/1730	16.2/72.0	90-100 gusting to 110	Severe Cyclonic Storm
25.10.19/2330	16.4/71.8	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/0530	16.6/70.6	125-135 gusting to 150	Very Severe Cyclonic Storm
26.10.19/1730	16.9/69.2	150-160 gusting to 175	Very Severe Cyclonic Storm
27.10.19/0530	17.3/68.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1730	17.8/66.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/0530	18.3/65.1	165-175 gusting to 195	Extremely Severe Cyclonic Storm
28.10.19/1730	18.8/64.0	160-170 gusting to 190	Extremely Severe Cyclonic Storm
29.10.19/0530	19.2/62.9	150-160 gusting to 180	Very Severe Cyclonic Storm
29.10.19/1730	19.4/61.9	140-150 gusting to 165	Very Severe Cyclonic Storm
30.10.19/0530	19.6/60.8	130-140 gusting to 155	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 70-80 kmph gusting to 90 kmph is prevailing around the system centre over Eastcentral Arabian Sea. It is very likely to increase gradually becoming 90-100 kmph gusting to 110 kmph by 25th evening and 170-180 kmph gusting to 200 kmph by 27th morning over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely to prevail along & off Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa and 40 to 50 kmph gusting to 60 kmph, is likely to prevail along & off remaining coastal districts of Maharashtra, north Karnataka coast and northeast Arabian Sea off Gujarat coast during next 24 hours.

(iii) Sea condition

- The sea condition is very likely to be high to very high over eastcentral Arabian Sea around the system centre during next 24 hours and phenomenal thereafter. It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 31st October.
- It will be very rough to high along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 24 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Damage Expected (over Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa):

- Minor damage to loose / unsecured structures.
- Some breaches in Kutcha road due to flooding.
- Minor damage to Banana trees and near coastal agriculture due to salt spray. Damage to ripe paddy crops.
- Minor damage to Kutcha embankments.

(v) Fishermen Warning

- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 1430 hrs IST of today, the 25th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

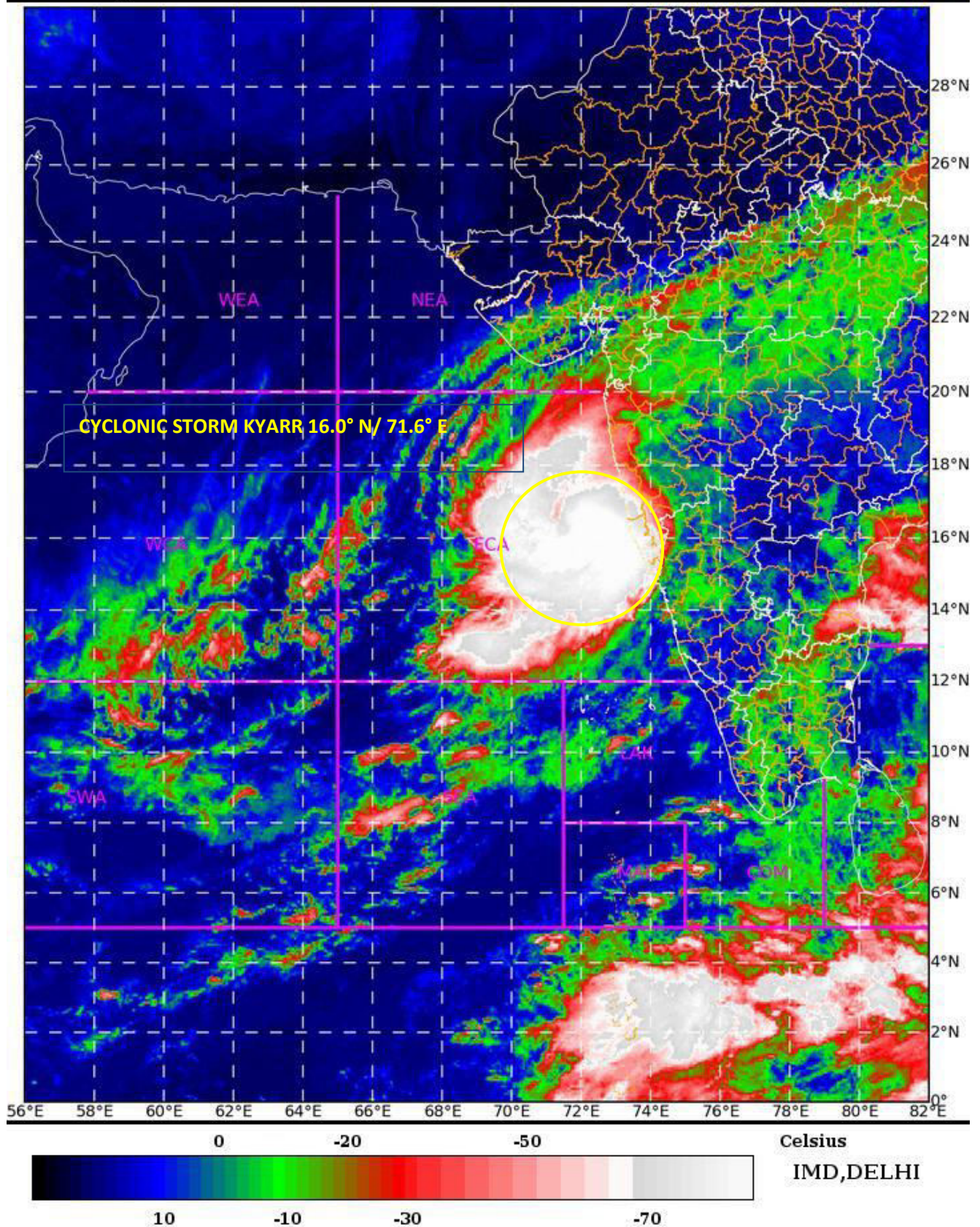
SAT : INSAT-3D IMG

25-10-2019/(0400 to 0427) GMT

IMG_TIR1_TEMP 10.8 um

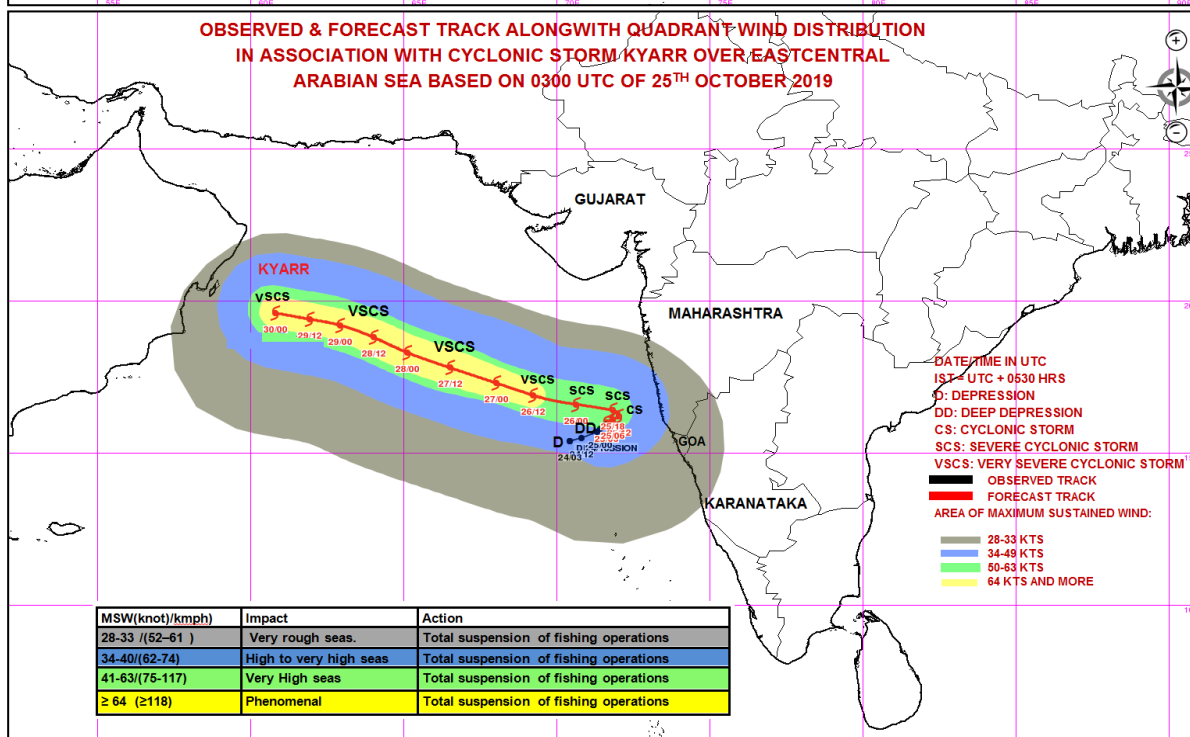
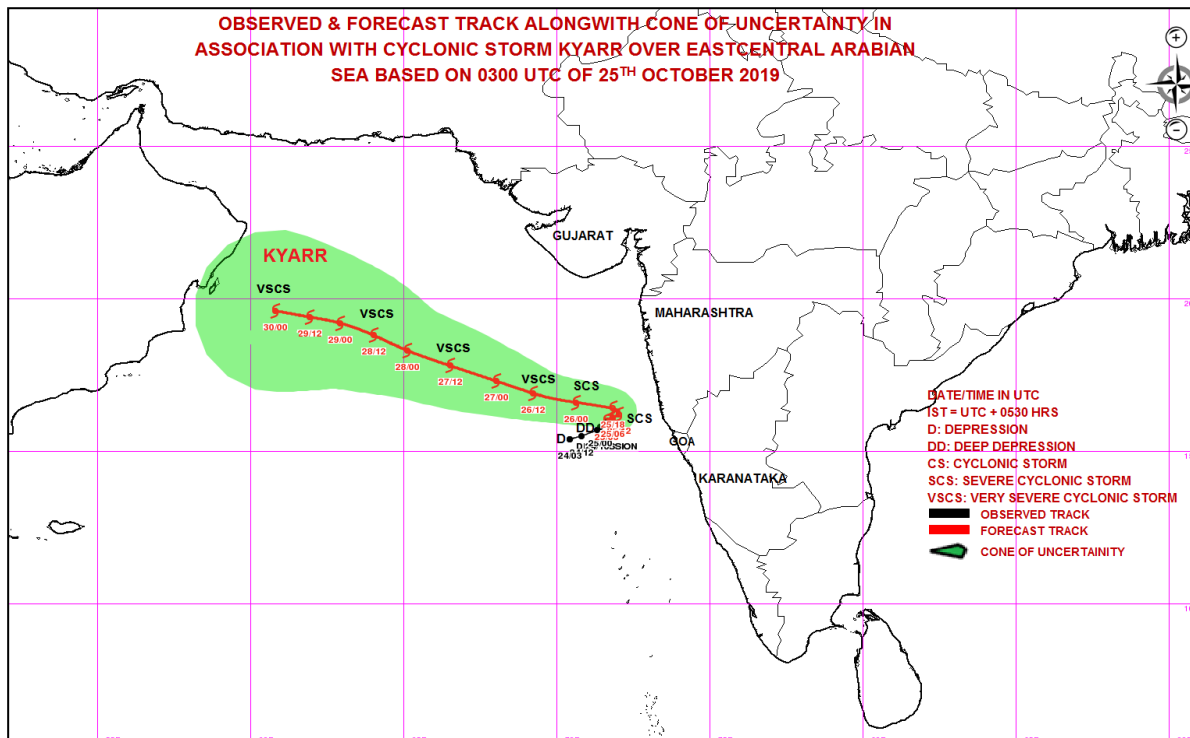
25-10-2019/(0930 to 0957) IST

ARABIAN_SEA



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. : 07 (ARB/03/2019)

TIME OF ISSUE: 1445 HOURS IST

DATED: 25.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Cyclonic Storm 'KYARR'** (Pronounced as Kyarr) over eastcentral Arabian Sea moved north-northeastwards with a speed of 09 Km/h during the past 06 hrs, and lay centred at 1130 hrs IST of today, the 25th October, 2019 near latitude 16.1°N and longitude 71.8°E over eastcentral Arabian Sea, about 190 km nearly to the west of Ratnagiri (Maharashtra), 350 km south-southwest of Mumbai (Maharashtra) and 1890 km east-southeast of Salalah (Oman). It is very likely to move nearly northwards during next 06 hours and then move west-northwestwards towards Oman coast during subsequent 5 days. It is very likely to intensify into a Severe Cyclonic Storm during next 12 hours and into a Very Severe Cyclonic Storm during subsequent 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Km/h)	Category of cyclonic disturbance
25.10.19/1130	16.1/71.8	80-90 gusting to 100	Cyclonic Storm
25.10.19/1730	16.2/71.8	90-100 gusting to 110	Severe Cyclonic Storm
25.10.19/2330	16.4/71.5	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/0530	16.6/70.6	125-135 gusting to 150	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/2330	17.1/68.6	150-160 gusting to 175	Very Severe Cyclonic Storm
27.10.19/1130	17.6/67.3	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/2330	18.1/65.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/1130	18.6/64.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
28.10.19/2330	19.0/63.5	150-160 gusting to 180	Very Severe Cyclonic Storm
29.10.19/1130	19.3/62.4	140-150 gusting to 165	Very Severe Cyclonic Storm
29.10.19/2330	19.5/61.3	135-145 gusting to 160	Very Severe Cyclonic Storm
30.10.19/1130	19.7/60.3	125-135 gusting to 150	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 80-90 kmph gusting to 100 kmph is prevailing around the system centre over Eastcentral Arabian Sea. It is very likely to increase gradually becoming 90-100 kmph gusting to 110 kmph by 25th evening and 170-180 kmph gusting to 200 kmph by 27th morning over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely to prevail along & off Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa during next 12 hours and decrease to 40 – 50 kmph gusting to 60 kmph during the subsequent 12 hours. Squally wind speed reaching 40 to 50 kmph gusting to 60 kmph, is likely to prevail along & off remaining coastal districts of north Maharashtra and northeast Arabian Sea off Gujarat coast during next 24 hours.

(iii) Sea condition

- The sea condition is very likely to be high to very high over eastcentral Arabian Sea around the system centre during next 24 hours and phenomenal thereafter. It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 31st October.
- It will be very rough to high along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 24 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Damage Expected (over Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa) during next 12 hours:

- Minor damage to loose / unsecured structures.
- Some breaches in Kutcha road due to flooding.
- Minor damage to Banana trees and near coastal agriculture due to salt spray. Damage to ripe paddy crops.
- Minor damage to Kutcha embankments.

(v) Fishermen Warning

- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 1730 hrs IST of today, the 25th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

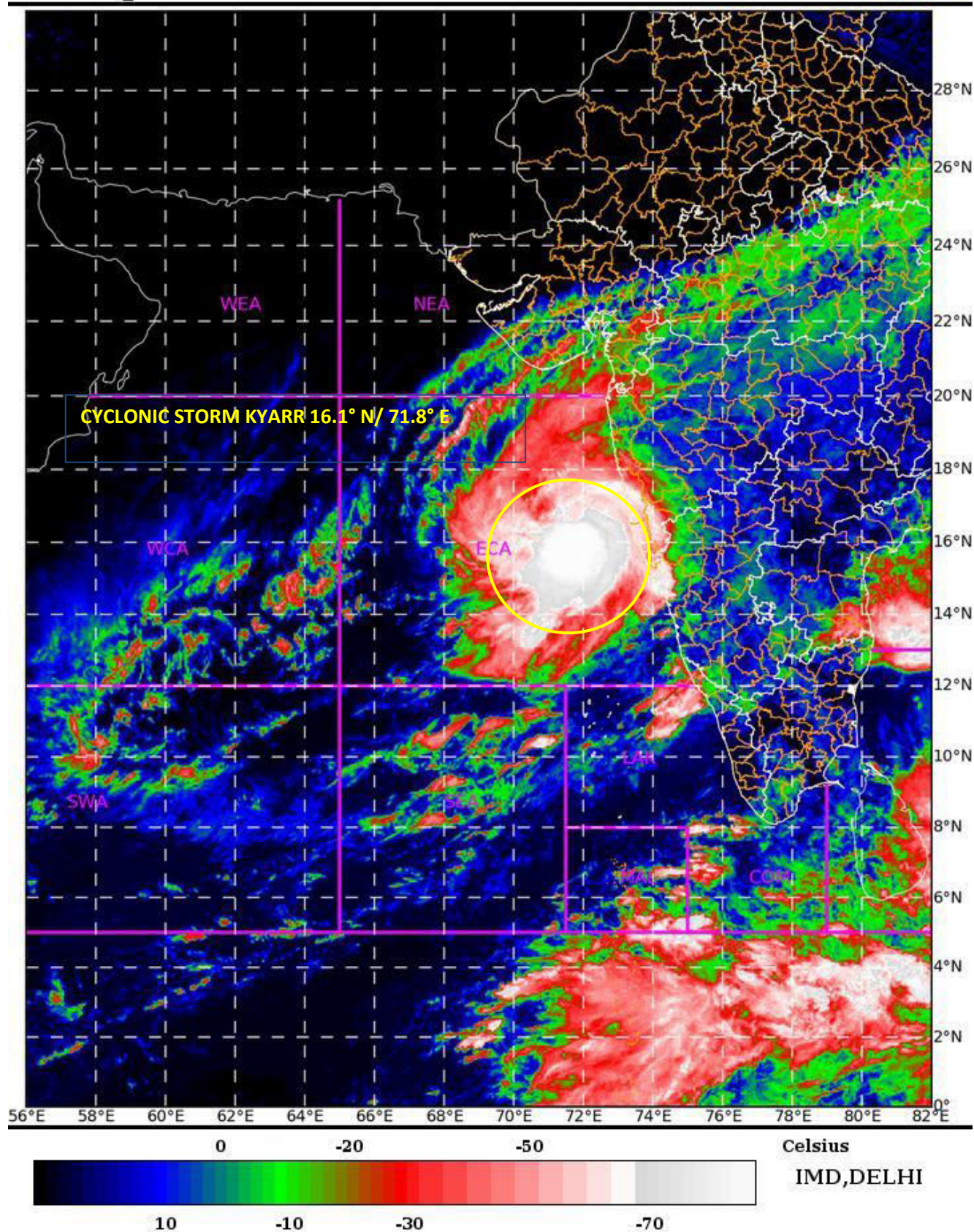
SAT : INSAT-3DR IMG

25-10-2019/(0615 to 0641) GMT

IMG_TIR1_TEMP 10.8 um

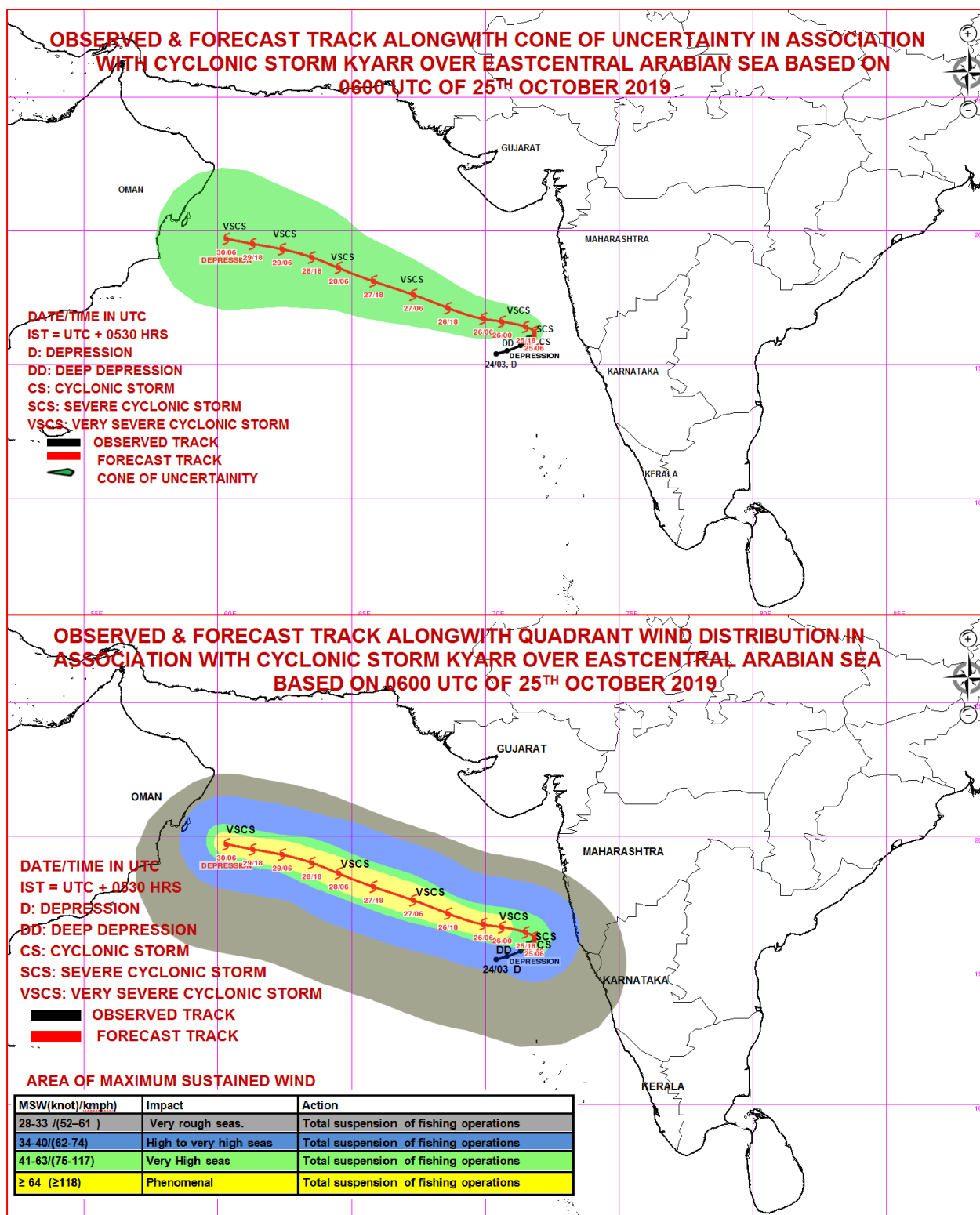
25-10-2019/(1145 to 1211) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1630 HOURS IST

DATED: 25.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Cyclonic Storm 'KYARR'** (Pronounced as Kyarr) over eastcentral Arabian Sea moved north-northeastwards with a speed of 04 Kmph during the past 06 hrs, and lay centred at 1430 hrs IST of today, the 25th October, 2019 near latitude 16.2°N and longitude 71.7°E over eastcentral Arabian Sea, about 190 km nearly to the west of Ratnagiri (Maharashtra), 340 km south-southwest of Mumbai (Maharashtra) and 1880 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify into a Severe Cyclonic Storm during next 06 hours and into a Very Severe Cyclonic Storm during subsequent 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.10.19/1430	16.2/71.7	80-90 gusting to 100	Cyclonic Storm
25.10.19/1730	16.3/71.6	90-100 gusting to 110	Severe Cyclonic Storm
25.10.19/2330	16.4/71.5	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/0530	16.6/70.6	125-135 gusting to 150	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/2330	17.1/68.6	150-160 gusting to 175	Very Severe Cyclonic Storm
27.10.19/1130	17.6/67.3	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/2330	18.1/65.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/1130	18.6/64.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
28.10.19/2330	19.0/63.5	150-160 gusting to 180	Very Severe Cyclonic Storm
29.10.19/1130	19.3/62.4	140-150 gusting to 165	Very Severe Cyclonic Storm
29.10.19/2330	19.5/61.3	135-145 gusting to 160	Very Severe Cyclonic Storm
30.10.19/1130	19.7/60.3	125-135 gusting to 150	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 12 hours.

(ii) Wind warning

- Gale wind, speed reaching 80-90 kmph gusting to 100 kmph is prevailing around the system centre over Eastcentral Arabian Sea. It is very likely to increase gradually becoming 90-100 kmph gusting to 110 kmph during next 06 hours and 170-180 kmph gusting to 200 kmph by 27th morning over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely to prevail along & off Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa during next 12 hours and decrease to 40 – 50 kmph gusting to 60 kmph during the subsequent 12 hours. Squally wind speed reaching 40 to 50 kmph gusting to 60 kmph, is likely to prevail along & off remaining coastal districts of north Maharashtra and northeast Arabian Sea off Gujarat coast during next 24 hours.

(iii) Sea condition

- The sea condition is very likely to be high to very high over eastcentral Arabian Sea around the system centre during next 24 hours and phenomenal thereafter. It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 31st October.
- It will be very rough to high along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 24 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Damage Expected (over Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa) during next 12 hours:

- Minor damage to loose / unsecured structures.
- Some breaches in Kutcha road due to flooding.
- Minor damage to Banana trees and near coastal agriculture due to salt spray. Damage to ripe paddy crops.
- Minor damage to Kutcha embankments.

(v) Fishermen Warning

- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 2030 hrs IST of today, the 25th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

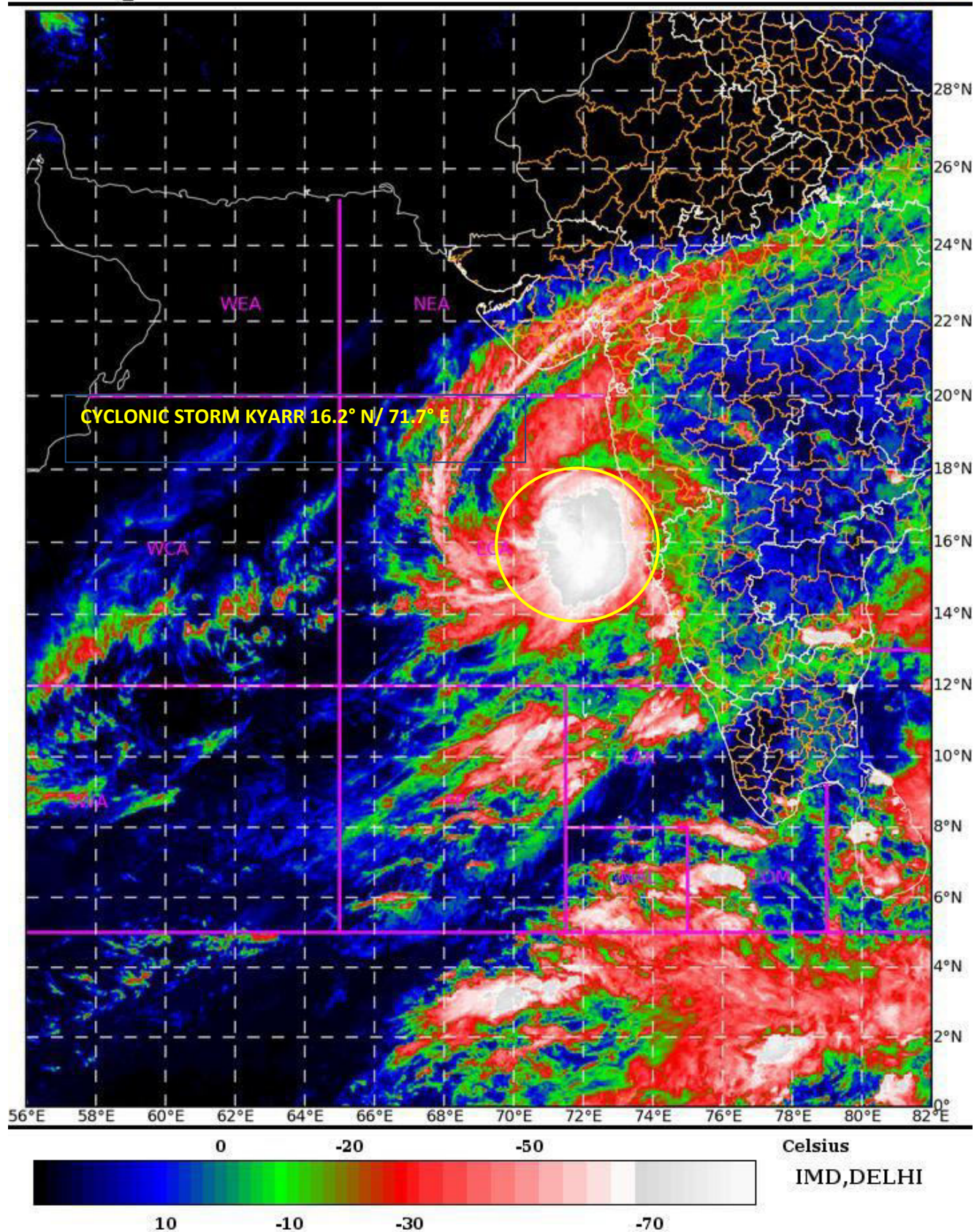
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

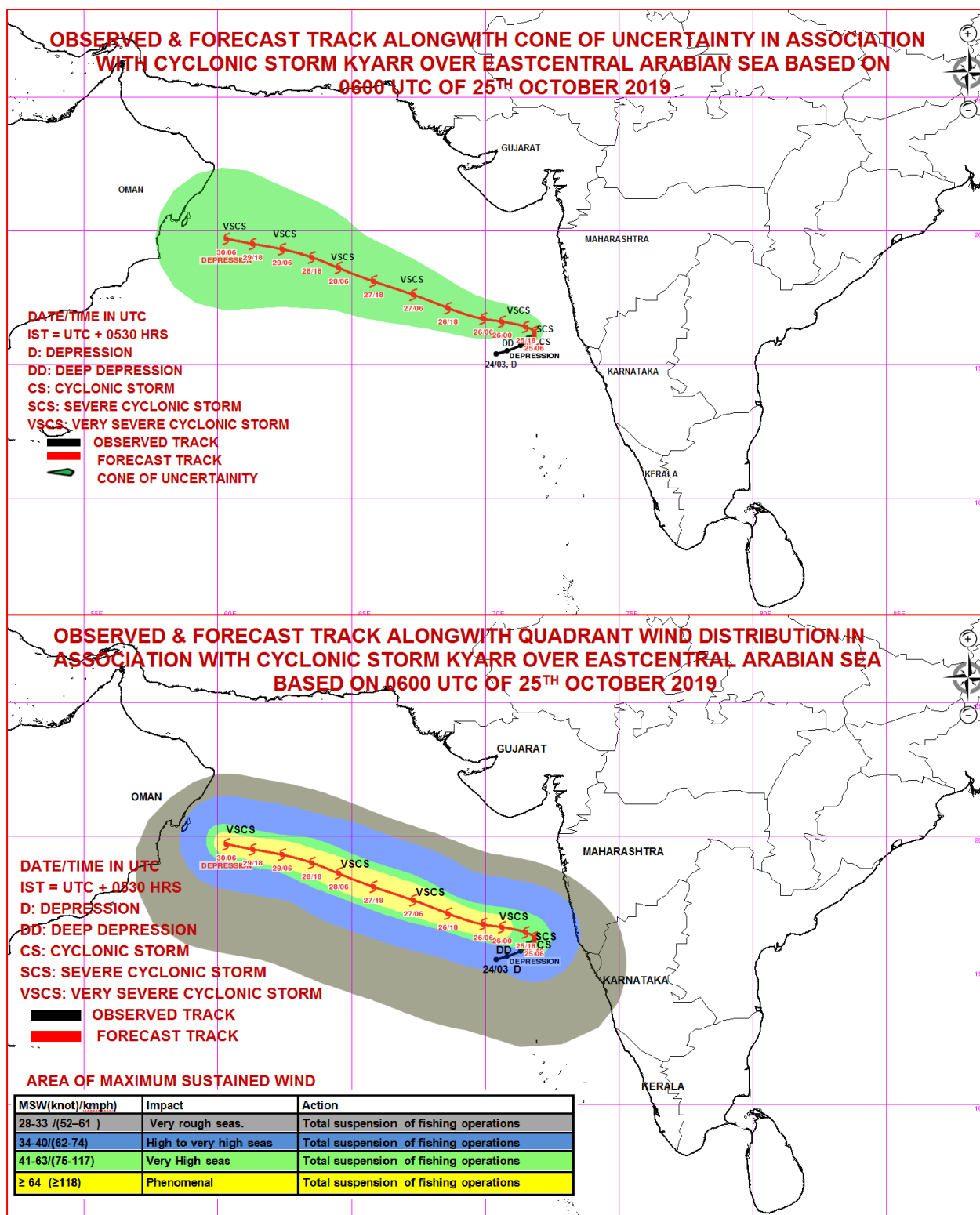
SAT : INSAT-3DR IMG 25-10-2019/(1015 to 1041) GMT

IMG_TIR1_TEMP 10.8 um 25-10-2019/(1545 to 1611) IST

ARABIAN_SEA



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. : 09 (ARB/03/2019)

TIME OF ISSUE: 2030 HOURS IST

DATED: 25.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

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ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) intensified into a Severe Cyclonic Storm over eastcentral Arabian Sea

The **Cyclonic Storm 'KYARR'** (Pronounced as Kyarr) over eastcentral Arabian Sea moved north-northwestwards with a speed of 04 Kmph during the past 06 hrs, intensified into a Severe Cyclonic Storm and lay centred at 1730 hrs IST of today, the 25th October, 2019 near latitude 16.3°N and longitude 71.7°E over eastcentral Arabian Sea, about 190 km nearly to the west of Ratnagiri (Maharashtra), 330 km south-southwest of Mumbai (Maharashtra) and 1870 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify into a Very Severe Cyclonic Storm during next 12 hours and further intensify into an extremely severe cyclonic storm during the subsequent 36 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.10.19/1730	16.3/71.7	90-100 gusting to 110	Severe Cyclonic Storm
25.10.19/2330	16.4/71.5	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/0530	16.6/70.6	120-130 gusting to 145	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/1730	16.9/69.3	155-165 gusting to 180	Very Severe Cyclonic Storm
27.10.19/0530	17.3/68.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1730	17.8/66.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/0530	18.3/65.1	160-170 gusting to 190	Extremely Severe Cyclonic Storm
28.10.19/1730	18.8/64.0	155-165 gusting to 180	Very Severe Cyclonic Storm
29.10.19/0530	19.1/63.0	145-155 gusting to 170	Very Severe Cyclonic Storm
29.10.19/1730	19.4/61.8	135-145 gusting to 160	Very Severe Cyclonic Storm
30.10.19/0530	19.6/60.8	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1730	19.6/59.8	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 12 hours.

(ii) Wind warning

- Gale wind, speed reaching 90-100 kmph gusting to 110 kmph is prevailing around the system centre over Eastcentral Arabian Sea. It is very likely to increase gradually becoming 100-110 kmph gusting to 120 kmph during next 06 hours and 120-130 kmph gusting to 145 kmph by 26th morning over eastcentral & adjoining westcentral Arabian Sea around the system centre and it is very likely to increase further becoming 170-180 kmph gusting to 200 kmph by 27th morning around the system centre.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely to prevail along & off Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa during next 12 hours and decrease to 40 – 50 kmph gusting to 60 kmph during the subsequent 12 hours. Squally wind speed reaching 40 to 50 kmph gusting to 60 kmph, is likely to prevail along & off remaining coastal districts of north Maharashtra and northeast Arabian Sea off Gujarat coast during next 24 hours.

(iii) Sea condition

- The sea condition is very likely to be high to very high over eastcentral Arabian Sea around the system centre during next 12 hours and phenomenal thereafter. It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 31st October.
- It will be very rough to high along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 2330 hrs IST of today, the 25th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

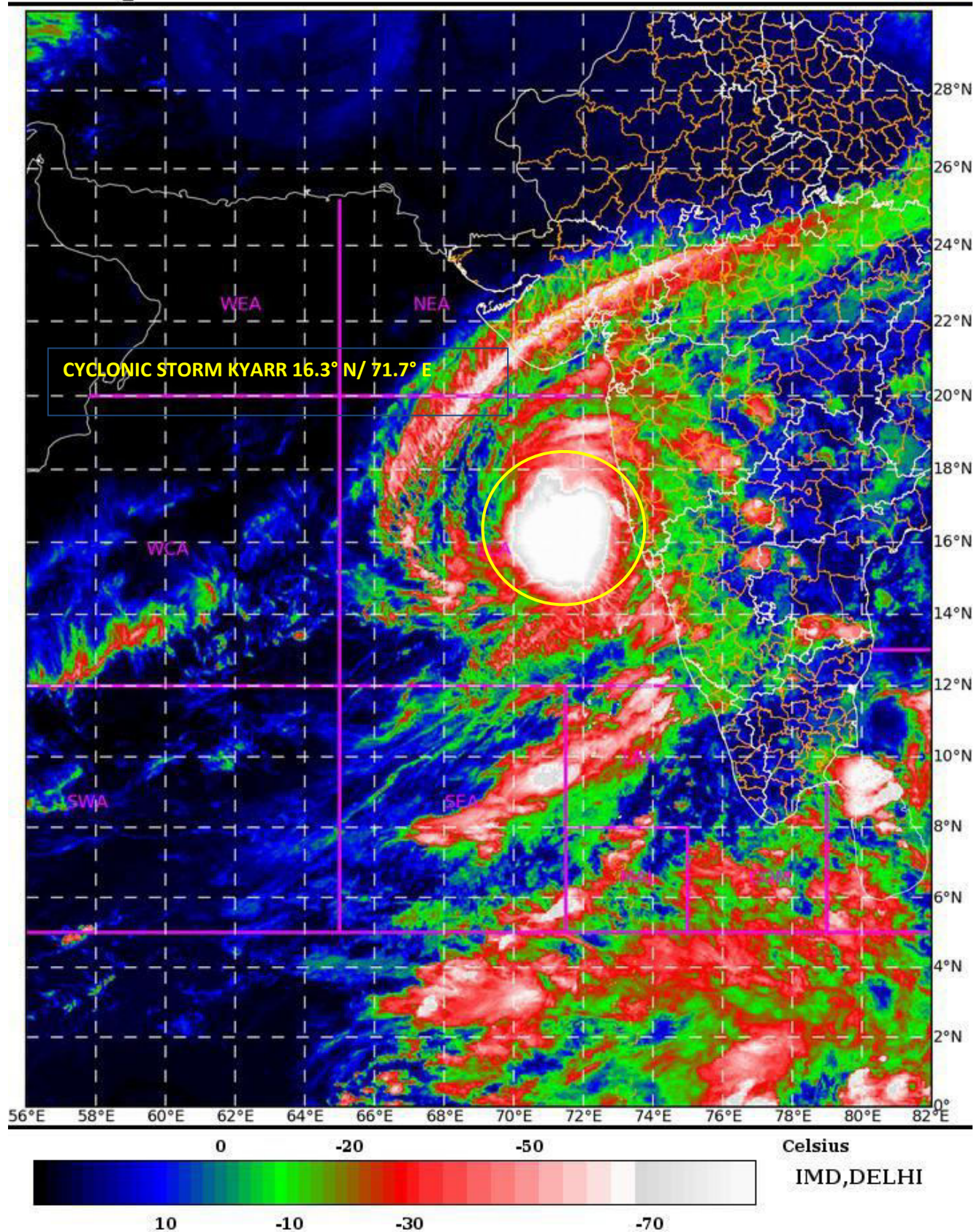
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

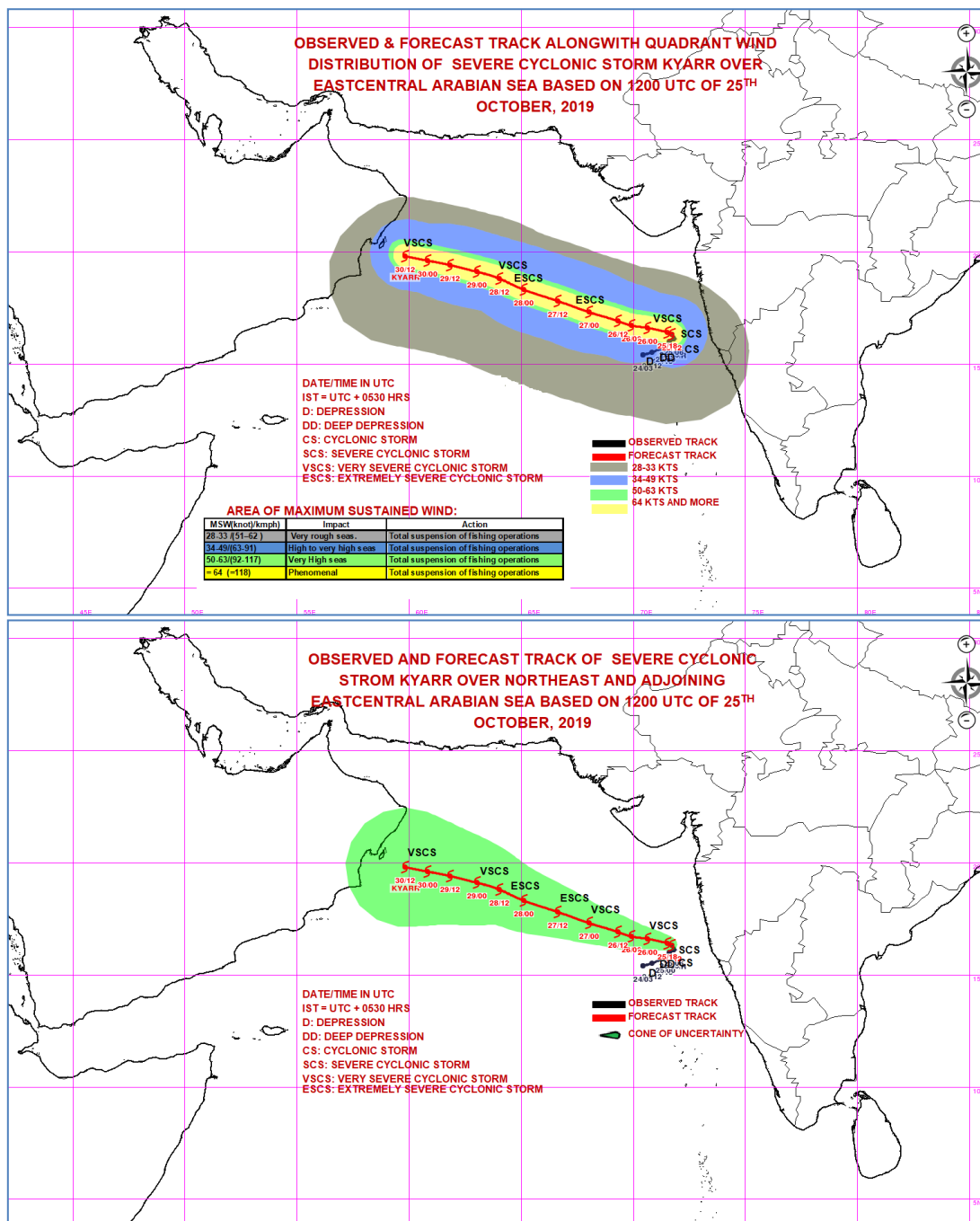
SAT : INSAT-3DR IMG 25-10-2019/(1345 to 1411) GMT

IMG_TIR1_TEMP 10.8 um 25-10-2019/(1915 to 1941) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 2230 HOURS IST

DATED: 25.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

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CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Severe Cyclonic Storm 'KYARR'** (Pronounced as Kyarr) over eastcentral Arabian Sea moved slowly northwards with a speed of 02 Kmph during the past 06 hrs and lay centred at 2030 hrs IST of today, the 25th October, 2019 near latitude 16.3°N and longitude 71.7°E over eastcentral Arabian Sea, about 190 km nearly to the west of Ratnagiri (Maharashtra), 330 km south-southwest of Mumbai (Maharashtra) and 1870 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify into a Very Severe Cyclonic Storm during next 12 hours and further intensify into an extremely severe cyclonic storm during the subsequent 36 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.10.19/2030	16.3/71.7	95-105 gusting to 115	Severe Cyclonic Storm
25.10.19/2330	16.4/71.5	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/0530	16.6/70.6	120-130 gusting to 145	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
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27.10.19/1730	17.8/66.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/0530	18.3/65.1	160-170 gusting to 190	Extremely Severe Cyclonic Storm
28.10.19/1730	18.8/64.0	155-165 gusting to 180	Very Severe Cyclonic Storm
29.10.19/0530	19.1/63.0	145-155 gusting to 170	Very Severe Cyclonic Storm
29.10.19/1730	19.4/61.8	135-145 gusting to 160	Very Severe Cyclonic Storm
30.10.19/0530	19.6/60.8	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1730	19.6/59.8	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 12 hours.

(ii) Wind warning

- Gale wind, speed reaching 95-105 kmph gusting to 115 kmph is prevailing around the system centre over Eastcentral Arabian Sea. It is very likely to increase gradually becoming 100-110 kmph gusting to 120 kmph during next 03 hours and 120-130 kmph gusting to 145 kmph by 26th morning over eastcentral & adjoining westcentral Arabian Sea around the system centre and it is very likely to increase further becoming 170-180 kmph gusting to 200 kmph by 27th morning around the system centre.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely to prevail along & off Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa during next 12 hours and decrease to 40 – 50 kmph gusting to 60 kmph during the subsequent 12 hours. Squally wind speed reaching 40 to 50 kmph gusting to 60 kmph, is likely to prevail along & off remaining coastal districts of north Maharashtra and northeast Arabian Sea off Gujarat coast during next 24 hours.

(iii) Sea condition

- The sea condition is very likely to be high to very high over eastcentral Arabian Sea around the system centre during next 12 hours and phenomenal thereafter. It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 31st October.
- It will be very rough to high along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 0230 hrs IST of today, the 26th October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

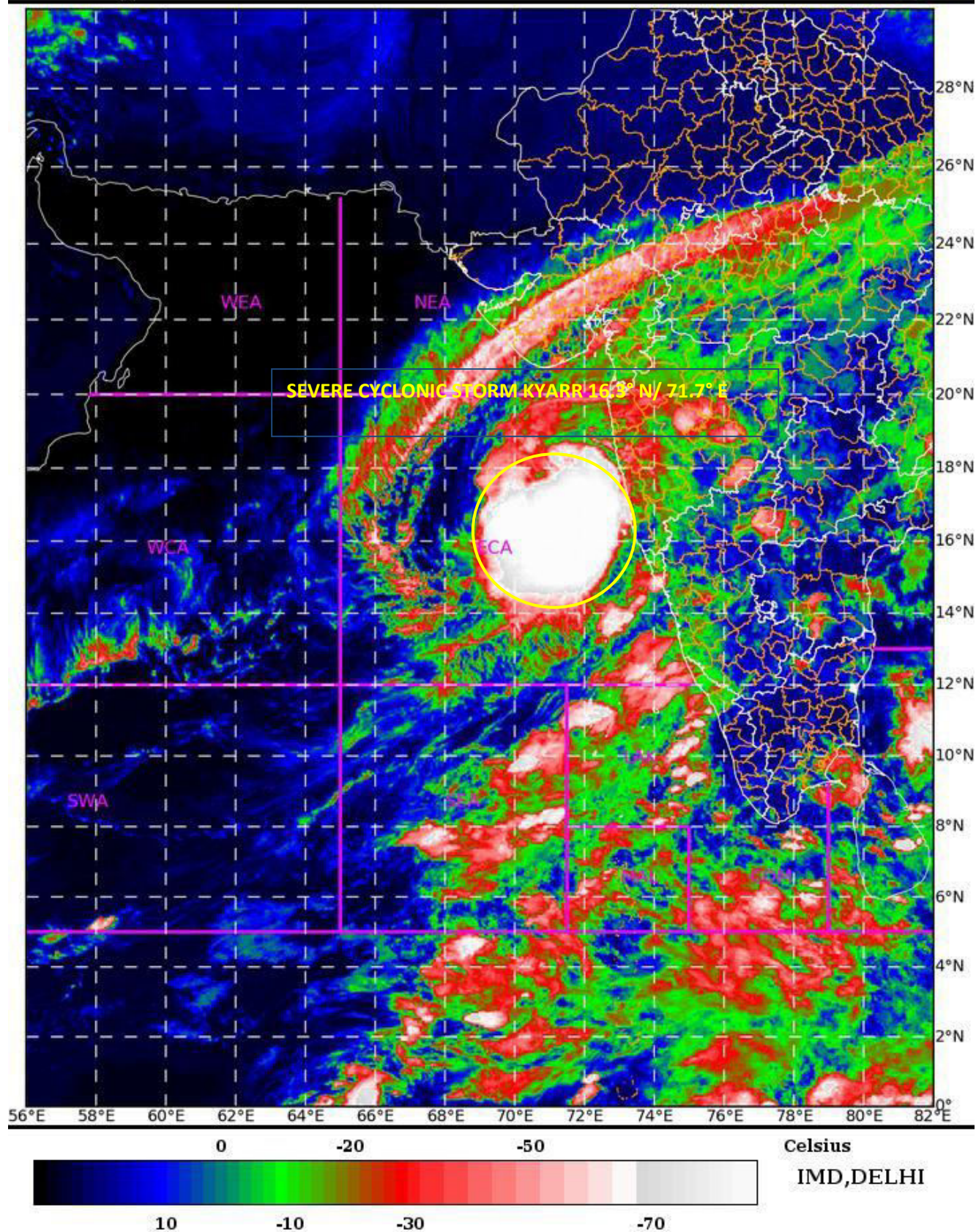
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

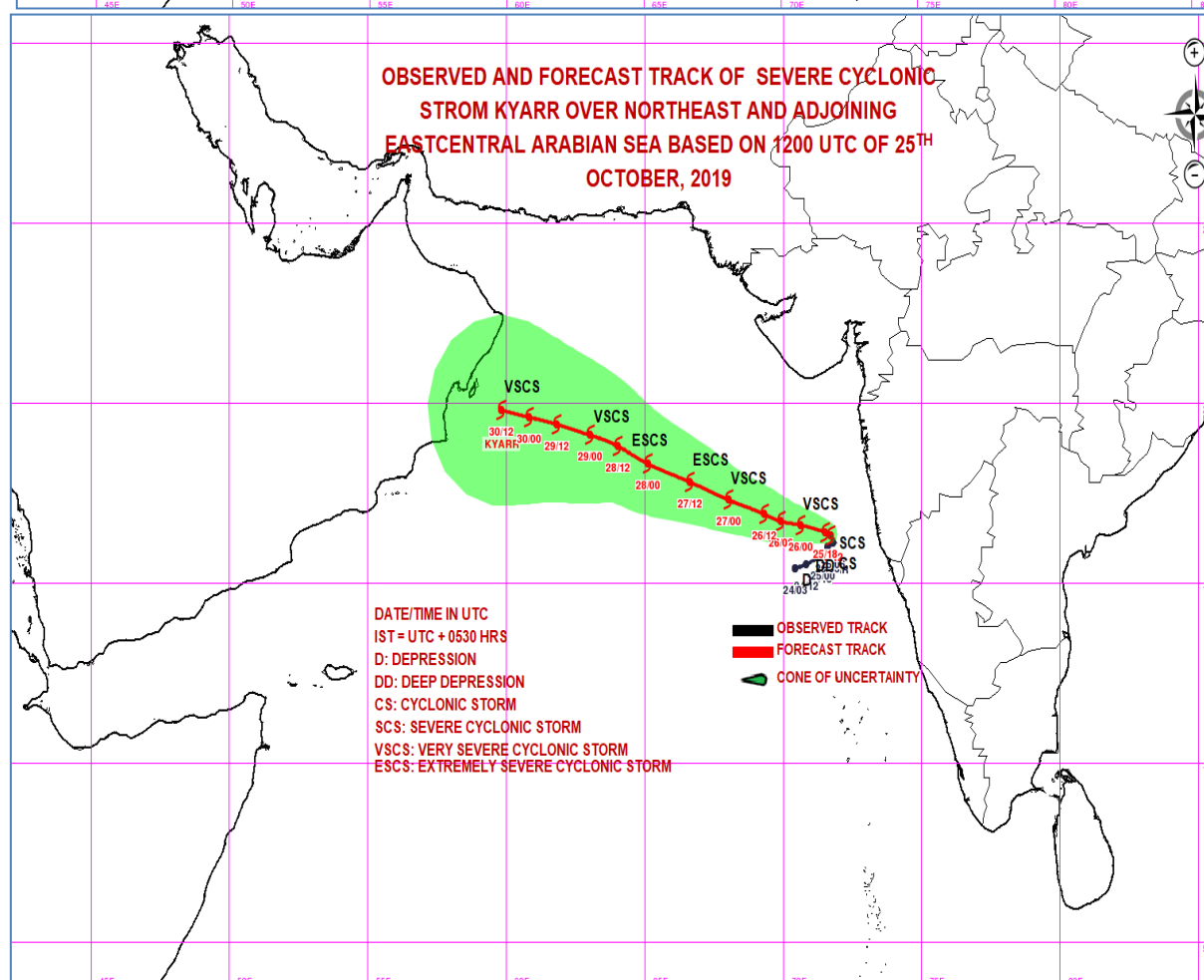
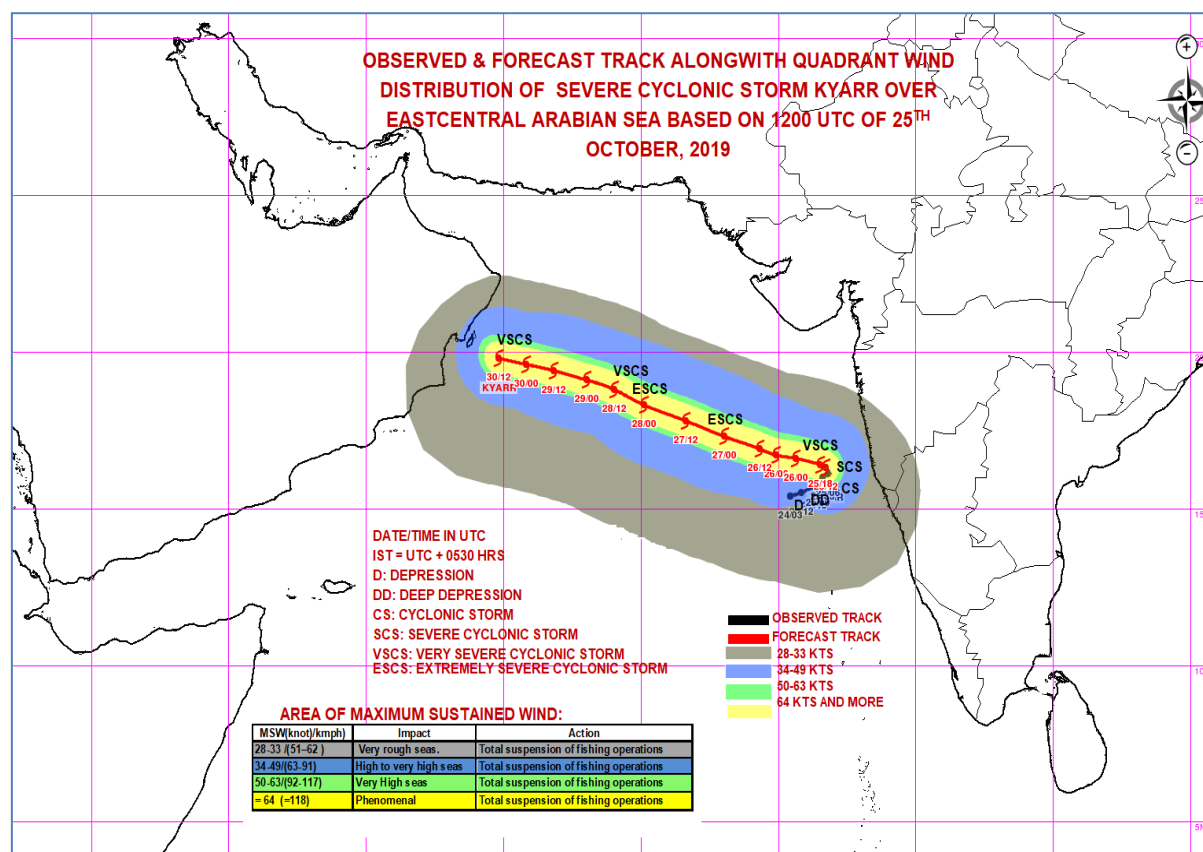
SAT : INSAT-3DR IMG 25-10-2019/(1615 to 1641) GMT

IMG_TIR1_TEMP 10.8 um 25-10-2019/(2145 to 2211) IST

ARABIAN SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0200 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

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PIB MOES (FAX NO. 23389042)

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CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 04 Kmph during the past 06 hrs and lay centred at 2330 hrs IST of 25th October, 2019 near latitude 16.4°N and longitude 71.5°E over eastcentral Arabian Sea, about 200 km nearly to the west of Ratnagiri (Maharashtra), 310 km south-southwest of Mumbai (Maharashtra) and 1870 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify into a Very Severe Cyclonic Storm during next 06 hours and further intensify into an extremely severe cyclonic storm during the subsequent 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.10.19/2330	16.4/71.5	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/0530	16.6/70.6	120-130 gusting to 145	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/1730	16.9/69.3	155-165 gusting to 180	Very Severe Cyclonic Storm
26.10.19/2330	17.1/68.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1130	17.5/67.4	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/2330	18.0/66.0	160-170 gusting to 190	Extremely Severe Cyclonic Storm
28.10.19/1130	18.5/64.8	155-165 gusting to 180	Very Severe Cyclonic Storm
28.10.19/2330	18.9/63.8	145-155 gusting to 170	Very Severe Cyclonic Storm
29.10.19/1130	19.2/62.7	135-145 gusting to 160	Very Severe Cyclonic Storm
29.10.19/2330	19.4/61.8	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1130	19.6/60.9	120-130 gusting to 145	Very Severe Cyclonic Storm
30.10.19/2330	19.7/60.1	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 12 hours.

(ii) Wind warning

- Gale wind, speed reaching 100-110 kmph gusting to 120 kmph is prevailing around the system centre over Eastcentral Arabian Sea. It is very likely to increase gradually becoming 120-130 kmph gusting to 145 kmph by 26th morning over eastcentral & adjoining westcentral Arabian Sea around the system centre and it is very likely to increase further becoming 170-180 kmph gusting to 200 kmph by 27th morning around the system centre.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely to prevail along & off Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa during next 06 hours and decrease to 40 – 50 kmph gusting to 60 kmph during the subsequent 12 hours. Squally wind speed reaching 40 to 50 kmph gusting to 60 kmph, is likely to prevail along & off remaining coastal districts of north Maharashtra and northeast Arabian Sea off Gujarat coast during next 24 hours.

(iii) Sea condition

- The sea condition is very likely to be very high over eastcentral Arabian Sea around the system centre during next 06 hours and phenomenal thereafter. It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 31st October.
- It will be very rough to high along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 06 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 12 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 0530 hrs IST of the 26th October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

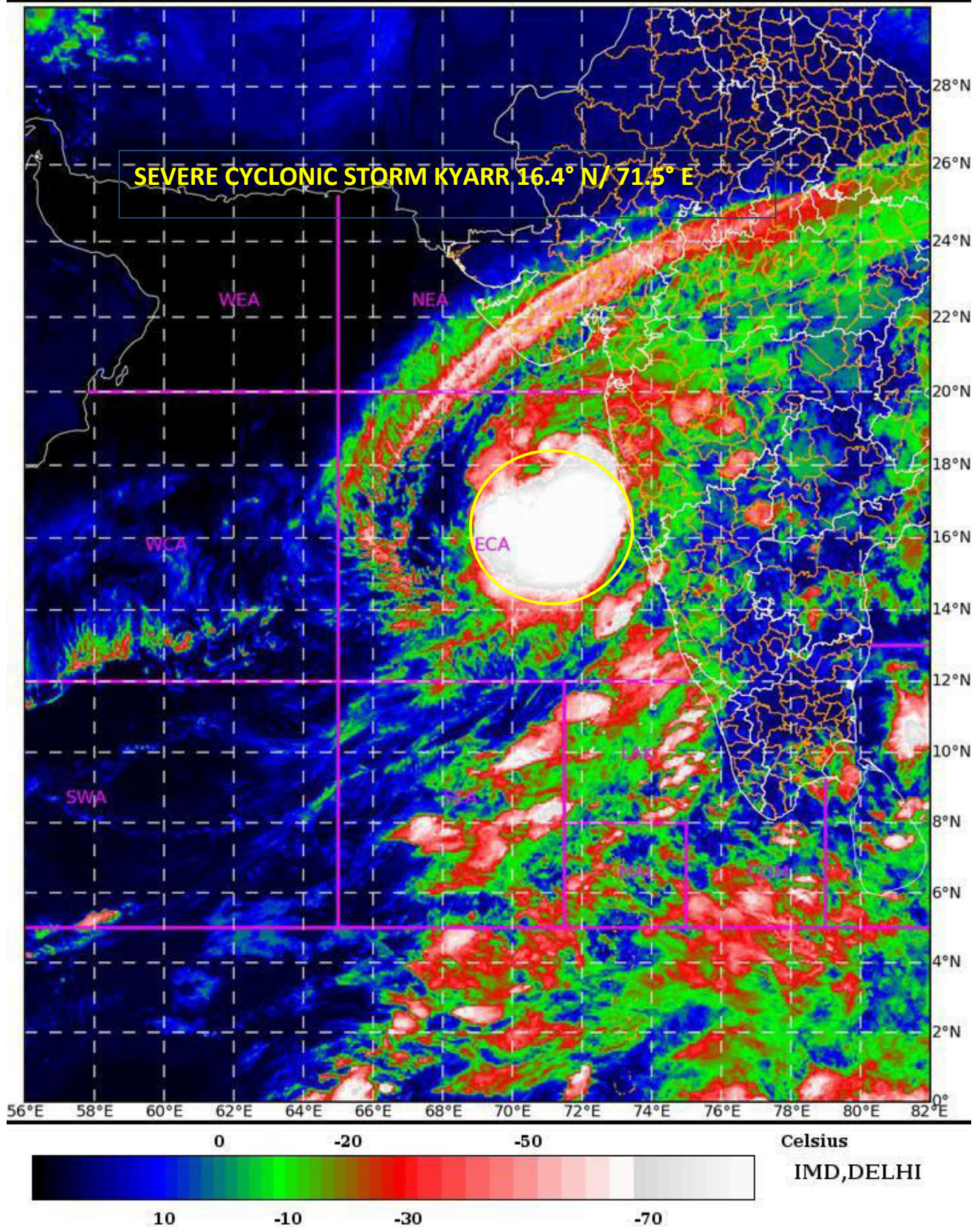
SAT : INSAT-3DR IMG

25-10-2019/(1645 to 1711) GMT

IMG_TIR1_TEMP 10.8 um

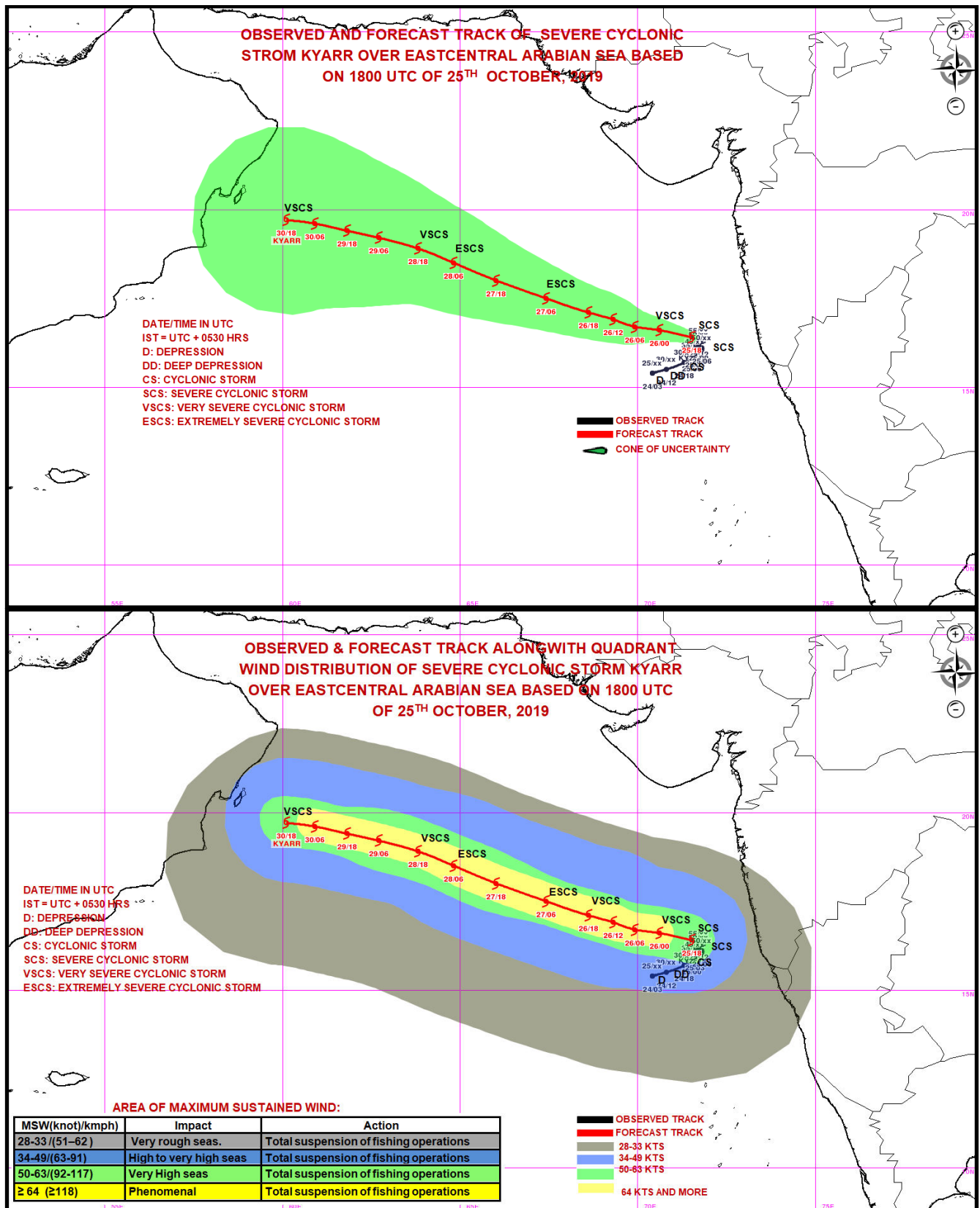
25-10-2019/(2215 to 2241) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0530 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 09 Km/h during the past 06 hrs and lay centred at 0230 hrs IST of 26th October, 2019 near latitude 16.5°N and longitude 71.2°E over eastcentral Arabian Sea, about 230 km nearly to the west of Ratnagiri (Maharashtra), 320 km south-southwest of Mumbai (Maharashtra) and 1840 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify into a Very Severe Cyclonic Storm during next 03 hours and further intensify into an extremely severe cyclonic storm during the subsequent 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/0230	16.5/71.2	100-110 gusting to 120	Severe Cyclonic Storm
26.10.19/0530	16.6/70.6	120-130 gusting to 145	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/1730	16.9/69.3	155-165 gusting to 180	Very Severe Cyclonic Storm
26.10.19/2330	17.1/68.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1130	17.5/67.4	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/2330	18.0/66.0	160-170 gusting to 190	Extremely Severe Cyclonic Storm
28.10.19/1130	18.5/64.8	155-165 gusting to 180	Very Severe Cyclonic Storm
28.10.19/2330	18.9/63.8	145-155 gusting to 170	Very Severe Cyclonic Storm
29.10.19/1130	19.2/62.7	135-145 gusting to 160	Very Severe Cyclonic Storm
29.10.19/2330	19.4/61.8	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1130	19.6/60.9	120-130 gusting to 145	Very Severe Cyclonic Storm
30.10.19/2330	19.7/60.1	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places is very likely over coastal districts of Karnataka, Goa & south Konkan and isolated heavy rainfall over north Konkan during next 06 hours.

(ii) Wind warning

- Gale wind, speed reaching 100-110 kmph gusting to 120 kmph is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 120-130 kmph gusting to 145 kmph from 26th morning onwards over eastcentral & adjoining westcentral Arabian Sea around the system centre. It is very likely to increase further becoming 170-180 kmph gusting to 200 kmph by 27th morning around the system centre.
- Prevailing squally wind speed reaching 55-65 kmph gusting to 75 kmph along & off Ratnagiri, Sindhudurg, Raigad districts of Maharashtra & Goa is likely to decrease from 26th morning and is very likely to become 40 – 50 kmph gusting to 60 kmph during the subsequent 12 hours. Squally wind speed reaching 40 to 50 kmph gusting to 60 kmph, is likely to prevail along & off remaining coastal districts of north Maharashtra and northeast Arabian Sea off Gujarat coast during next 12 hours.

(iii) Sea condition

- The very high sea condition prevailing over eastcentral Arabian Sea around the system centre is very likely to become phenomenal during next 06 hours. It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 31st October.
- It will be very rough along & off Maharashtra, Goa coasts and rough to very rough along & off north Karnataka coast during next 06 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 12 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 0830 hrs IST of the 26th October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

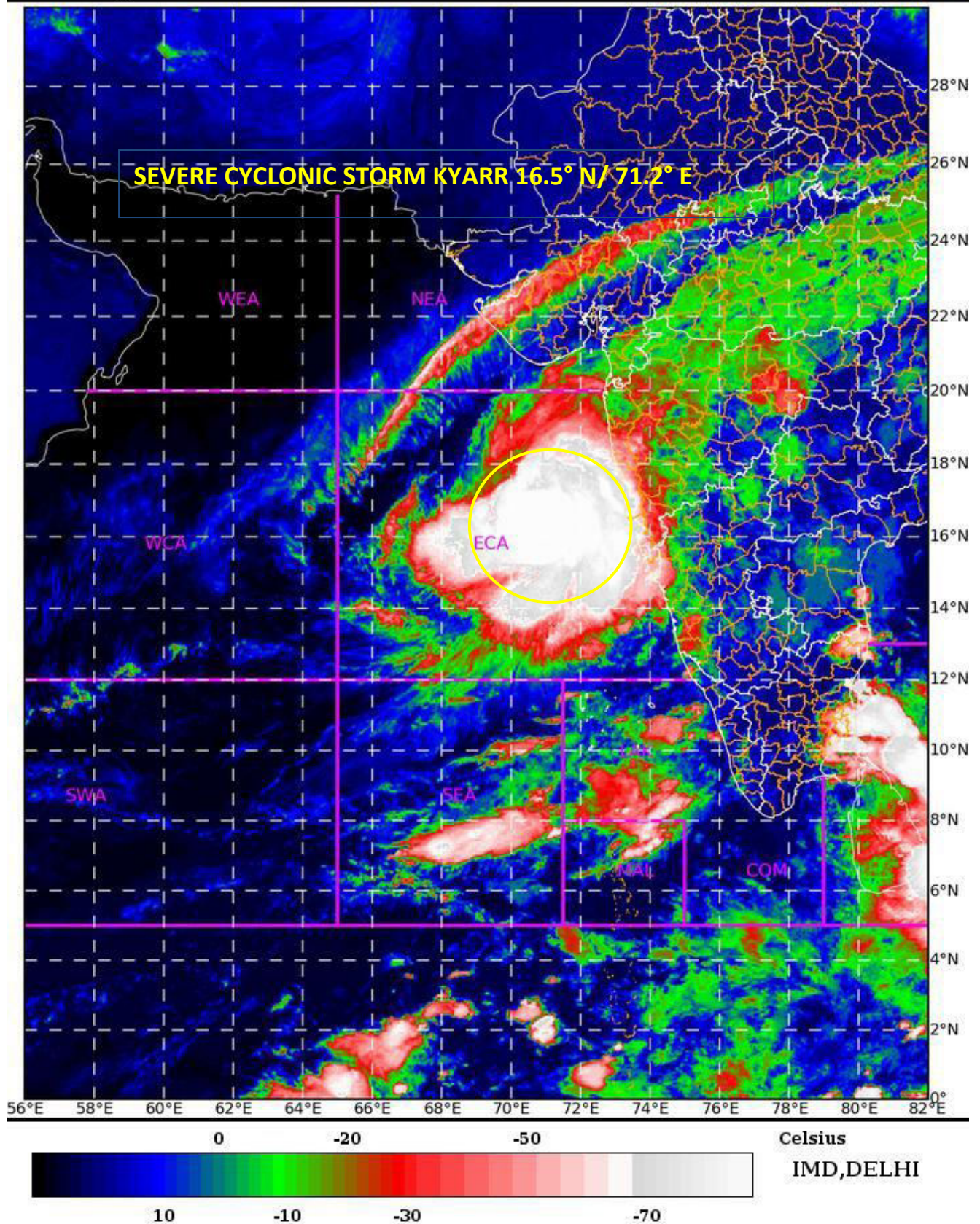
SAT : INSAT-3DR IMG

25-10-2019/(2315 to 2341) GMT

IMG_TIR1_TEMP 10.8 um

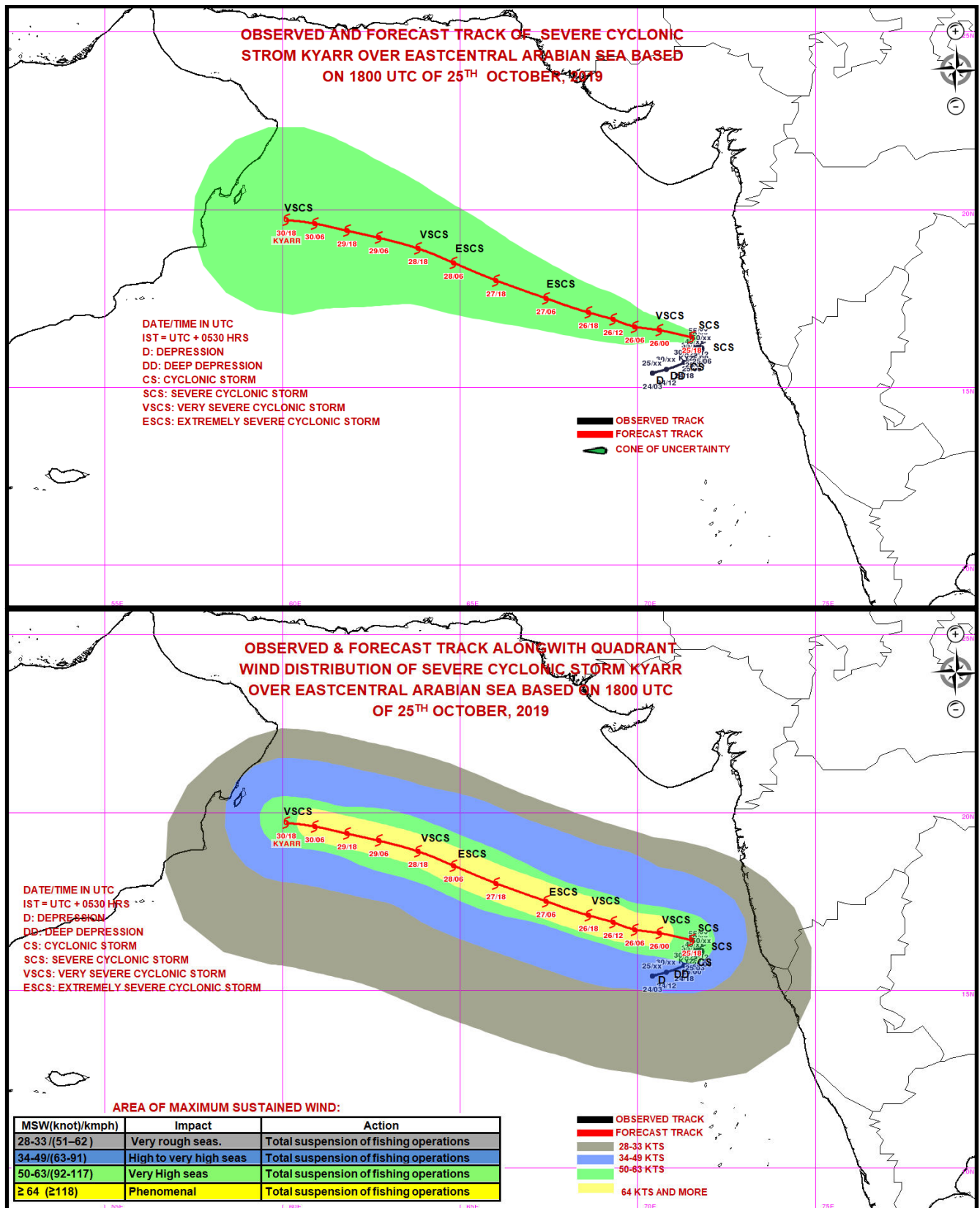
26-10-2019/(0445 to 0511) IST

ARABIAN SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0800 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) intensified into a Very Severe Cyclonic Storm over eastcentral Arabian Sea

The **Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 12 Kmph during the past 06 hrs, intensified **into a Very Severe Cyclonic Storm** and lay centred at 0530 hrs IST of 26th October, 2019 near latitude 16.5°N and longitude 70.8°E over eastcentral Arabian Sea, about 270 km west-southwest of Ratnagiri (Maharashtra), 360 km south-southwest of Mumbai (Maharashtra) and 1780 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to further intensify into an extremely severe cyclonic storm during next 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/0530	16.5/70.8	120-130 gusting to 145	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/1730	16.9/69.3	155-165 gusting to 180	Very Severe Cyclonic Storm
26.10.19/2330	17.1/68.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/0530	17.3/68.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1730	17.7/66.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/0530	18.2/65.4	155-165 gusting to 180	Very Severe Cyclonic Storm
28.10.19/1730	18.6/64.3	145-155 gusting to 170	Very Severe Cyclonic Storm
29.10.19/0530	19.0/63.3	135-145 gusting to 160	Very Severe Cyclonic Storm
29.10.19/1730	19.3/62.3	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/0530	19.6/61.4	120-130 gusting to 145	Very Severe Cyclonic Storm
30.10.19/1730	19.8/60.5	110-120 gusting to 135	Severe Cyclonic Storm
31.10.19/0530	20.1/59.6	100-110 gusting to 125	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at many places very likely over coastal districts Konkan & Goa and south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 120-130 kmph gusting to 145 kmph is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 170-180 kmph gusting to 200 kmph from 27th morning onwards over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 12 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October.
It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

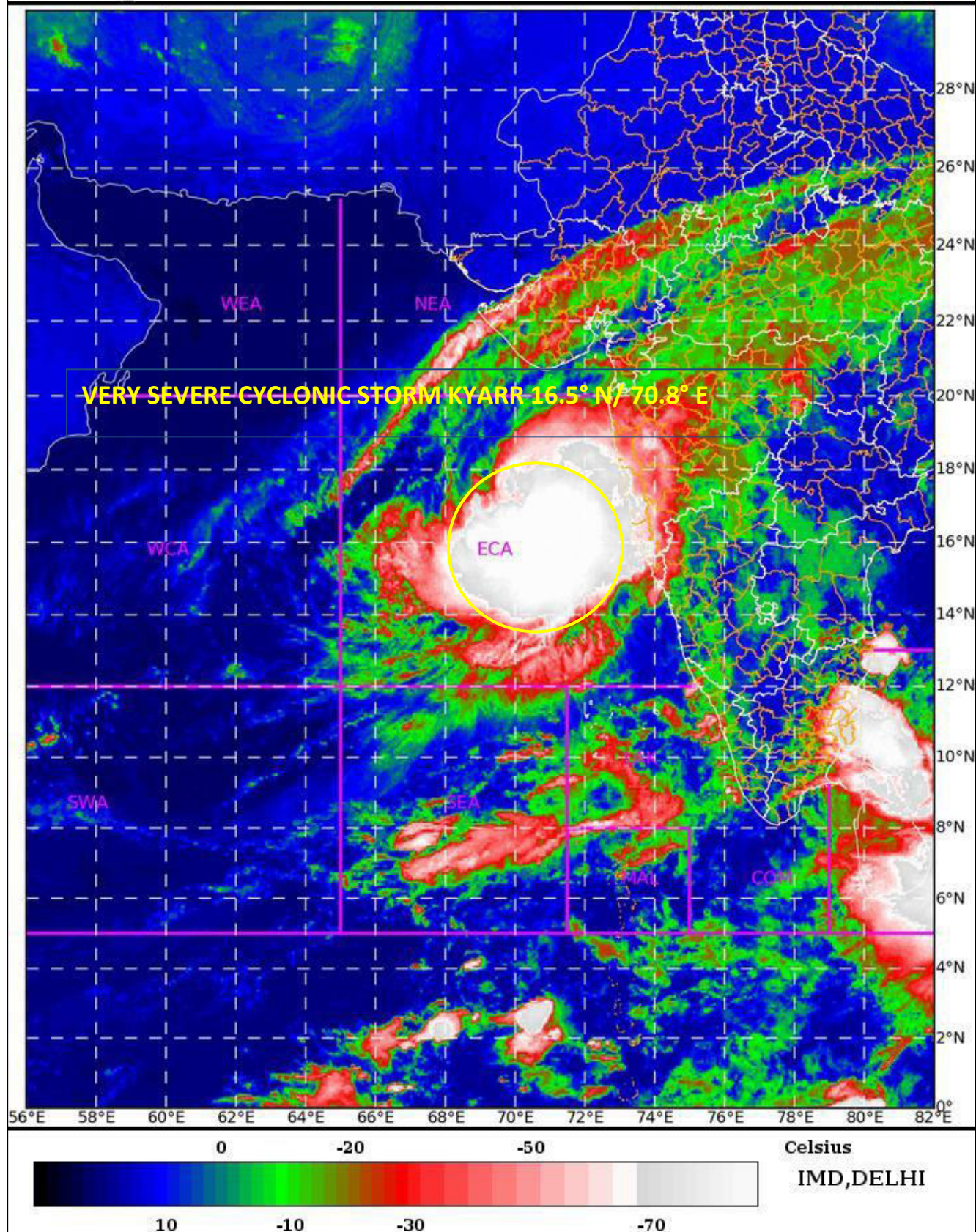
- The fishermen are advised not to venture into along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 28th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 1130 hrs IST of the 26th October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

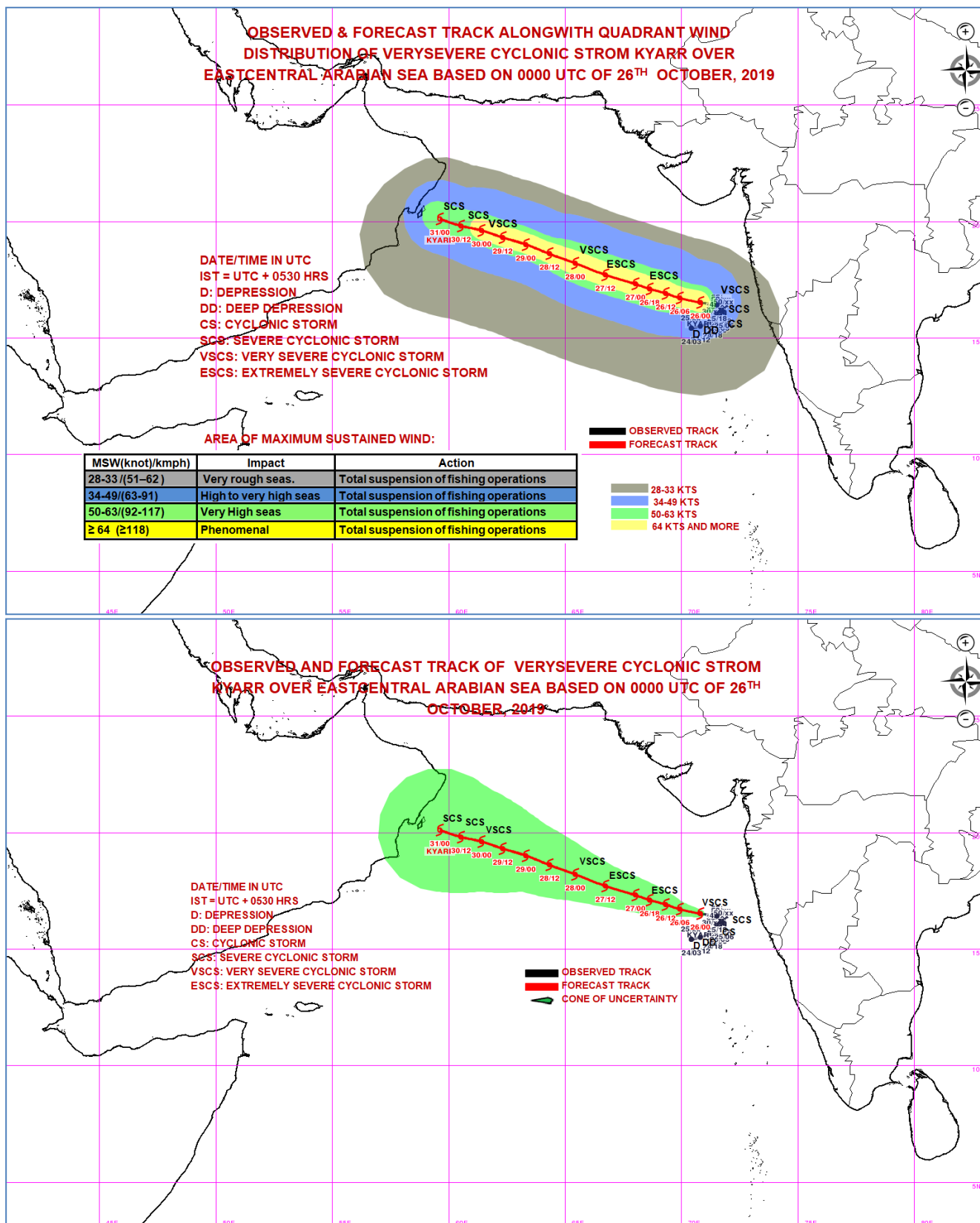
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 26-10-2019/(0130 to 0157) GMT
 IMG_TIR1_TEMP 10.8 um 26-10-2019/(0700 to 0727) IST
 ARABIAN_SEA



ECA= East Central Arabian Sea

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 (ARB/03/2019)

TIME OF ISSUE: 1130 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Very Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 12 Kmph during the past 06 hrs, and lay centred at 0830 hrs IST of 26th October, 2019 near latitude 16.6°N and longitude 70.5°E over eastcentral Arabian Sea, about 300 km west-southwest of Ratnagiri (Maharashtra), 370 km south-southwest of Mumbai (Maharashtra) and 1740 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify further into an extremely severe cyclonic storm during next 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/0830	16.6/70.5	125-135 gusting to 150	Very Severe Cyclonic Storm
26.10.19/1130	16.7/69.9	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/1730	16.9/69.3	155-165 gusting to 180	Very Severe Cyclonic Storm
26.10.19/2330	17.1/68.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/0530	17.3/68.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1730	17.7/66.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/0530	18.2/65.4	155-165 gusting to 180	Very Severe Cyclonic Storm
28.10.19/1730	18.6/64.3	145-155 gusting to 170	Very Severe Cyclonic Storm
29.10.19/0530	19.0/63.3	135-145 gusting to 160	Very Severe Cyclonic Storm
29.10.19/1730	19.4/62.3	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/0530	19.6/61.4	120-130 gusting to 145	Very Severe Cyclonic Storm
30.10.19/1730	19.5/60.7	110-120 gusting to 135	Severe Cyclonic Storm
31.10.19/0530	19.3/60.0	100-110 gusting to 125	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at many places with heavy falls at isolated places very likely over Ratnagiri, Sindhudurg Districts of Maharashtra, Goa and Uttara Kannada & Uduppi districts of Karnataka during next 12 hours. Light to moderate rainfall at a few places likely over south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 125-135 kmph gusting to 150 kmph is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 170-180 kmph gusting to 200 kmph from 27th morning onwards over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 12 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October and improve gradually thereafter becoming High to very high during 29th – 30th October.
It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 1430 hrs IST of the 26th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

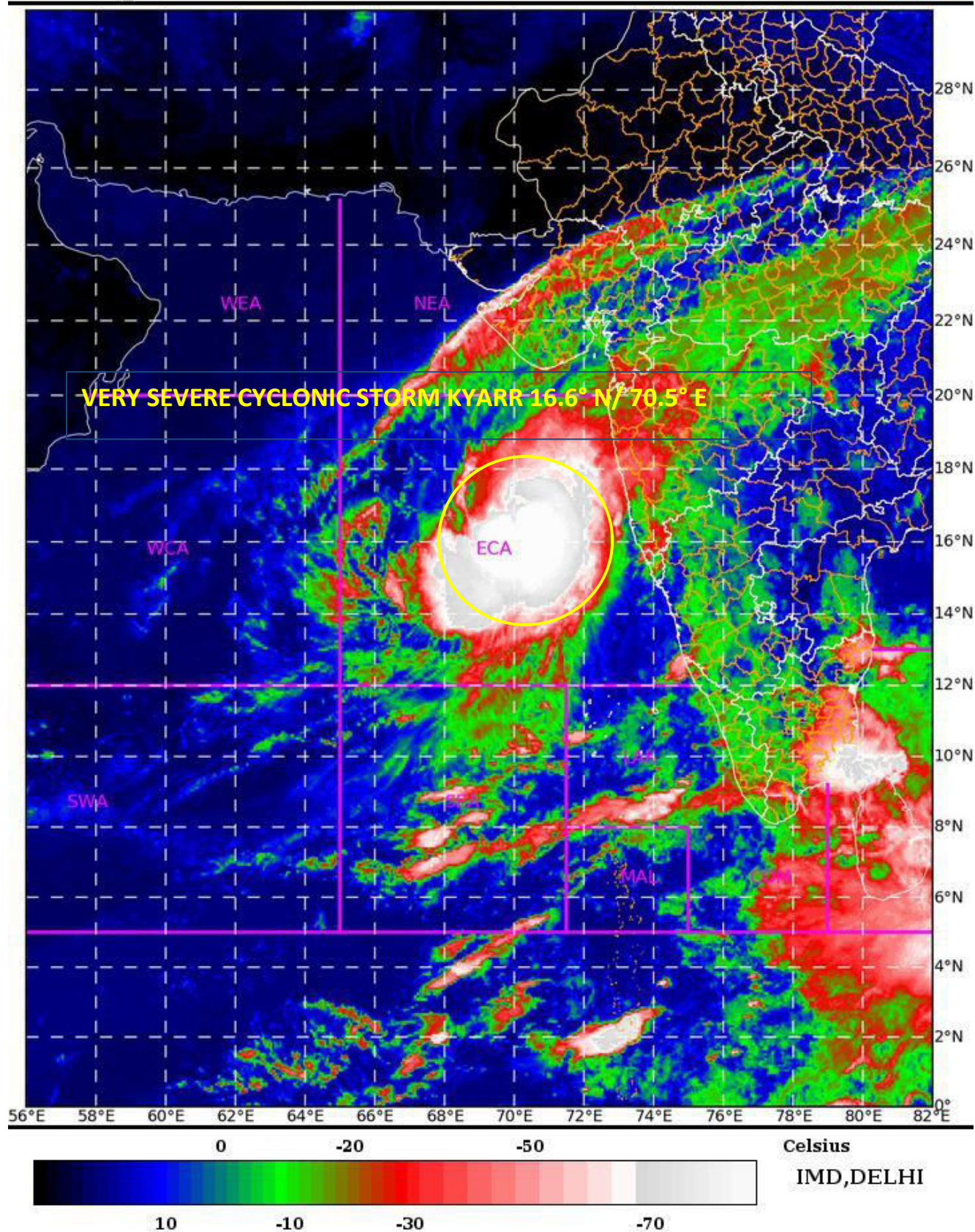
SAT : INSAT-3D IMG

26-10-2019/(0500 to 0527) GMT

IMG_TIR1_TEMP 10.8 um

26-10-2019/(1030 to 1057) IST

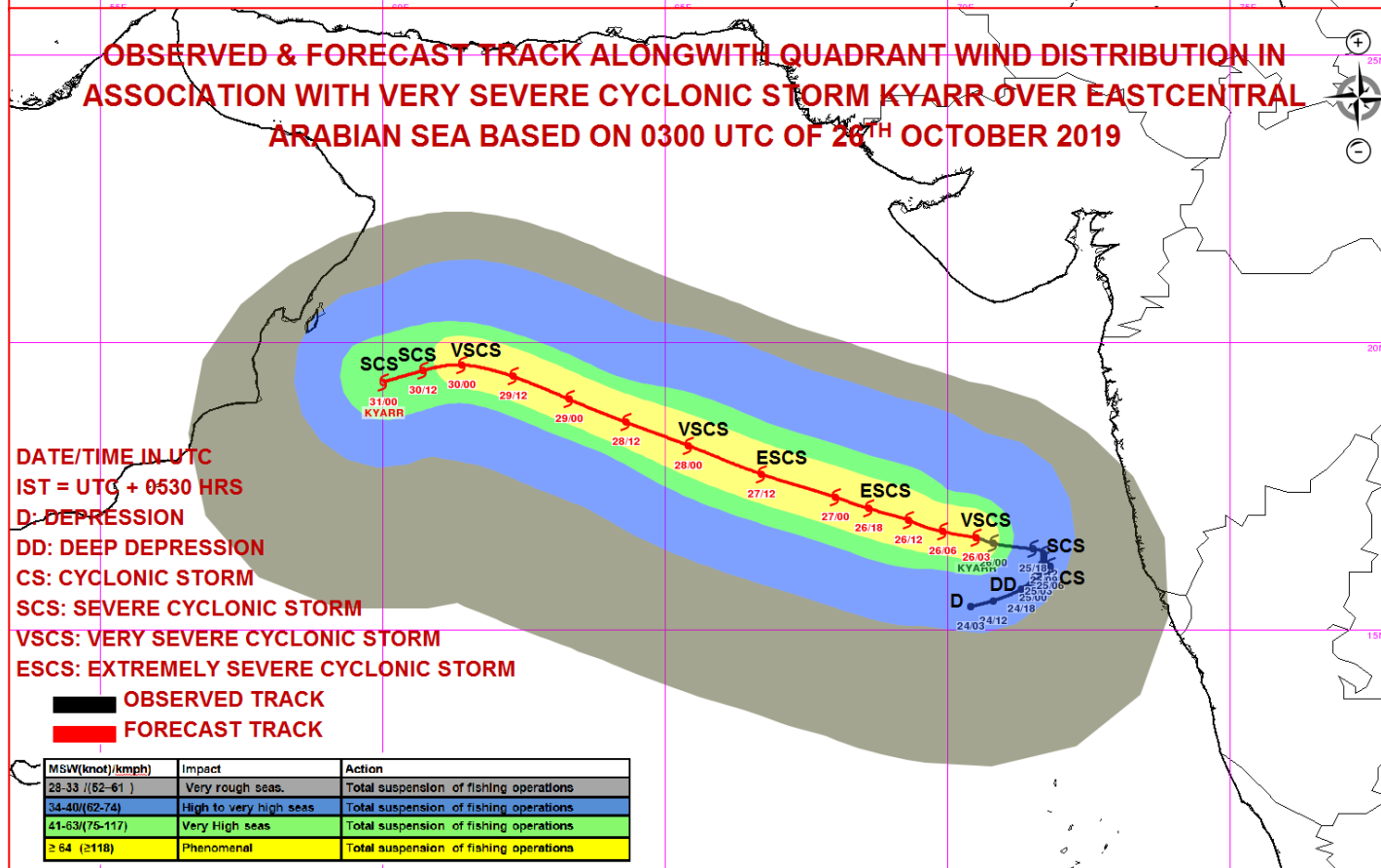
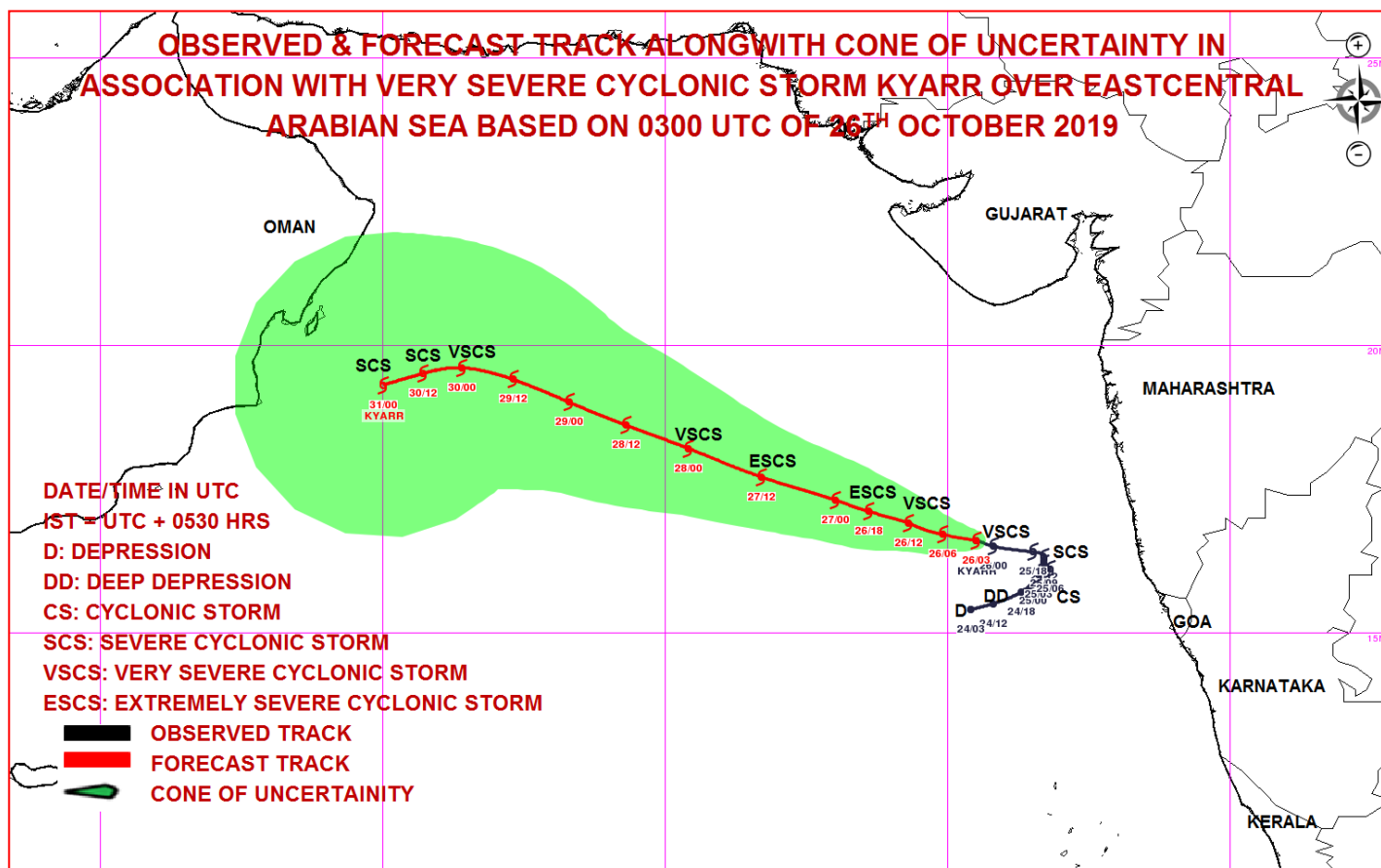
ARABIAN_SEA



ECA= East Central Arabian Sea

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 (ARB/03/2019)

TIME OF ISSUE: 1430 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Very Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 14 Kmph during the past 06 hrs, and lay centred at 1130 hrs IST of 26th October, 2019 near latitude 16.6°N and longitude 70.0°E over eastcentral Arabian Sea, about 350 km west-southwest of Ratnagiri (Maharashtra), 410 km south-southwest of Mumbai (Maharashtra) and 1690 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify further into an extremely severe cyclonic storm during next 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/1130	16.6/70.0	135-145 gusting to 160	Very Severe Cyclonic Storm
26.10.19/1730	16.7/69.4	155-165 gusting to 180	Very Severe Cyclonic Storm
26.10.19/2330	16.8/68.6	165-175 gusting to 195	Extremely Severe Cyclonic Storm
27.10.19/0530	16.9/68.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1130	17.2/67.1	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/2330	17.6/66.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/1130	18.2/64.9	165-175 gusting to 195	Extremely Severe Cyclonic Storm
28.10.19/2330	18.8/63.8	165-175 gusting to 195	Extremely Severe Cyclonic Storm
29.10.19/1130	19.2/63.0	155-165 gusting to 180	Very Severe Cyclonic Storm
29.10.19/2330	19.5/62.5	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1130	19.6/62.0	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/2330	19.4/61.5	115-125 gusting to 135	Severe Cyclonic Storm
31.10.19/1130	19.2/61.0	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at many places with heavy falls at isolated places very likely over Ratnagiri, Sindhudurg Districts of Maharashtra, Goa and Uttara Kannada & Uduppi districts of Karnataka during next 12 hours. Light to moderate rainfall at a few places likely over south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 135-145 kmph gusting to 160 kmph is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 170-180 kmph gusting to 200 kmph from early hours of 27th October onwards over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 12 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October and improve gradually thereafter becoming High to very high during 29th – 30th October.
It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

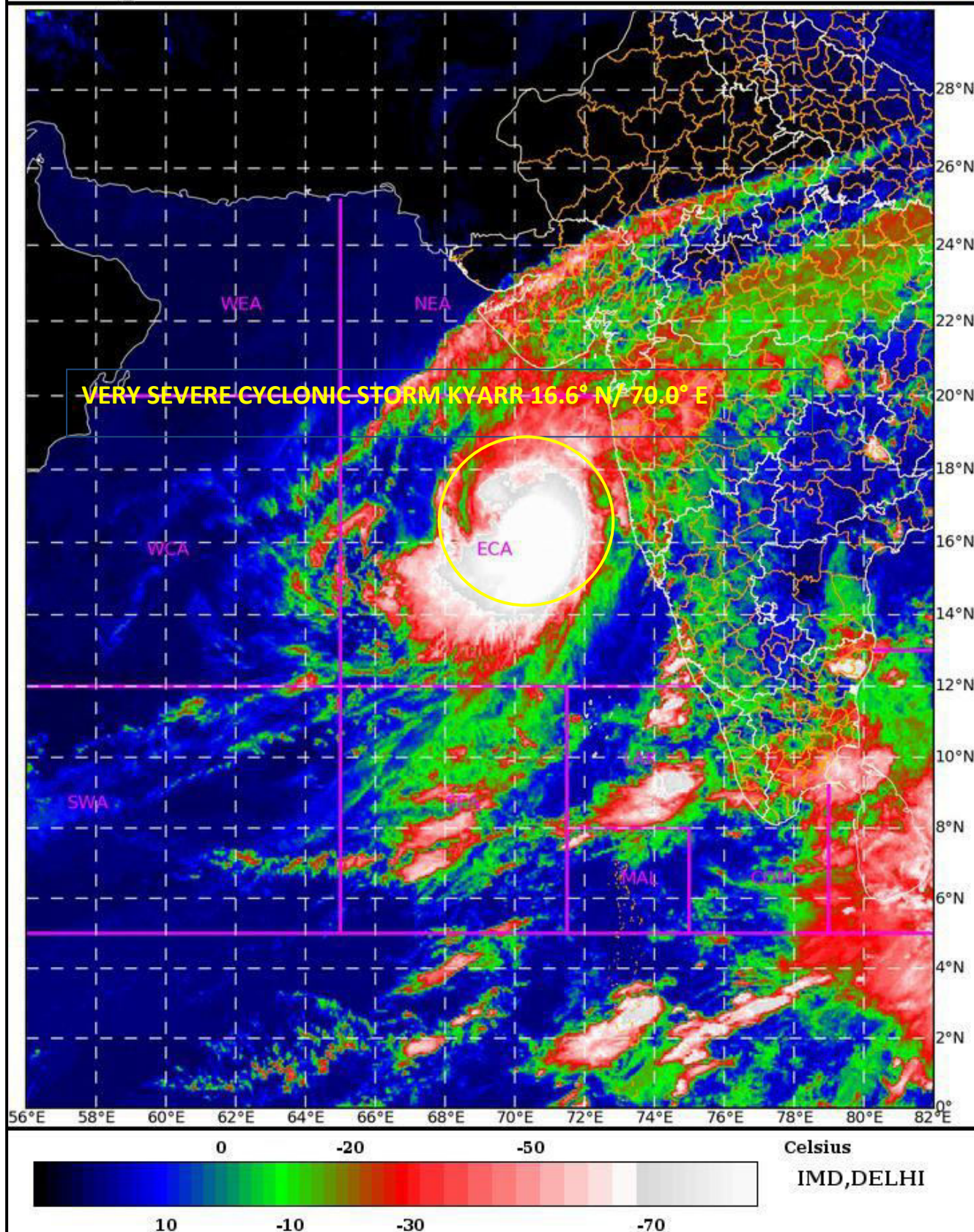
- The fishermen are advised not to venture into the Sea along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 1730 hrs IST of the 26th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

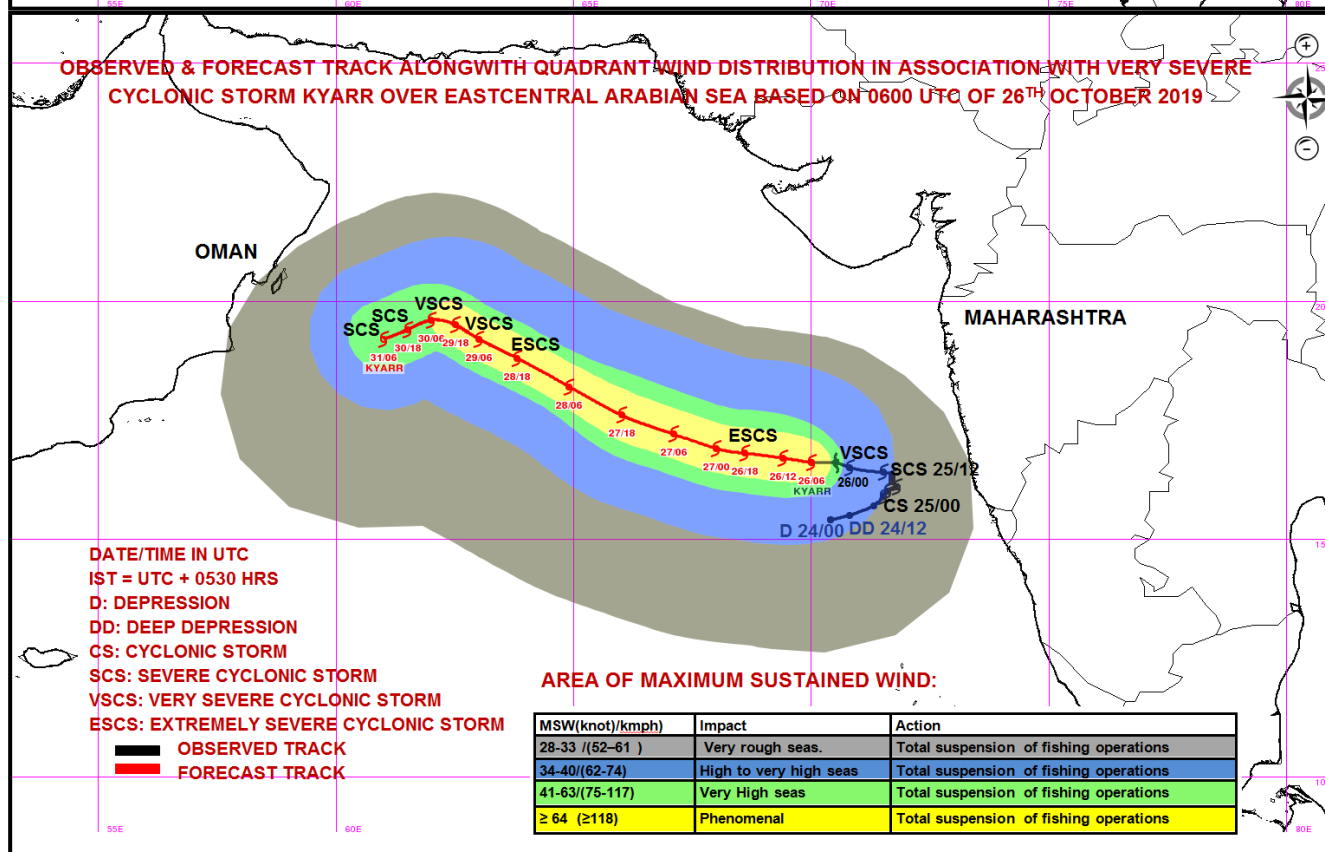
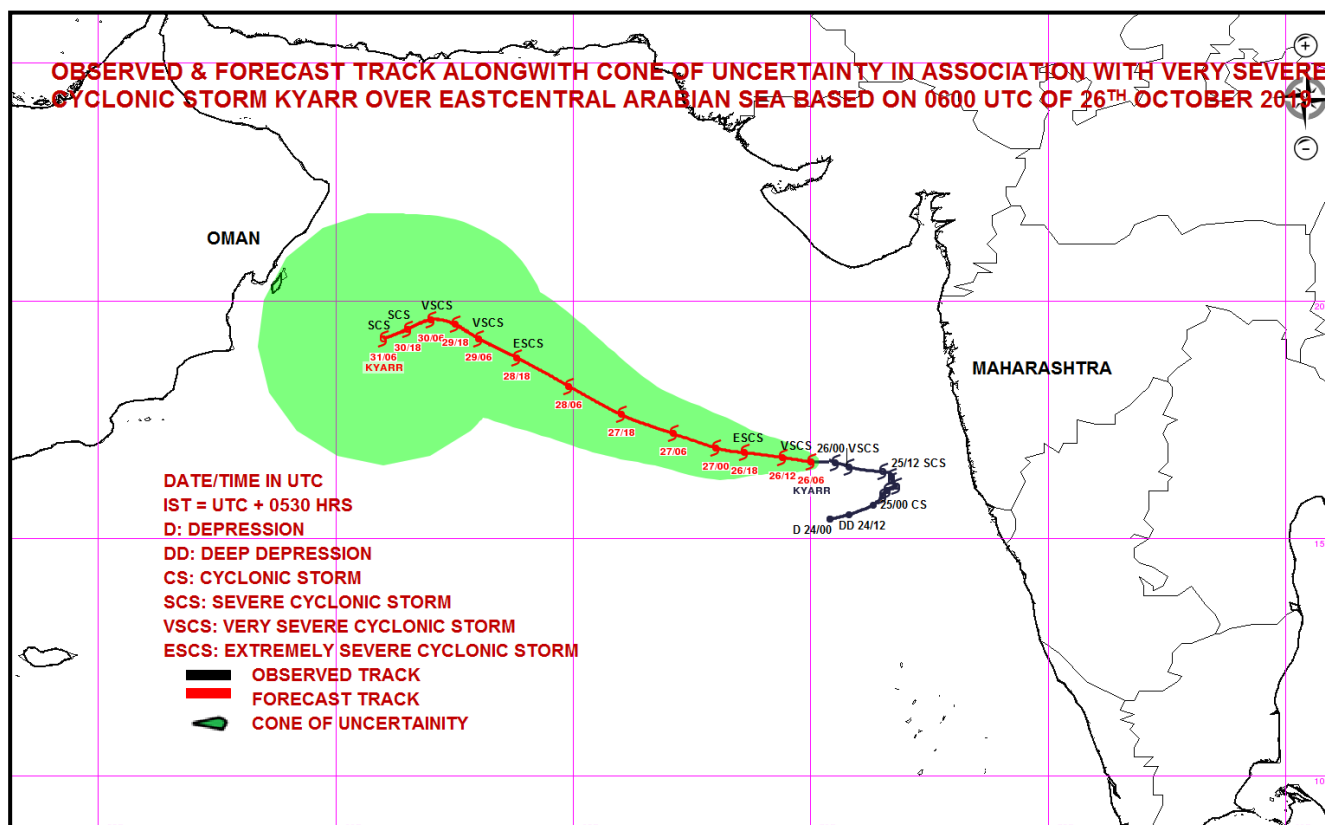
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 26-10-2019/(0700 to 0727) GMT
 IMG_TIR1_TEMP 10.8 um 26-10-2019/(1230 to 1257) IST
 ARABIAN_SEA



ECA= East Central Arabian Sea

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 (ARB/03/2019)

TIME OF ISSUE: 1645 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Very Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved westwards with a speed of 12 Kmph during past 06 hrs and lay centred at 1430 hrs IST of 26th October, 2019 near latitude 16.6°N and longitude 69.8°E over eastcentral Arabian Sea, about 380 km west-southwest of Ratnagiri (Maharashtra), 425 km southwest of Mumbai (Maharashtra) and 1670 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify further into an extremely severe cyclonic storm during next 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/1430	16.6/69.8	140-150 gusting to 165	Very Severe Cyclonic Storm
26.10.19/1730	16.7/69.4	155-165 gusting to 180	Very Severe Cyclonic Storm
26.10.19/2330	16.8/68.6	165-175 gusting to 195	Extremely Severe Cyclonic Storm
27.10.19/0530	16.9/68.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1130	17.2/67.1	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/2330	17.6/66.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/1130	18.2/64.9	165-175 gusting to 195	Extremely Severe Cyclonic Storm
28.10.19/2330	18.8/63.8	165-175 gusting to 195	Extremely Severe Cyclonic Storm
29.10.19/1130	19.2/63.0	155-165 gusting to 180	Very Severe Cyclonic Storm
29.10.19/2330	19.5/62.5	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1130	19.6/62.0	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/2330	19.4/61.5	115-125 gusting to 135	Severe Cyclonic Storm
31.10.19/1130	19.2/61.0	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at many places with heavy falls at isolated places very likely over Ratnagiri, Sindhudurg Districts of Maharashtra, Goa and Uttara Kannada & Uduppi districts of Karnataka during next 12 hours. Light to moderate rainfall at a few places likely over south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 140-150 kmph gusting to 165 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 170-180 kmph gusting to 200 kmph from early hours of 27th October onwards over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 12 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October and improve gradually thereafter becoming High to very high during 29th – 30th October.
It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

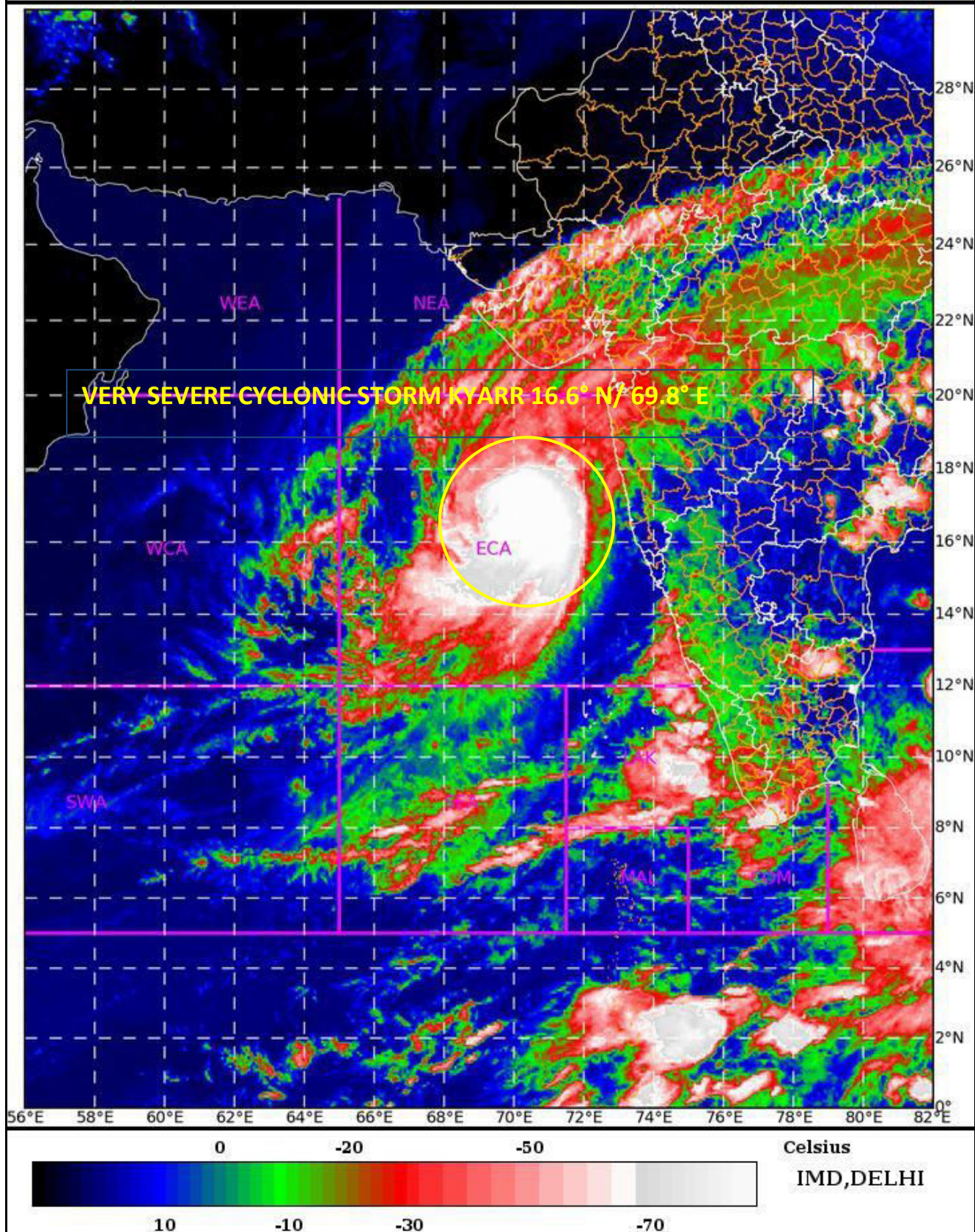
- The fishermen are advised not to venture into the Sea along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 2030 hrs IST of the 26th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

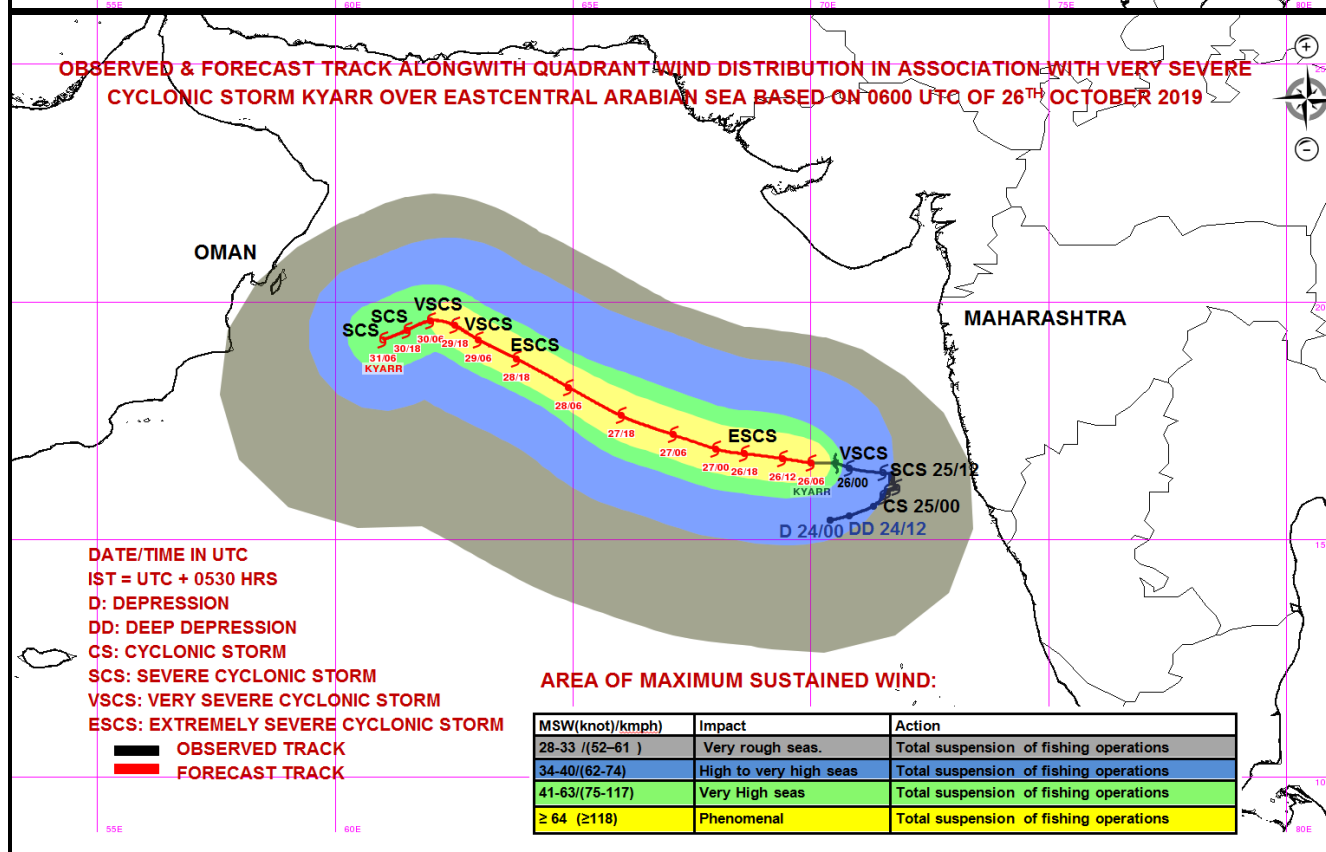
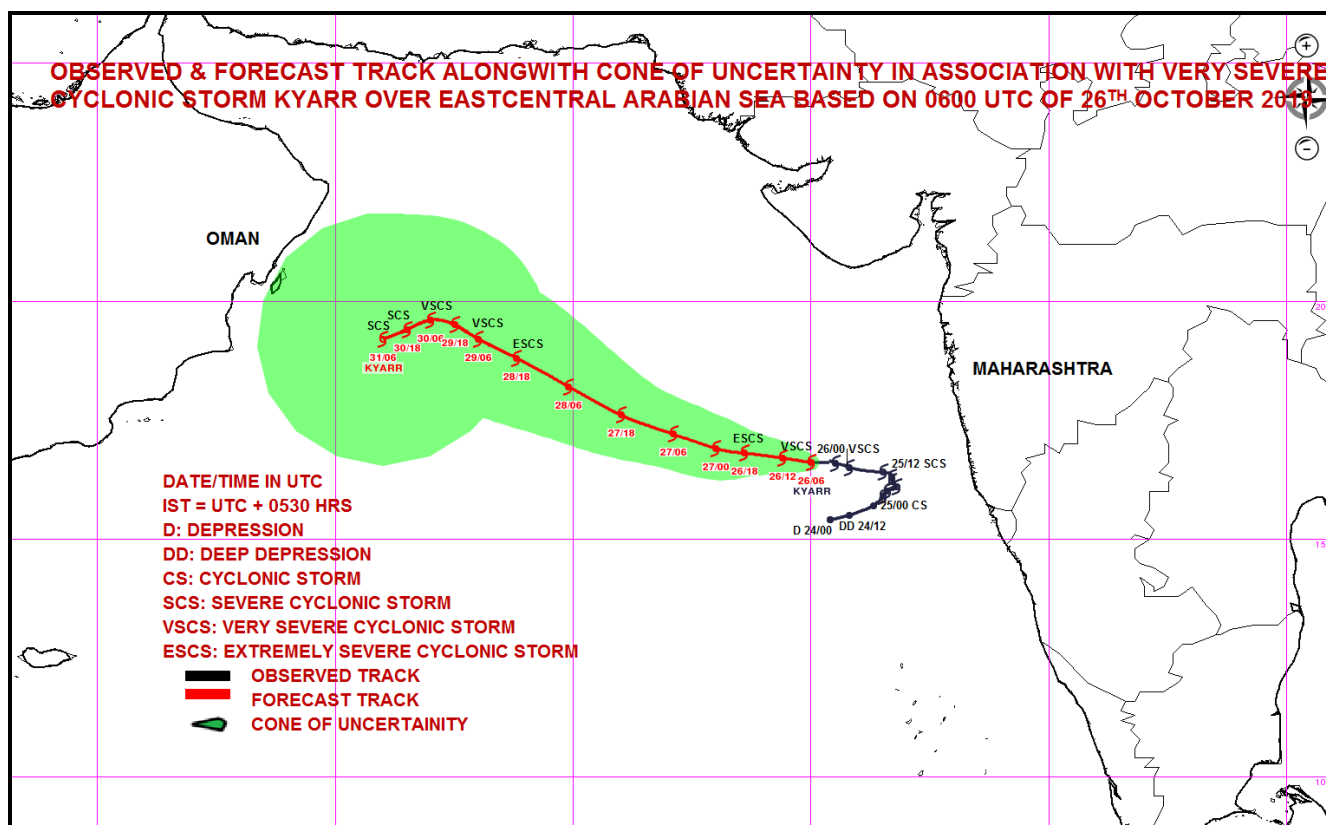
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 26-10-2019/(1000 to 1026) GMT
 IMG_TIR1_TEMP 10.8 um 26-10-2019/(1530 to 1556) IST
 ARABIAN_SEA



ECA= East Central Arabian Sea

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 (ARB/03/2019)

TIME OF ISSUE: 2030 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Very Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 11 Kmph during past 06 hrs and lay centred at 1730 hrs IST of 26th October, 2019 near latitude 16.7°N and longitude 69.4°E over eastcentral Arabian Sea, about 420 km west-southwest of Ratnagiri (Maharashtra), 450 km west-southwest of Mumbai (Maharashtra) and 1630 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify further into an extremely severe cyclonic storm during next 06 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/1730	16.7/69.4	155-165 gusting to 180	Very Severe Cyclonic Storm
26.10.19/2330	16.8/68.6	165-175 gusting to 195	Extremely Severe Cyclonic Storm
27.10.19/0530	16.9/68.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1130	17.2/67.1	170-180 gusting to 200	Extremely Severe Cyclonic Storm
27.10.19/1730	17.4/66.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
28.10.19/0530	17.9/65.5	165-175 gusting to 195	Extremely Severe Cyclonic Storm
28.10.19/1730	18.5/64.3	165-175 gusting to 195	Extremely Severe Cyclonic Storm
29.10.19/0530	19.0/63.4	155-165 gusting to 180	Very Severe Cyclonic Storm
29.10.19/1730	19.3/62.7	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/0530	19.5/62.2	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1730	19.5/61.7	115-125 gusting to 135	Severe Cyclonic Storm
31.10.19/0530	19.3/61.2	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/1730	19.1/60.8	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over coastal districts of Maharashtra, Goa and north Karnataka during next 12 hours. Light to moderate rainfall at a few places likely over south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 155-165 kmph gusting to 180 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 170-180 kmph gusting to 200 kmph from early hours of 27th October onwards over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 35-45 kmph gusting to 55 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 12 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October and improve gradually thereafter becoming High to very high during 29th – 30th October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th to 31st October 2019.

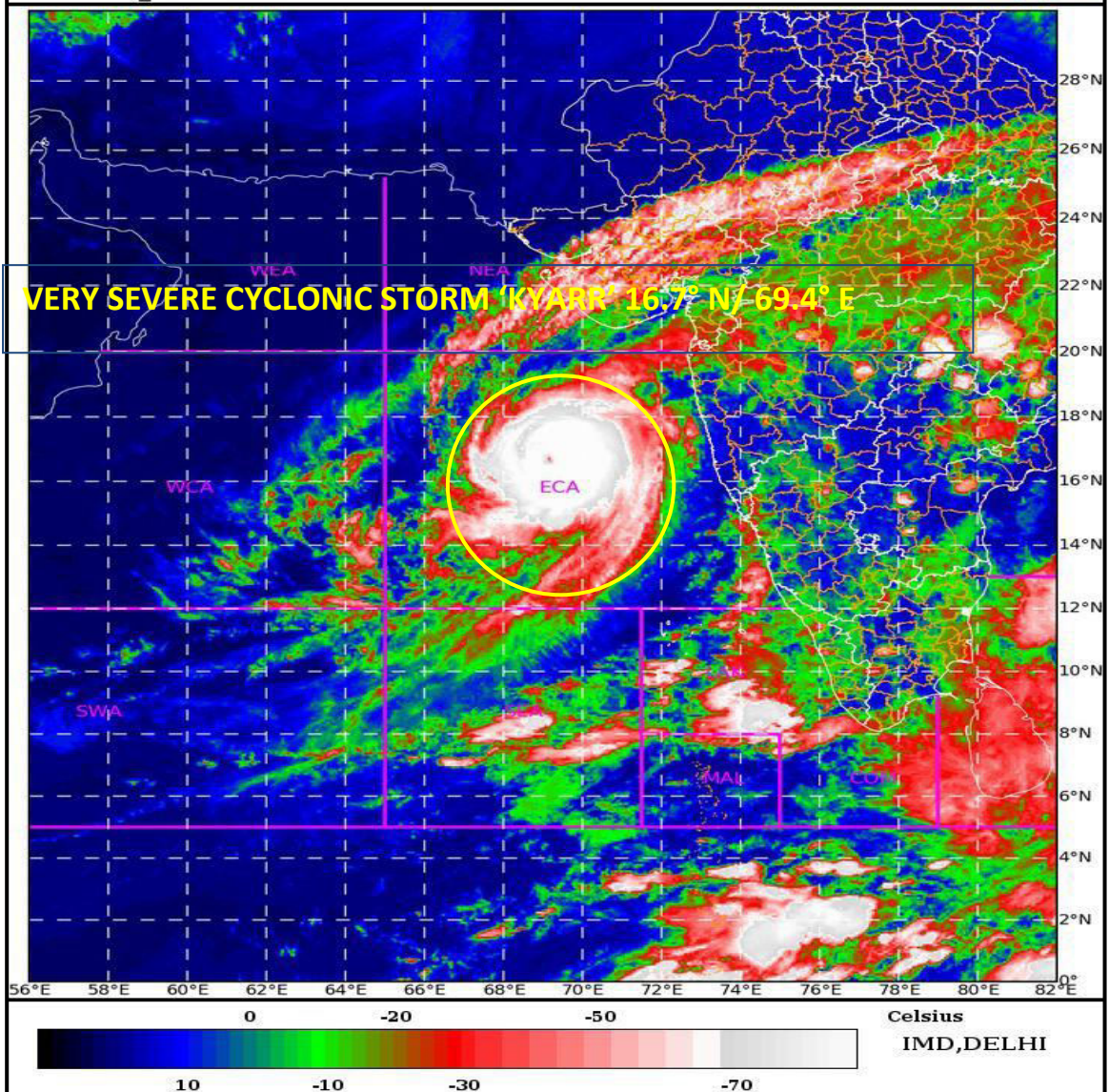
The next bulletin will be issued at 2330 hrs IST of the 26th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

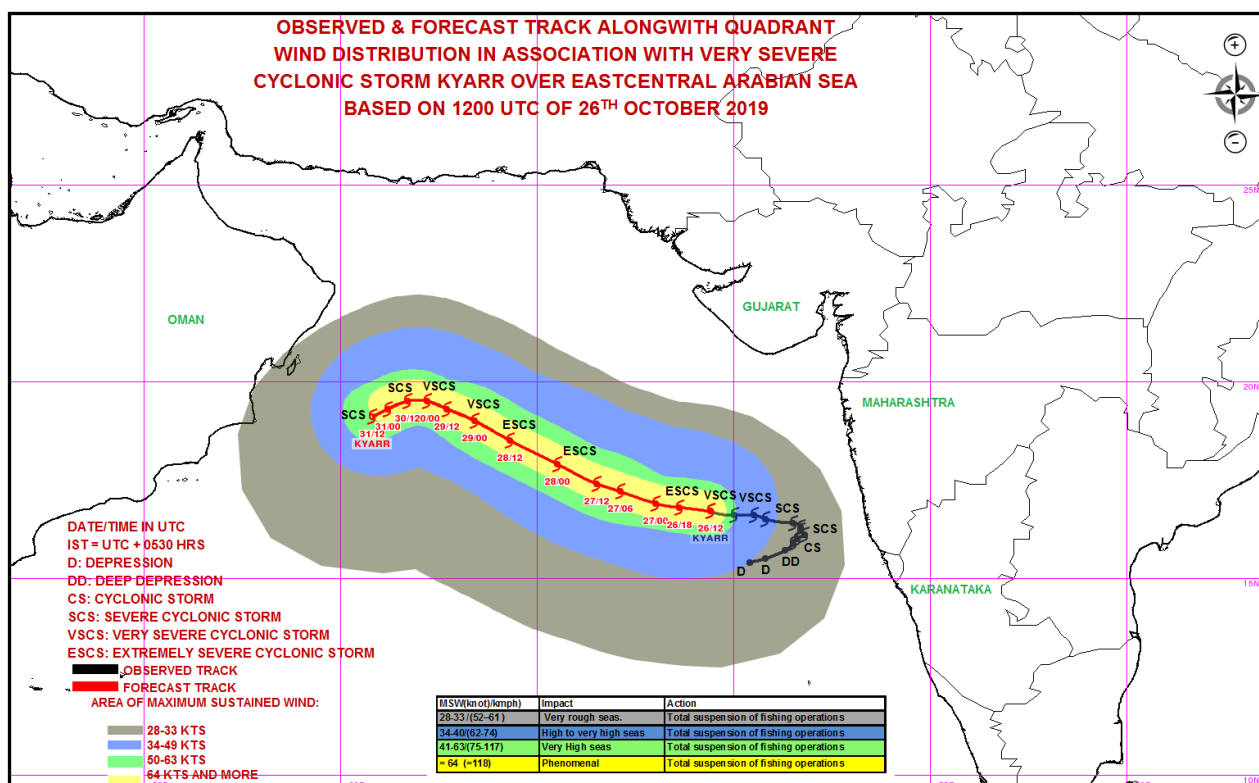
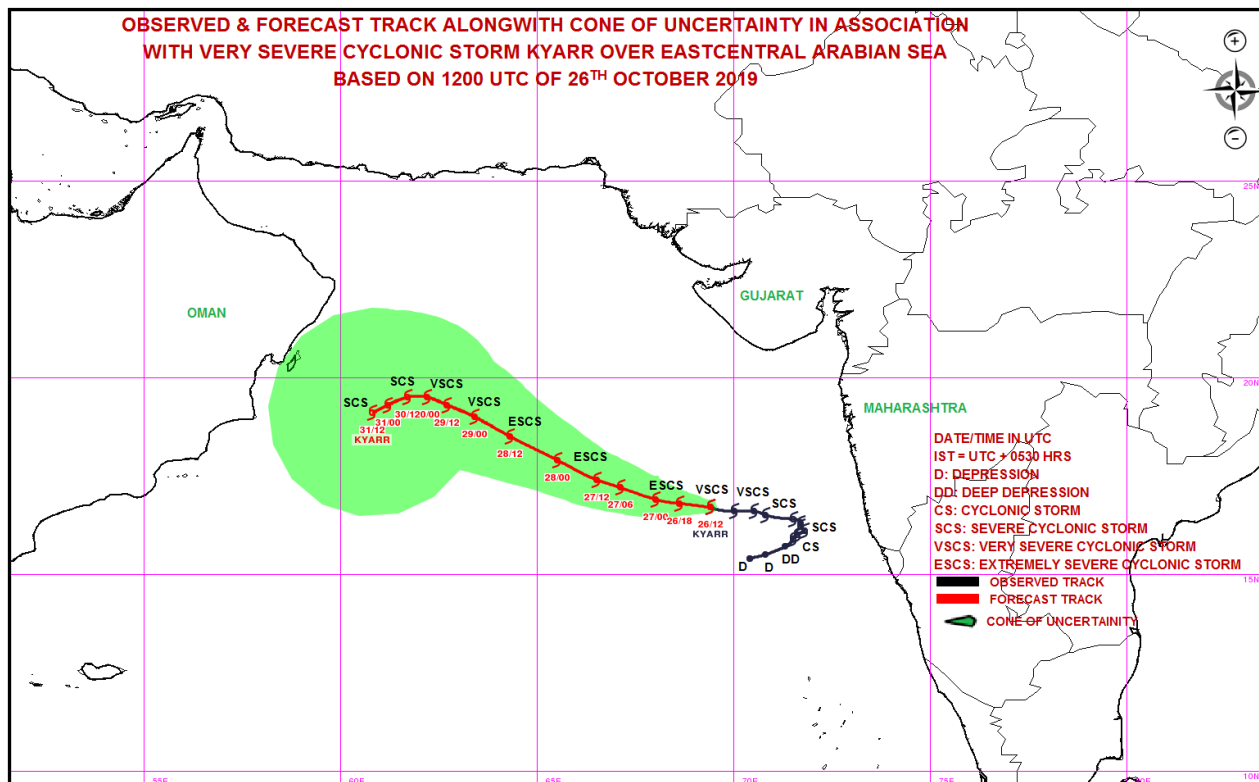
SAT : INSAT-3D IMG
IMG_TIR1_TEMP 10.8 um
ARABIAN_SEA

26-10-2019/(1330 to 1356) GMT
26-10-2019/(1900 to 1926) IST



ECA= East Central Arabian Sea

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 (ARB/03/2019)

TIME OF ISSUE: 2230 HOURS IST

DATED: 26.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) intensified into an Extremely Severe Cyclonic Storm over eastcentral Arabian Sea

The **Very Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 12 Km/h during past 06 hrs, intensified into an **Extremely Severe Cyclonic Storm** and lay centred at 2030 hrs IST of 26th October, 2019 near latitude 16.7°N and longitude 69.1°E over eastcentral Arabian Sea, about 450 km west-southwest of Ratnagiri (Maharashtra), 480 km west-southwest of Mumbai (Maharashtra) and 1600 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/2030	16.7/69.1	165-175 gusting to 195	Extremely Severe Cyclonic Storm
26.10.19/2330	16.8/68.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
27.10.19/0530	16.9/68.0	185-195 gusting to 215	Extremely Severe Cyclonic Storm
27.10.19/1130	17.2/67.1	195-205 gusting to 225	Extremely Severe Cyclonic Storm
27.10.19/1730	17.4/66.5	205-215 gusting to 235	Extremely Severe Cyclonic Storm
28.10.19/0530	17.9/65.5	195-205 gusting to 225	Extremely Severe Cyclonic Storm
28.10.19/1730	18.5/64.3	185-195 gusting to 215	Extremely Severe Cyclonic Storm
29.10.19/0530	19.0/63.4	165-175 gusting to 195	Extremely Severe Cyclonic Storm
29.10.19/1730	19.3/62.7	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/0530	19.5/62.2	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1730	19.5/61.7	115-125 gusting to 135	Severe Cyclonic Storm
31.10.19/0530	19.3/61.2	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/1730	19.1/60.8	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over coastal districts of Maharashtra, Goa and north Karnataka during next 12 hours. Light to moderate rainfall at a few places likely over south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 165-175 kmph gusting to 195 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 205-215 kmph gusting to 235 kmph by evening of 27th October over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 30-40 kmph gusting to 50 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 12 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October and improve gradually thereafter becoming High to very high during 29th – 30th October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th to 31st October 2019.

The next bulletin will be issued at 0230 hrs IST of the 27th October, 2019.

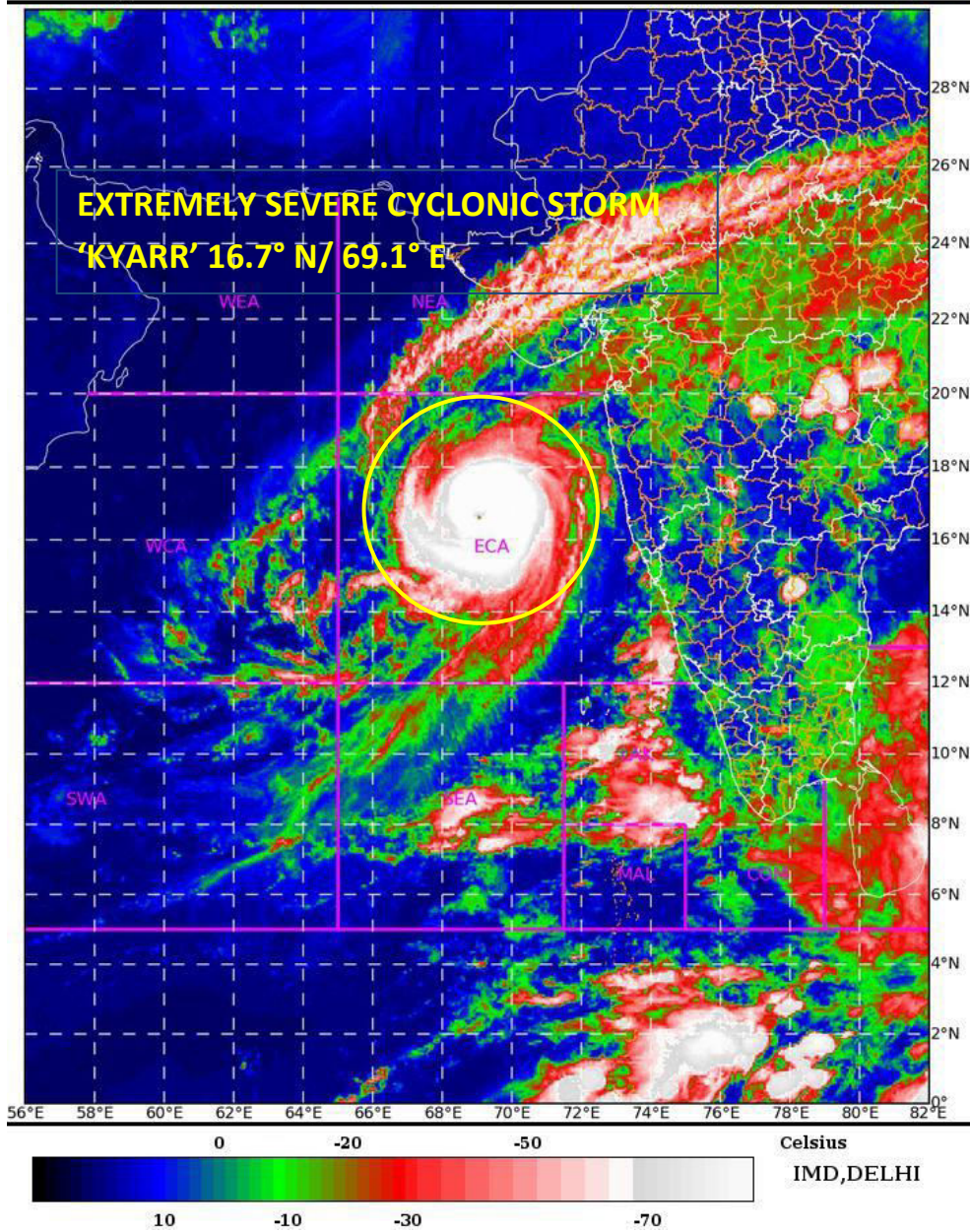
(D R Pattanaik)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 26-10-2019/(1500 to 1526) GMT

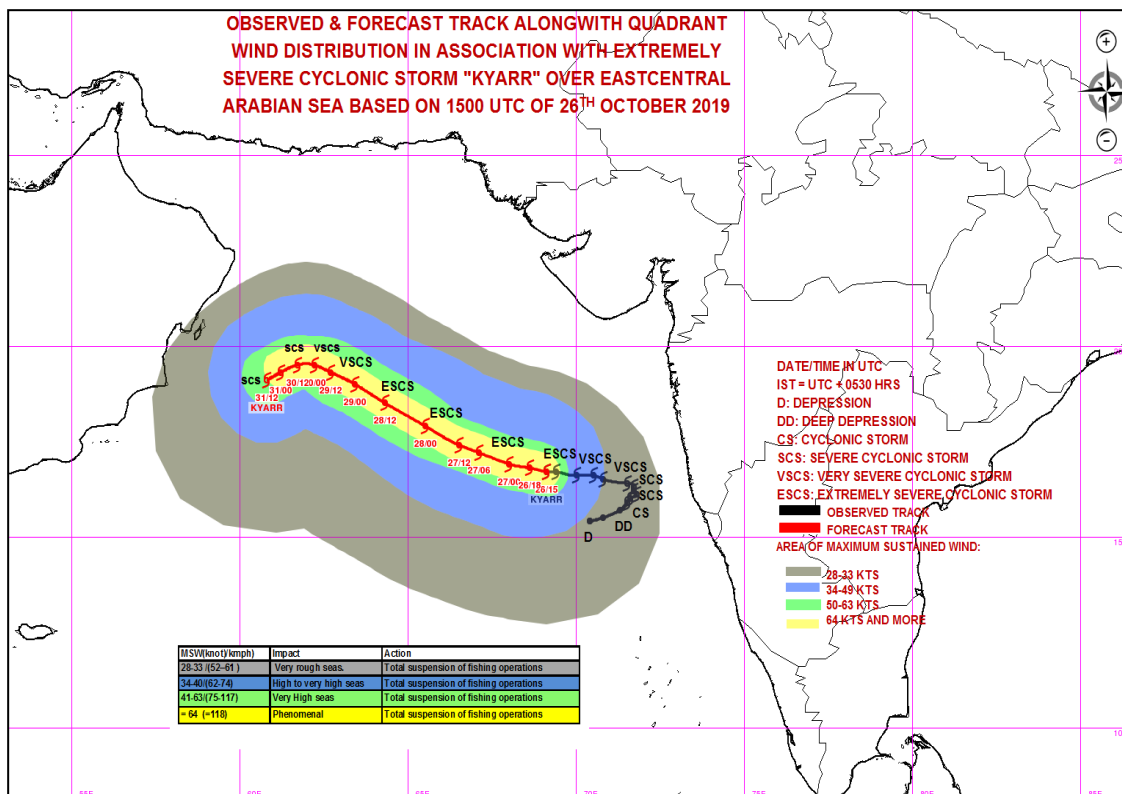
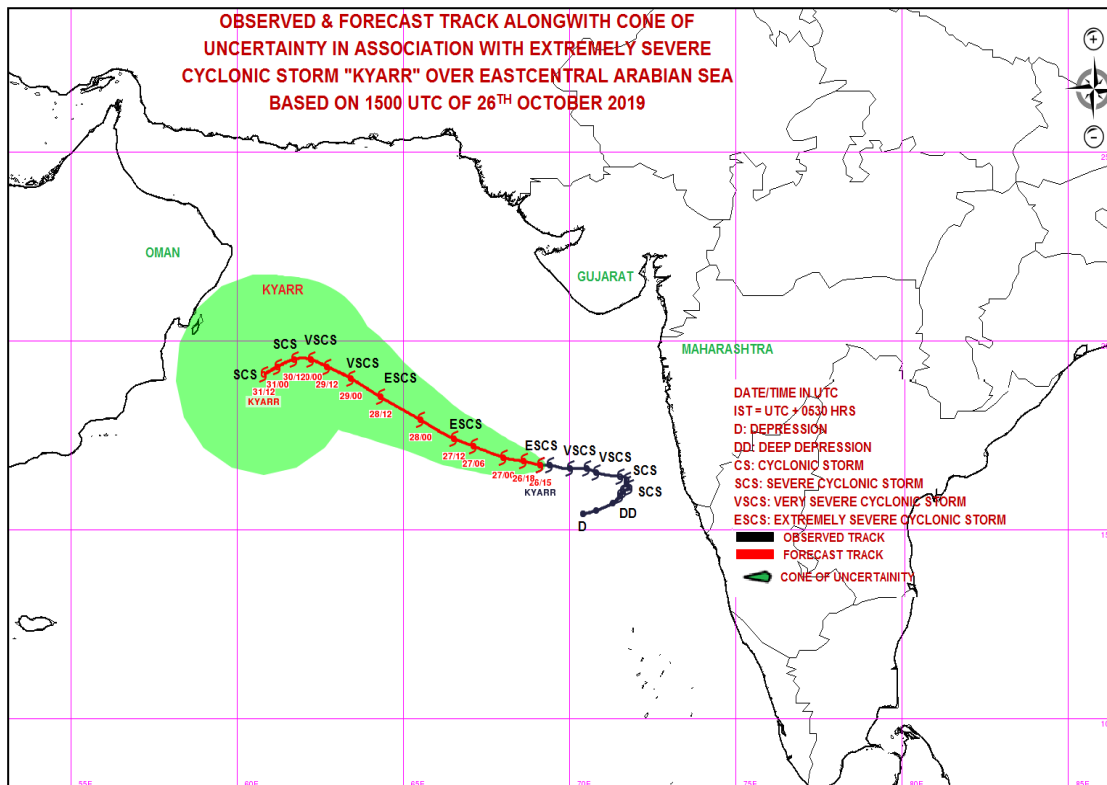
IMG_TIR1_TEMP 10.8 um 26-10-2019/(2030 to 2056) IST

ARABIAN_SEA



ECA= East Central Arabian Sea

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 (ARB/03/2019)

TIME OF ISSUE: 0200 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Extremely Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 09 Kmph during past 06 hrs and lay centred at 2330 hrs IST of yesterday, the 26th October, 2019 near latitude 16.8°N and longitude 68.9°E over eastcentral Arabian Sea, about 470 km west-southwest of Ratnagiri (Maharashtra), 490 km west-southwest of Mumbai (Maharashtra) and 1580 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.10.19/2330	16.8/68.9	185-195 gusting to 215	Extremely Severe Cyclonic Storm
27.10.19/0530	16.9/68.3	200-210 gusting to 230	Extremely Severe Cyclonic Storm
27.10.19/1130	17.2/67.4	210-220 gusting to 240	Extremely Severe Cyclonic Storm
27.10.19/1730	17.4/66.8	210-220 gusting to 240	Extremely Severe Cyclonic Storm
27.10.19/2330	17.6/66.3	205-215 gusting to 235	Extremely Severe Cyclonic Storm
28.10.19/1130	18.2/65.2	195-205 gusting to 225	Extremely Severe Cyclonic Storm
28.10.19/2330	18.7/64.1	185-195 gusting to 215	Extremely Severe Cyclonic Storm
29.10.19/1130	19.1/63.4	165-175 gusting to 195	Extremely Severe Cyclonic Storm
29.10.19/2330	19.4/62.7	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1130	19.5/62.3	120-130 gusting to 140	Very Severe Cyclonic Storm
30.10.19/2330	19.4/61.7	110-120 gusting to 130	Severe Cyclonic Storm
31.10.19/1130	19.2/61.3	105-115 gusting to 125	Severe Cyclonic Storm
31.10.19/2330	19.0/60.9	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over coastal districts of Maharashtra, Goa and north Karnataka during next 12 hours. Light to moderate rainfall at a few places likely over south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 185-195 kmph gusting to 215 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 210-220 kmph gusting to 240 kmph by afternoon of 27th October over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 30-40 kmph gusting to 50 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 06 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October and improve gradually thereafter becoming High to very high during 29th – 30th October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

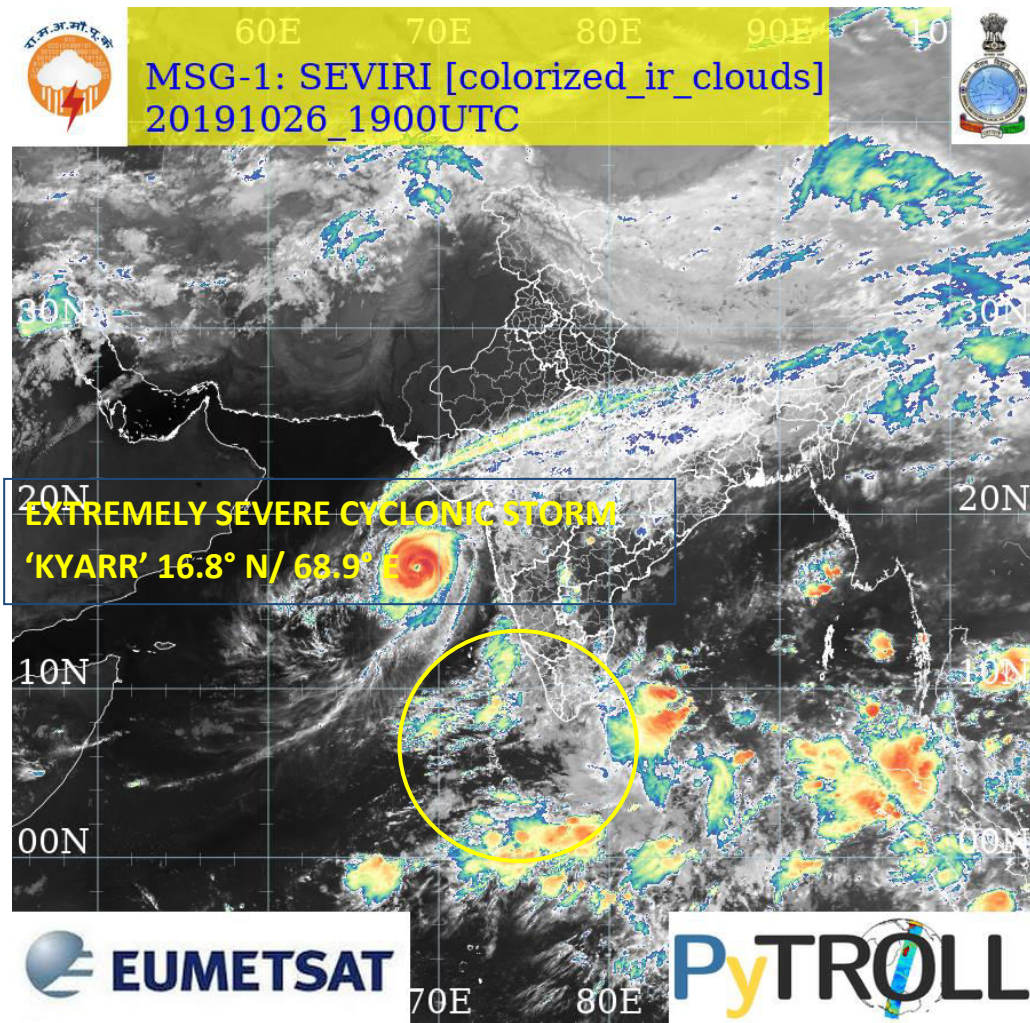
(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th to 31st October 2019.

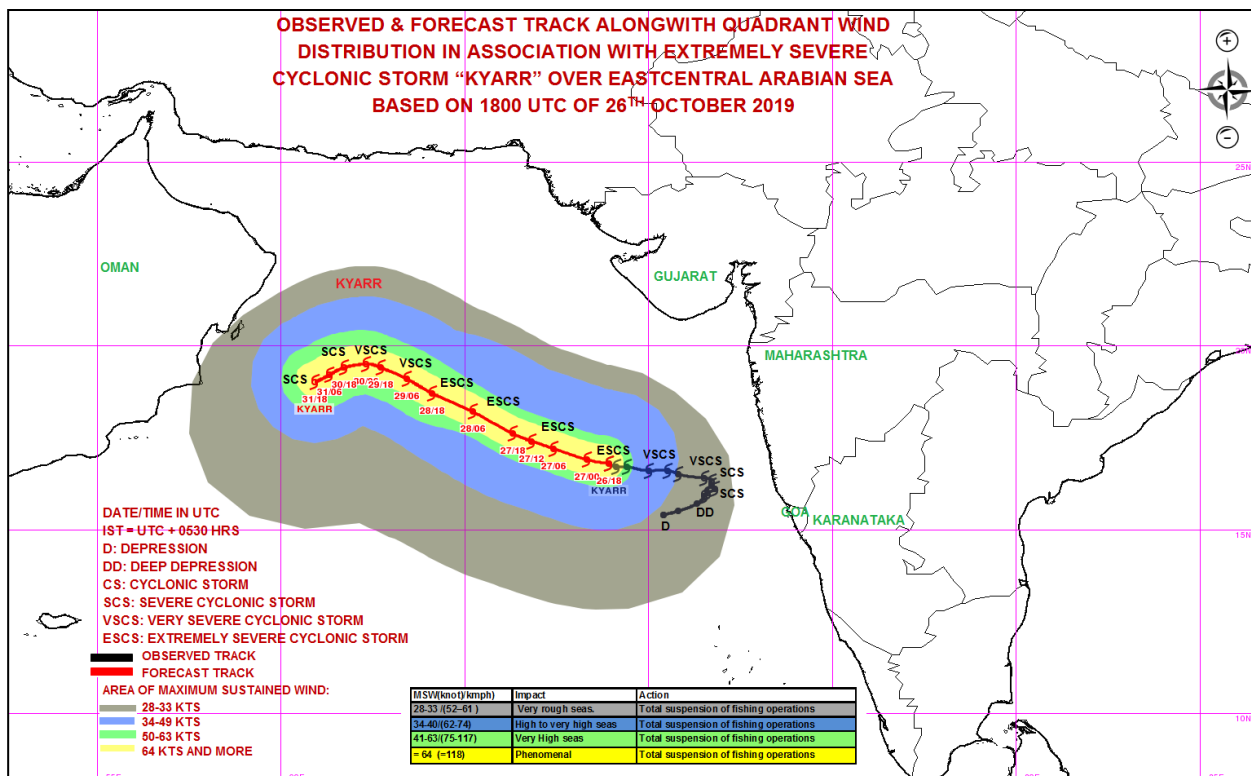
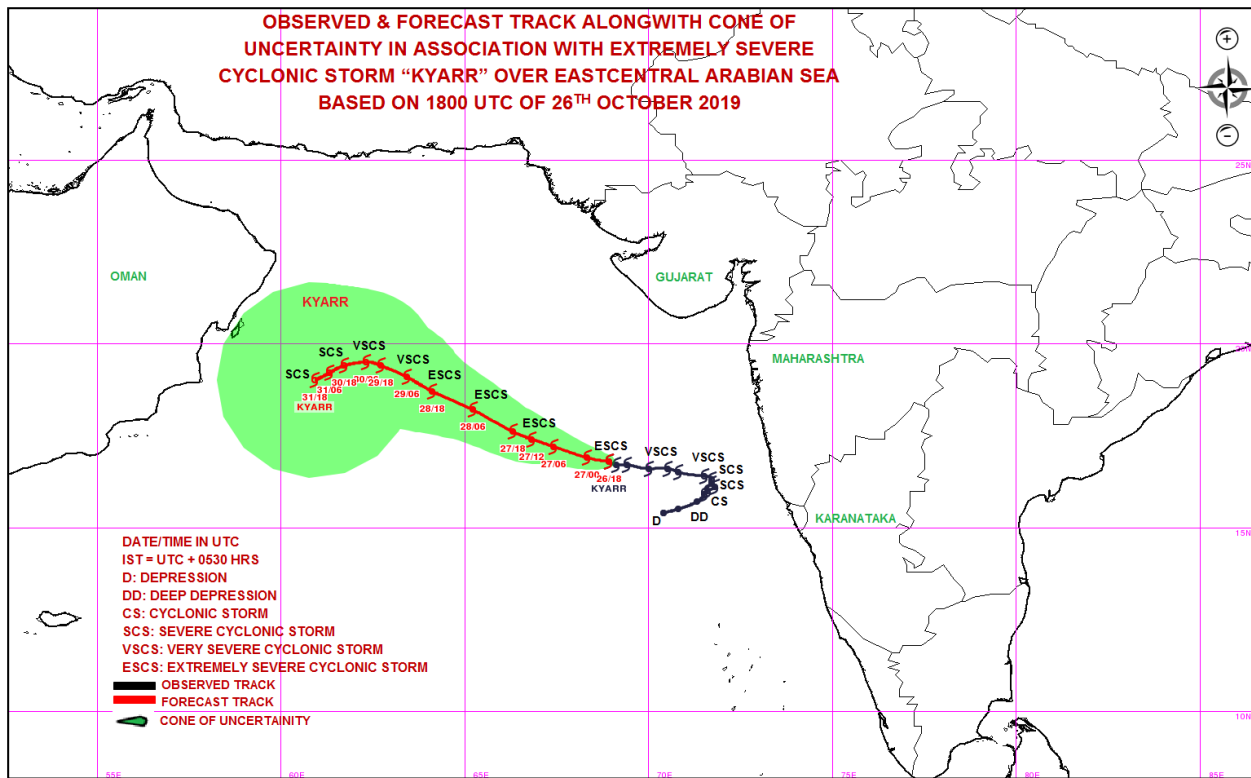
The next bulletin will be issued at 0530 hrs IST of the 27th October, 2019.

(D R Pattanaik)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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 (ARB/03/2019)

TIME OF ISSUE: 0530 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Extremely Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 11 Kmph during past 06 hrs and lay centred at 0230 hrs IST of today, the 27th October, 2019 near latitude 16.9°N and longitude 68.5°E over eastcentral Arabian Sea, about 510 km almost west of Ratnagiri (Maharashtra), 520 km west-southwest of Mumbai (Maharashtra) and 1530 km east-southeast of Salalah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/0230	16.9/68.5	205-215 gusting to 235	Extremely Severe Cyclonic Storm
27.10.19/0530	16.9/68.3	210-220 gusting to 240	Extremely Severe Cyclonic Storm
27.10.19/1130	17.2/67.4	215-225 gusting to 245	Extremely Severe Cyclonic Storm
27.10.19/1730	17.4/66.8	215-225 gusting to 245	Extremely Severe Cyclonic Storm
27.10.19/2330	17.6/66.3	215-225 gusting to 245	Extremely Severe Cyclonic Storm
28.10.19/1130	18.2/65.2	210-220 gusting to 240	Extremely Severe Cyclonic Storm
28.10.19/2330	18.7/64.1	190-200 gusting to 210	Extremely Severe Cyclonic Storm
29.10.19/1130	19.1/63.4	165-175 gusting to 185	Extremely Severe Cyclonic Storm
29.10.19/2330	19.4/62.7	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1130	19.5/62.3	120-130 gusting to 140	Very Severe Cyclonic Storm
30.10.19/2330	19.4/61.7	110-120 gusting to 130	Severe Cyclonic Storm
31.10.19/1130	19.2/61.3	105-115 gusting to 125	Severe Cyclonic Storm
31.10.19/2330	19.0/60.9	100-110 gusting to 120	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over coastal districts of Maharashtra, Goa and north Karnataka during next 12 hours. Light to moderate rainfall at a few places likely over south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind, speed reaching 205-215 kmph gusting to 235 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 215-225 kmph gusting to 245 kmph by afternoon of 27th October over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Squally wind speed reaching 30-40 kmph gusting to 50 kmph likely along & off Maharashtra & Goa and Karnataka coast during next 06 hours and along & off south Gujarat coast during next 24 hours.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 28th October and improve gradually thereafter becoming High to very high during 29th – 30th October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.
- It will be rough to very rough along & off Maharashtra & Goa and Karnataka coasts during next 12 hours. It is also very likely to be rough to very rough over northeast Arabian Sea off south Gujarat coast during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra– Goa – Karnataka coasts and northeast Arabian Sea & adjoining south Gujarat coast during next 24 hours.
- The fishermen are also advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th to 31st October 2019.

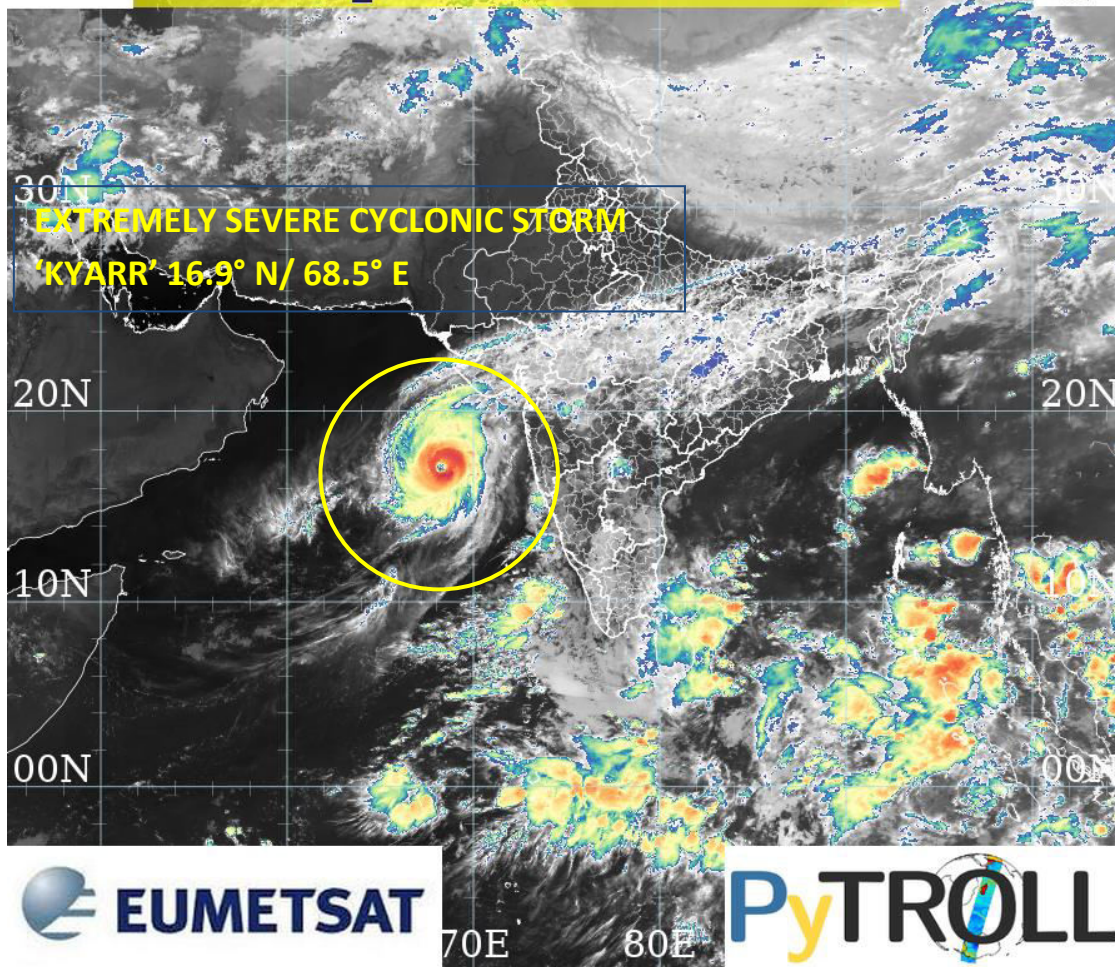
The next bulletin will be issued at 0830 hrs IST of the 27th October, 2019.

(D R Pattanaik)
Scientist-E, RSMC, New Delhi

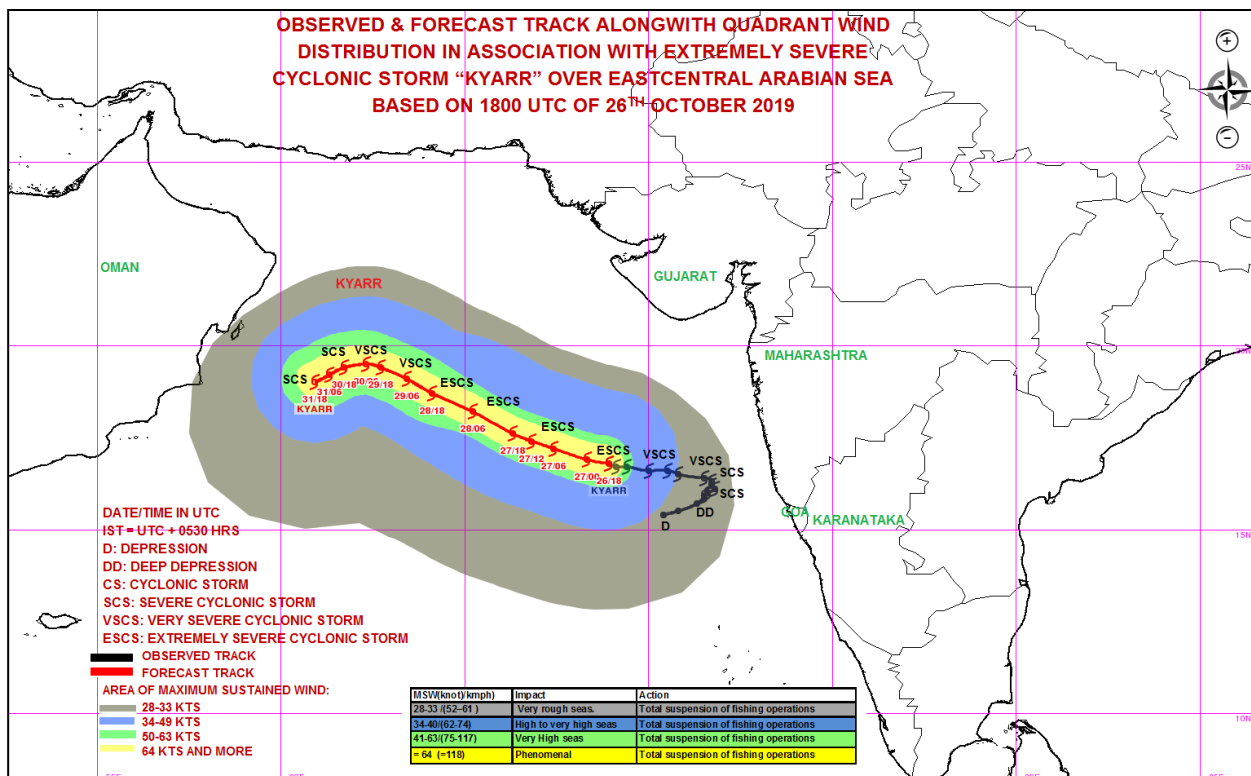
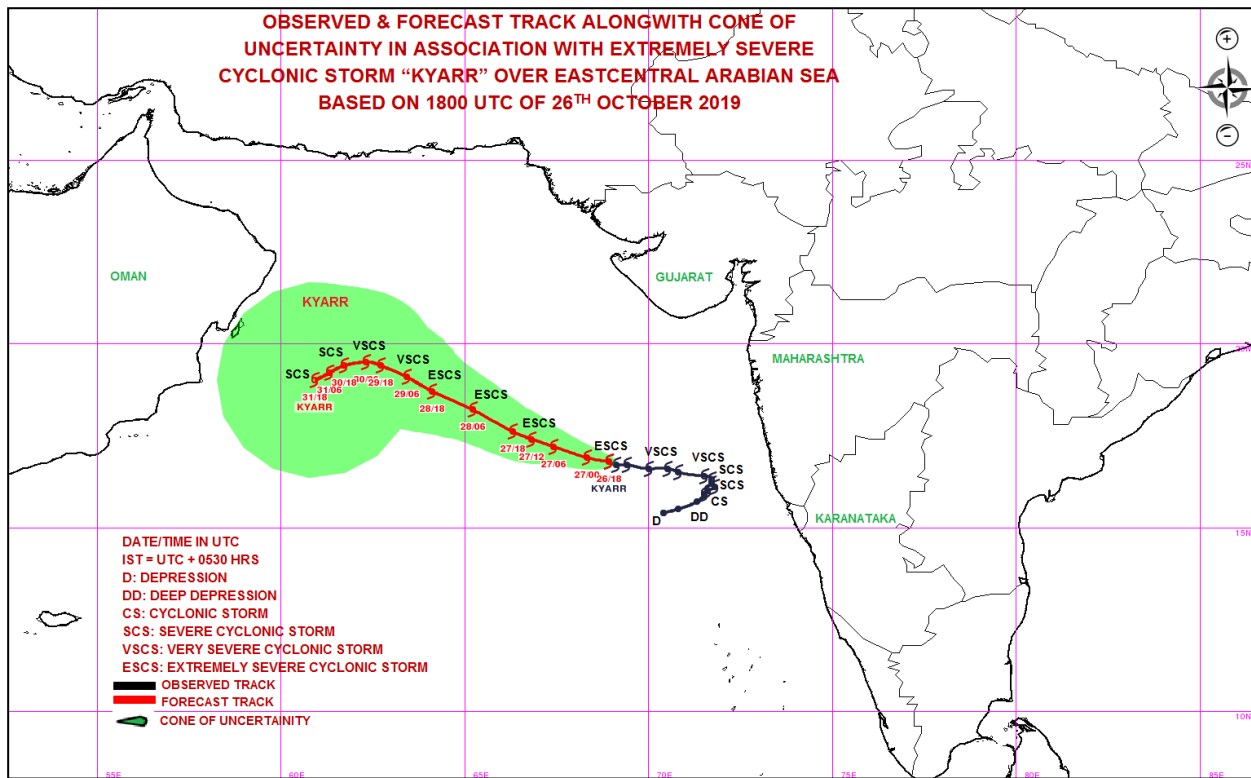
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



60E 70E 80E 90E 100E
MSG-1: SEVIRI [colorized_ir_clouds]
20191026_2330UTC



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 (ARB/03/2019)

TIME OF ISSUE: 0815 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral Arabian Sea

The **Extremely Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 13 Kmph during past 06 hrs and lay centred at 0530 hrs IST of today, the 27th October, 2019 near latitude 17.0°N and longitude 68.2°E over eastcentral Arabian Sea, about 540 km west-southwest of Mumbai (Maharashtra) and 1500 km east of Salalah (Oman). It is very likely to further intensify into a Super Cyclonic Storm during next 03 hours. It is very likely to move west-northwestwards towards Oman coast during next 5 days.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/0530	17.0/68.2	215-225 gusting to 250	Extremely Severe Cyclonic Storm
27.10.19/1130	17.2/67.4	230-240 gusting to 260	Super Cyclonic Storm
27.10.19/1730	17.4/66.8	245-255 gusting to 280	Super Cyclonic Storm
27.10.19/2330	17.6/66.3	255-265 gusting to 290	Super Cyclonic Storm
28.10.19/0530	17.9/65.7	240-250 gusting to 275	Super Cyclonic Storm
28.10.19/1730	18.4/64.7	220-230 gusting to 255	Super Cyclonic Storm
29.10.19/0530	18.9/63.7	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/1730	19.2/63.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/0530	19.4/62.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1730	19.5/62.0	140-150 gusting to 165	Extremely Severe Cyclonic Storm
31.10.19/0530	19.4/61.5	125-135 gusting to 145	Very Severe Cyclonic Storm
31.10.19/1730	19.3/61.2	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/0530	19.2/60.9	95-105 gusting to 115	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 215-225 kmph gusting to 250 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 255-265 kmph gusting to 290 kmph by early hours of 28th October over eastcentral & adjoining westcentral Arabian Sea around the system centre.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and improve gradually thereafter becoming High to very rough from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

The next bulletin will be issued at 1130 hrs IST of the 27th October, 2019.

(D R Pattanaik)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

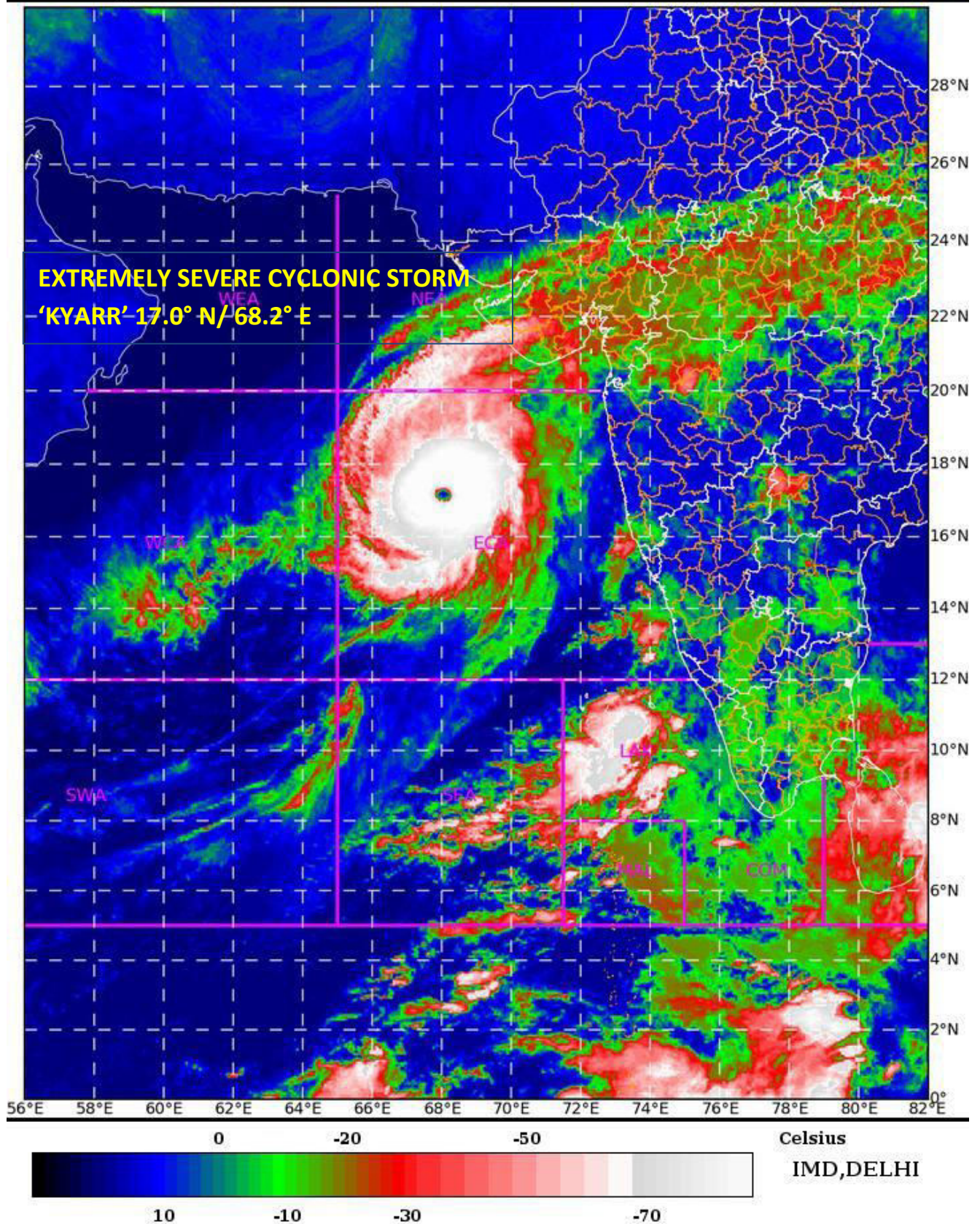
SAT : INSAT-3D IMG

27-10-2019/(0030 to 0056) GMT

IMG_TIR1_TEMP 10.8 um

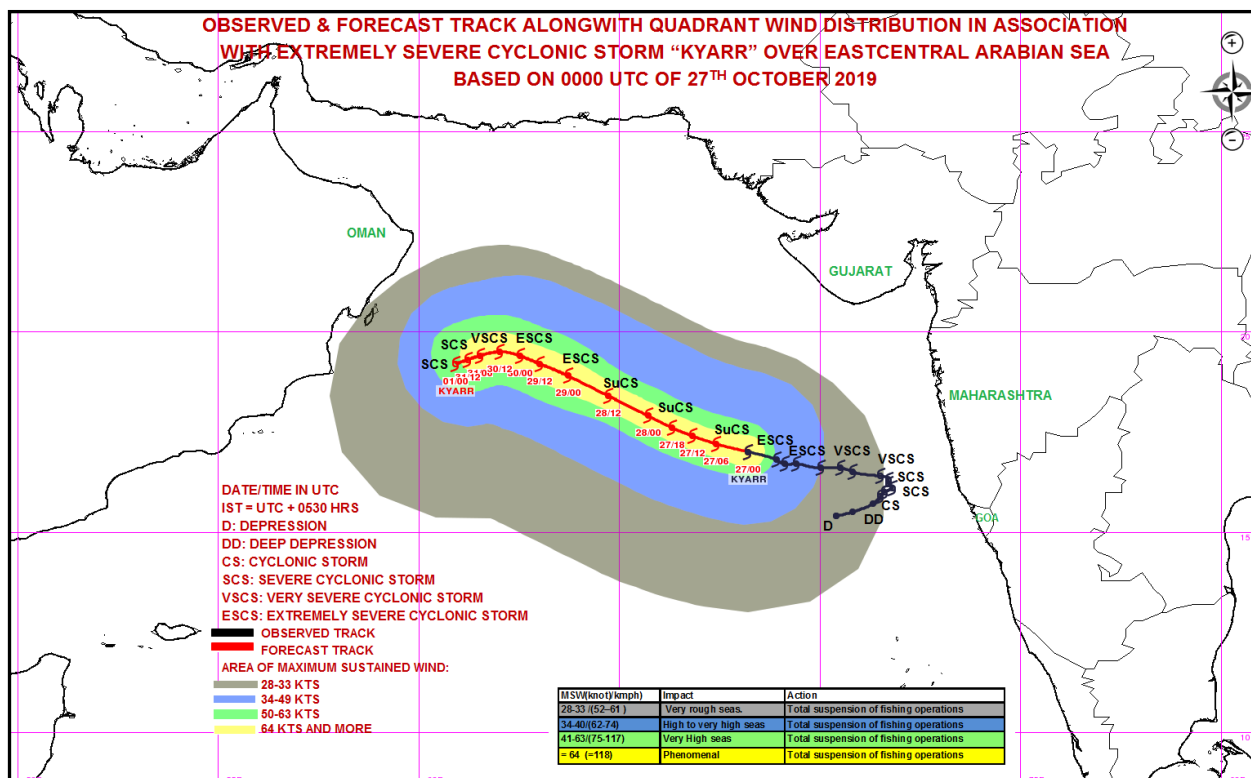
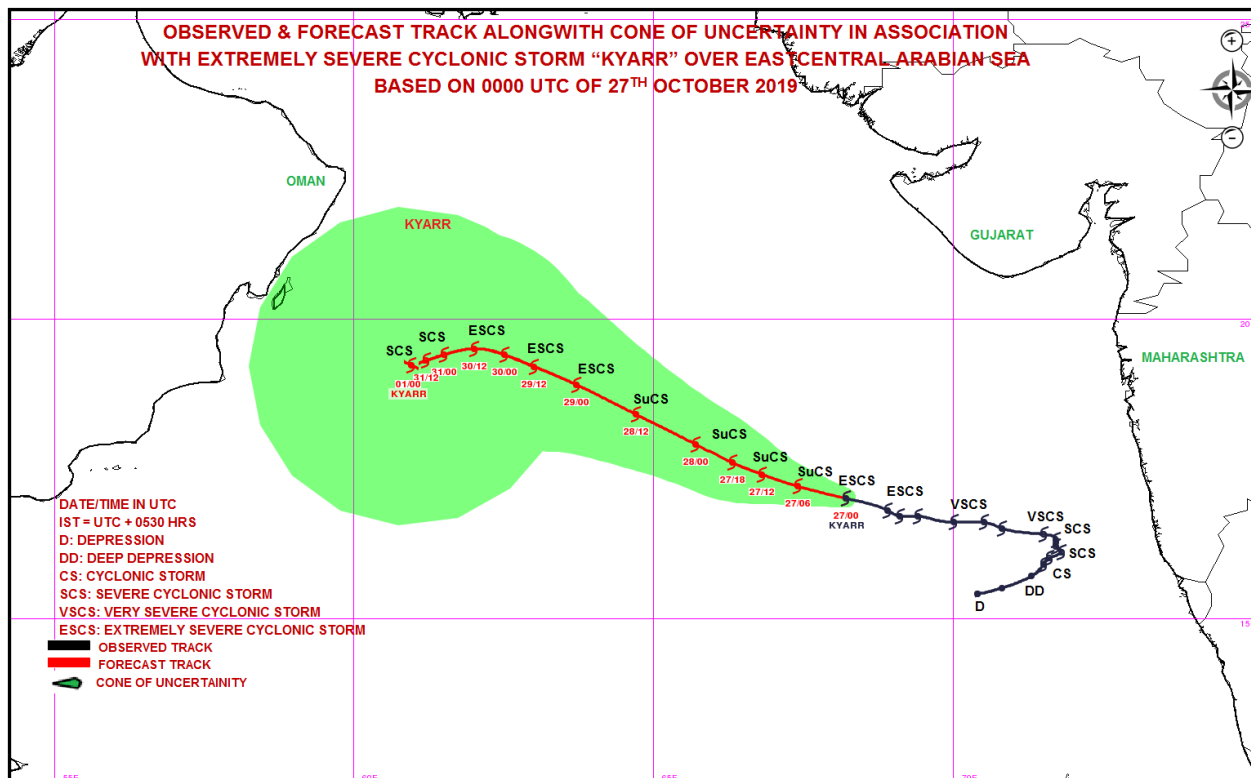
27-10-2019/(0600 to 0626) IST

ARABIAN SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1030 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Extremely Severe Cyclonic Storm 'KYARR'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 13 Kmph during past 06 hrs, intensified into a **Super Cyclonic Storm** and lay centred at 0830 hrs IST of today, the 27th October, 2019 near latitude 17.1°N and longitude 67.8°E over Eastcentral Arabian Sea, about 580 km west-southwest of Mumbai (Maharashtra), 1450 km east of Salalah (Oman) and 1010 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to intensify further till early hours of 28th and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/0830	17.1/67.8	230-240 gusting to 265	Super Cyclonic Storm
27.10.19/1130	17.2/67.4	240-250 gusting to 275	Super Cyclonic Storm
27.10.19/1730	17.4/66.8	250-260 gusting to 285	Super Cyclonic Storm
27.10.19/2330	17.6/66.3	255-265 gusting to 290	Super Cyclonic Storm
28.10.19/0530	17.9/65.7	240-250 gusting to 275	Super Cyclonic Storm
28.10.19/1730	18.4/64.7	220-230 gusting to 255	Super Cyclonic Storm
29.10.19/0530	18.9/63.7	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/1730	19.2/63.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/0530	19.4/62.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1730	19.5/62.0	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/0530	19.4/61.5	125-135 gusting to 145	Very Severe Cyclonic Storm
31.10.19/1730	19.3/61.2	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/0530	19.2/60.9	95-105 gusting to 115	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 230-240 kmph gusting to 265 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 255-265 kmph gusting to 290 kmph by early hours of 28th October over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Gale wind, speed reaching 200-210 kmph gusting to 230 kmph, likely to prevail over west-central Arabian Sea from 29th October and decrease gradually becoming 95 – 105 gusting to 115 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and improve gradually thereafter becoming High to very rough from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

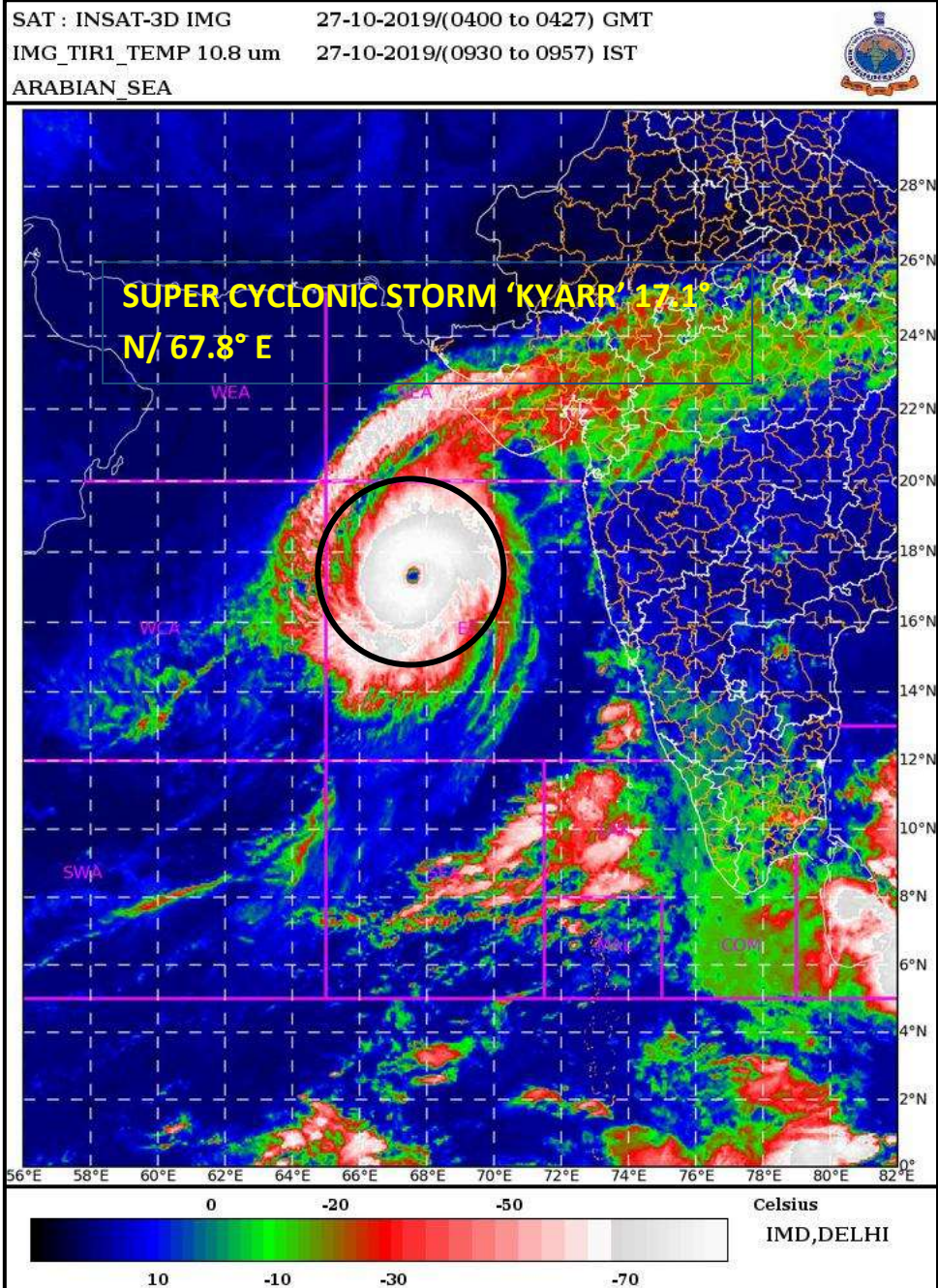
(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

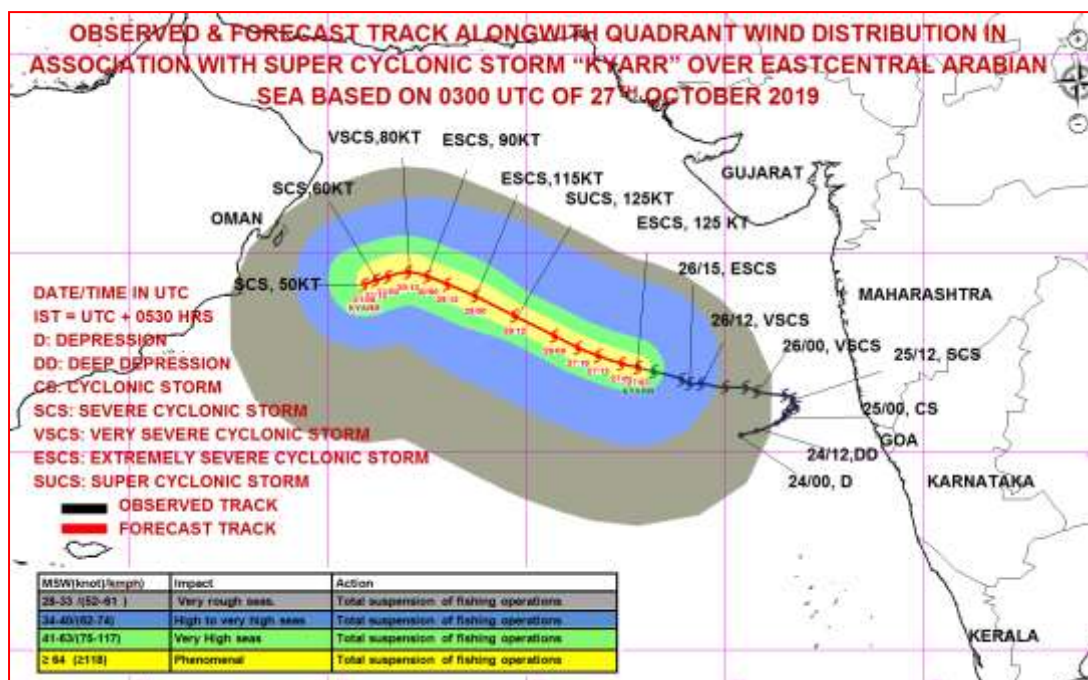
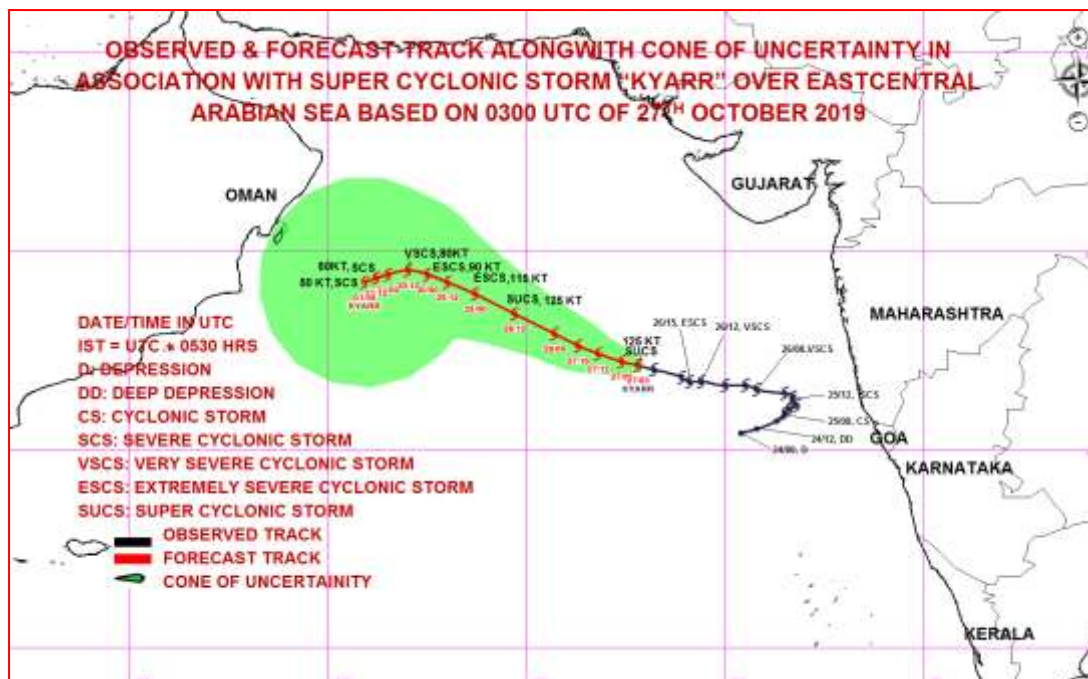
The next bulletin will be issued at 1430 hrs IST of today, the 27th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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 (ARB/03/2019)

TIME OF ISSUE: 1330 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 16 Kmph during past 06 hrs and lay centred at 1130 hrs IST of today, the 27th October, 2019 near latitude 17.2°N and longitude 67.3°E over Eastcentral Arabian Sea, about 620 km west-southwest of Mumbai (Maharashtra), 1400 km east of Salalah (Oman) and 960 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October morning and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/1130	17.2/67.3	230-240 gusting to 265	Super Cyclonic Storm
27.10.19/1730	17.4/66.7	240-250 gusting to 275	Super Cyclonic Storm
27.10.19/2330	17.6/66.1	240-250 gusting to 275	Super Cyclonic Storm
28.10.19/0530	17.9/65.6	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/1130	18.1/65.1	220-230 gusting to 255	Super Cyclonic Storm
28.10.19/2330	18.6/64.2	210-220 gusting to 245	Extremely Severe Cyclonic Storm
29.10.19/1130	19.1/63.4	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/2330	19.3/62.7	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/1130	19.4/62.2	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/2330	19.4/61.8	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1130	19.3/61.4	125-135 gusting to 145	Very Severe Cyclonic Storm
31.10.19/2330	19.1/61.0	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/1130	18.7/60.7	95-105 gusting to 115	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 230-240 kmph gusting to 265 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 240-250 kmph gusting to 275 kmph by evening of 27th October over eastcentral & adjoining westcentral Arabian Sea around the system centre.
- Gale wind, speed reaching 210-220 kmph gusting to 240 kmph, likely to prevail over west-central Arabian Sea from 28th October and decrease gradually becoming 95 – 105 gusting to 115 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and improve gradually thereafter becoming very rough to high from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

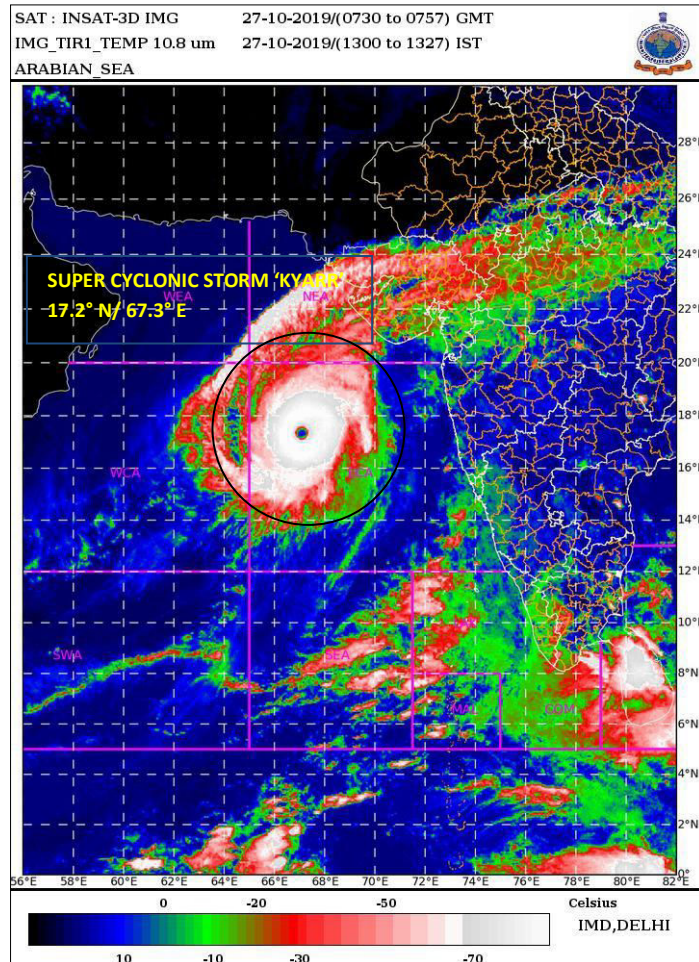
(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

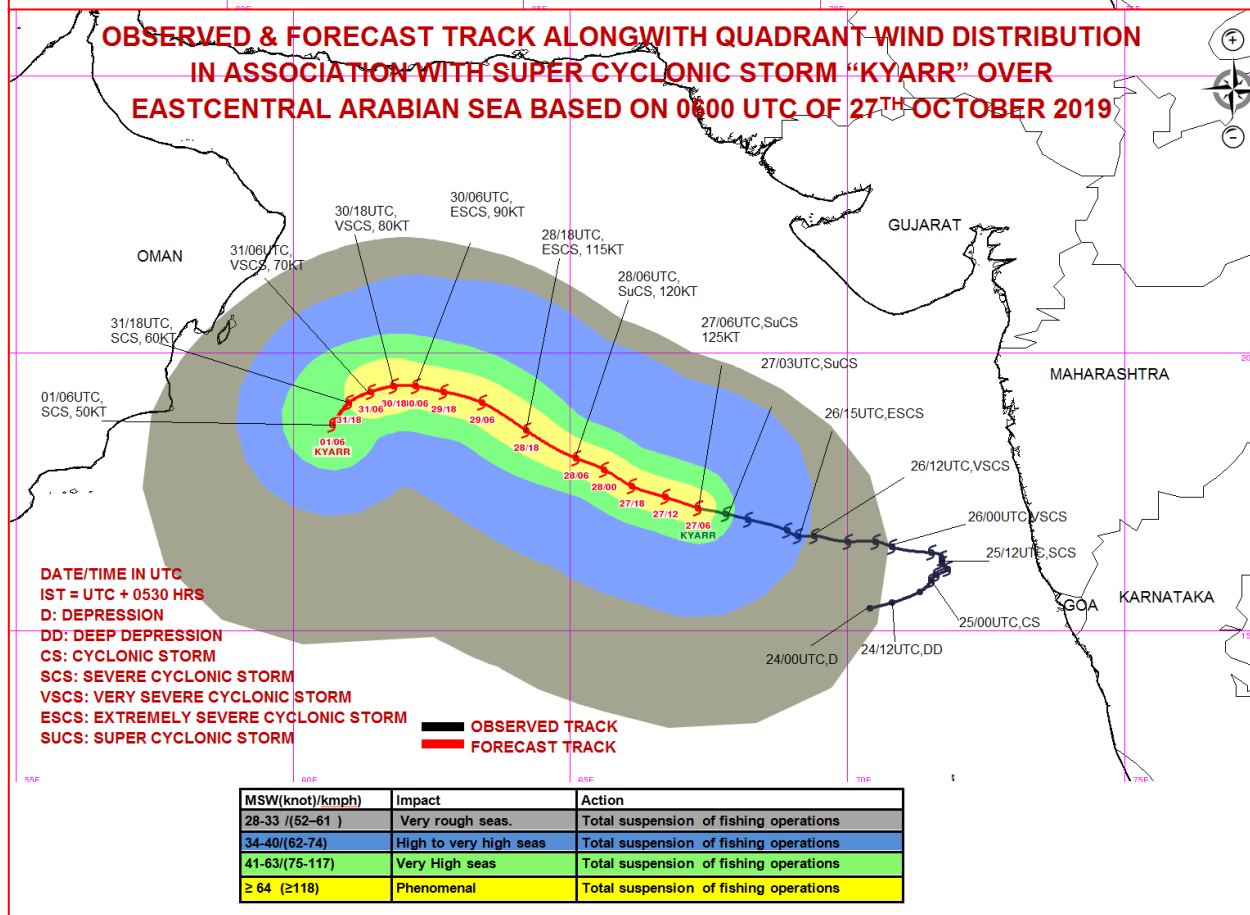
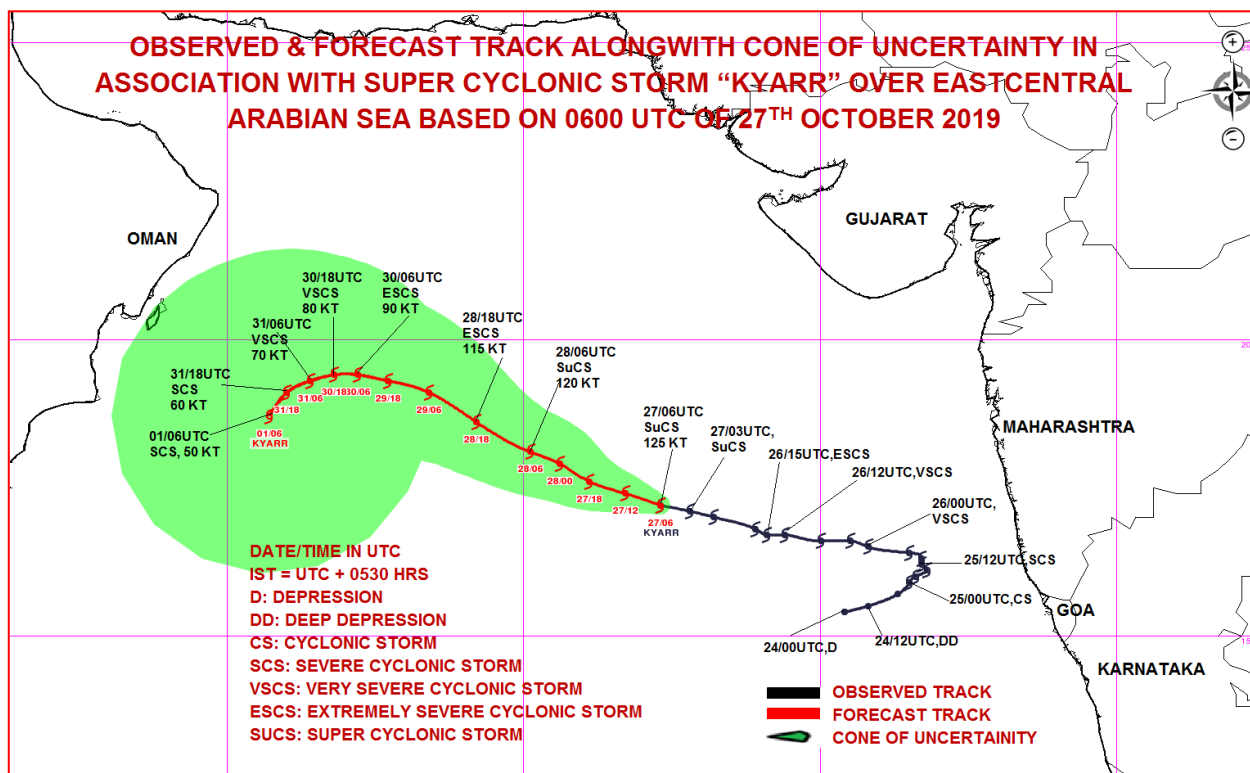
The next bulletin will be issued at 1730 hrs IST of today, the 27th October, 2019.

(Sunitha Devi. S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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 (ARB/03/2019)

TIME OF ISSUE: 1600 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 16 Kmph during past 06 hrs and lay centred at 1430 hrs IST of today, the 27th October, 2019 near latitude 17.4°N and longitude 67.0°E over Eastcentral Arabian Sea, about 630 km west-southwest of Mumbai (Maharashtra), 1390 km east-northeast of Salalah (Oman) and 920 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October morning and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/1430	17.4/67.0	235-245 gusting to 270	Super Cyclonic Storm
27.10.19/1730	17.4/66.7	240-250 gusting to 275	Super Cyclonic Storm
27.10.19/2330	17.6/66.1	240-250 gusting to 275	Super Cyclonic Storm
28.10.19/0530	17.9/65.6	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/1130	18.1/65.1	220-230 gusting to 255	Super Cyclonic Storm
28.10.19/2330	18.6/64.2	210-220 gusting to 245	Extremely Severe Cyclonic Storm
29.10.19/1130	19.1/63.4	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/2330	19.3/62.7	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/1130	19.4/62.2	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/2330	19.4/61.8	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1130	19.3/61.4	125-135 gusting to 145	Very Severe Cyclonic Storm
31.10.19/2330	19.1/61.0	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/1130	18.7/60.7	95-105 gusting to 115	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 235-245 kmph gusting to 270 kmph, is prevailing around the system centre over Eastcentral Arabian Sea and very likely to increase gradually becoming 240-250 kmph gusting to 275 kmph during next 3 hours over eastcentral & adjoining westcentral Arabian Sea around the system centre. It is likely to reduce gradually becoming 220-230 kmph gusting to 255 kmph by 28th forenoon.
- Gale wind, speed reaching 210-220 kmph gusting to 240 kmph, likely to prevail over west-central Arabian Sea from 28th October and decrease gradually becoming 95 – 105 gusting to 115 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and improve gradually thereafter becoming very rough to high from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

The next bulletin will be issued at 2030 hrs IST of today, the 27th October, 2019.

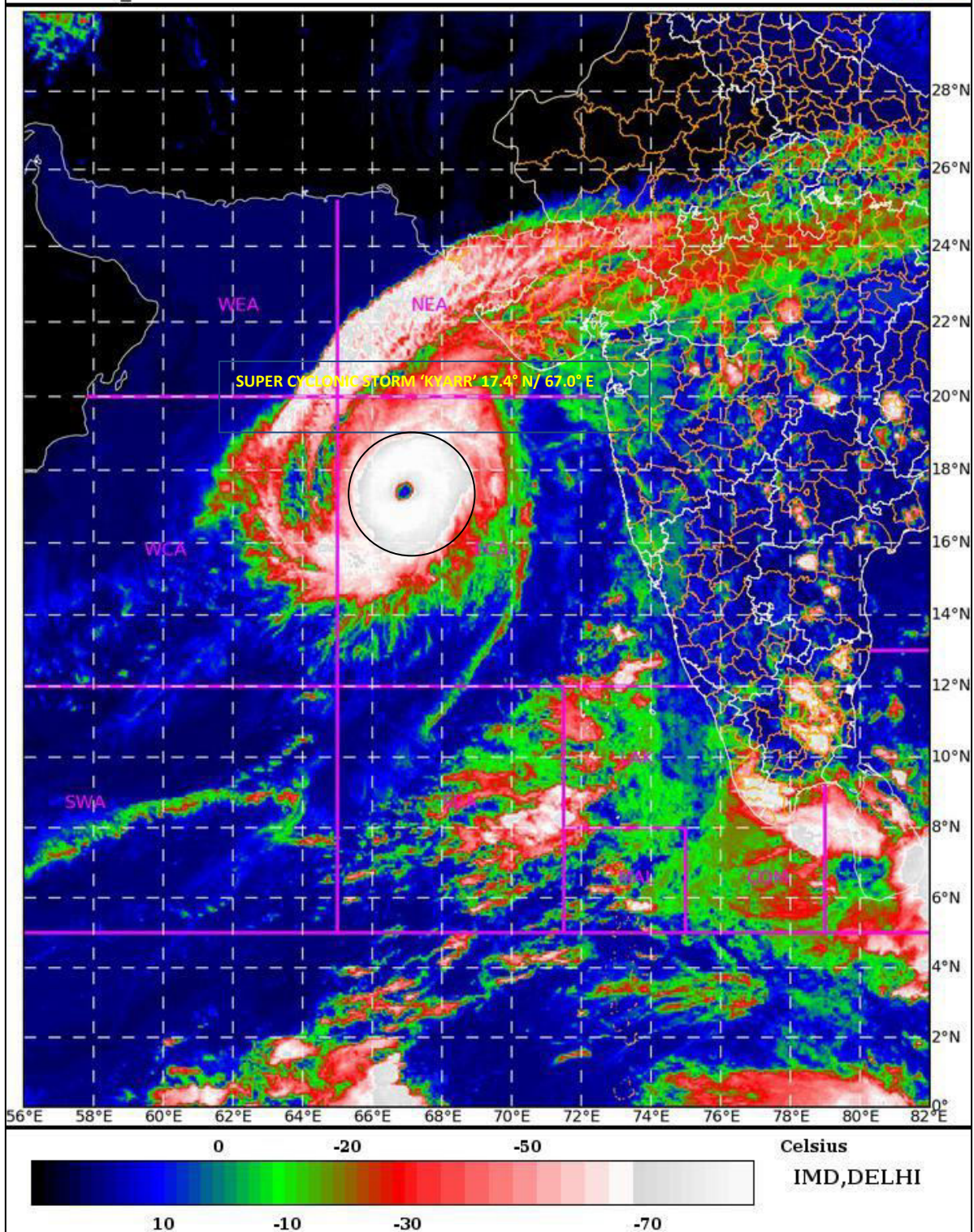
(Sunitha Devi. S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 27-10-2019/(0930 to 0956) GMT

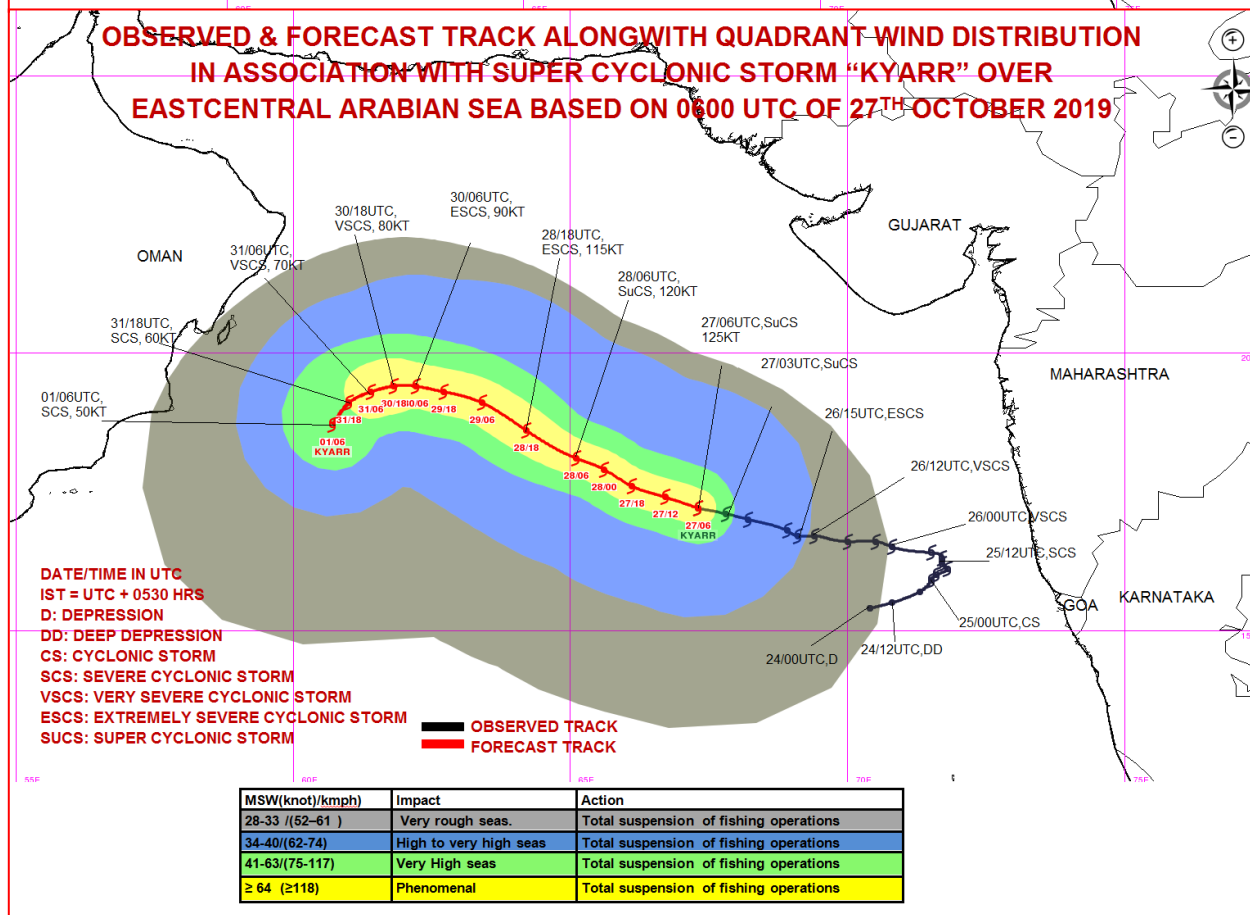
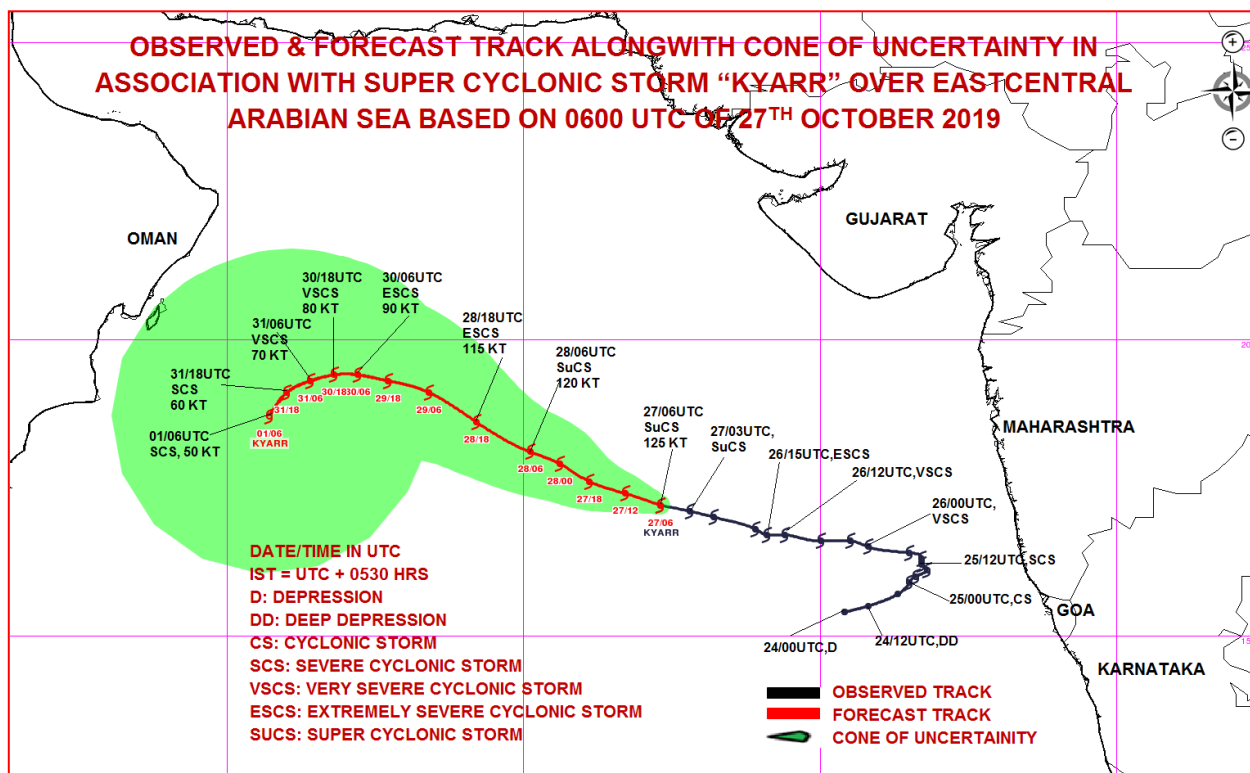
IMG_TIR1_TEMP 10.8 um 27-10-2019/(1500 to 1526) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1940 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 12 Kmph during past 06 hrs and lay centred at 1730 hrs IST of today, the 27th October, 2019 near latitude 17.5°N and longitude 66.7°E over Eastcentral Arabian Sea, about 670 km west-southwest of Mumbai (Maharashtra), 1340 km east-northeast of Salalah (Oman) and 890 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/1730	17.5/66.7	240-250 gusting to 275	Super Cyclonic Storm
27.10.19/2330	17.8/66.1	240-250 gusting to 275	Super Cyclonic Storm
28.10.19/0530	18.0/65.6	235-245 gusting to 270	Super Cyclonic Storm
28.10.19/1130	18.2/65.1	225-235 gusting to 260	Super Cyclonic Storm
28.10.19/1730	18.5/64.6	220-230 gusting to 250	Super Cyclonic Storm
29.10.19/0530	18.9/63.8	210-220 gusting to 240	Extremely Severe Cyclonic Storm
29.10.19/1730	19.2/63.1	200-210 gusting to 230	Extremely Severe Cyclonic Storm
30.10.19/0530	19.4/62.5	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/1730	19.5/62.0	160-170 gusting to 185	Extremely Severe Cyclonic Storm
31.10.19/0530	19.4/61.6	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1730	19.2/61.2	125-135 gusting to 150	Very Severe Cyclonic Storm
01.11.19/0530	18.9/60.8	105-115 gusting to 125	Severe Cyclonic Storm
01.11.19/1730	18.8/60.4	90-100 gusting to 110	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 240-250 kmph gusting to 275 kmph, is prevailing around the system centre over Eastcentral Arabian Sea during next 06 hours over eastcentral & adjoining westcentral Arabian Sea around the system centre. It is likely to reduce gradually becoming 220-230 kmph gusting to 255 kmph by 28th evening.
- Gale wind, speed reaching 210-220 kmph gusting to 240 kmph, likely to prevail over west-central Arabian Sea from 28th October and decrease gradually becoming 105-115 gusting to 125 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

The next bulletin will be issued at 2330 hrs IST of today, the 27th October, 2019.

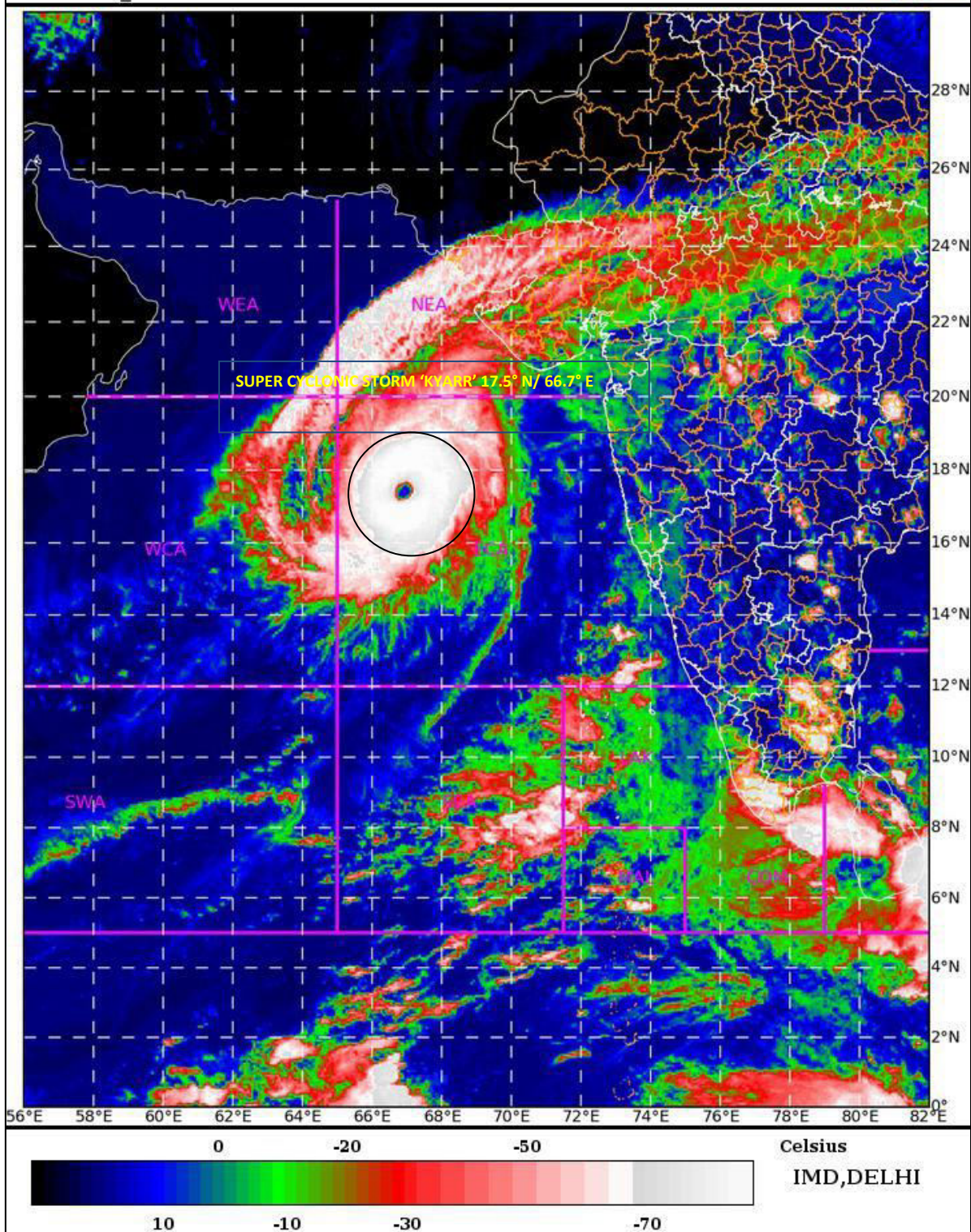
(Sunitha Devi. S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 27-10-2019/(0930 to 0956) GMT

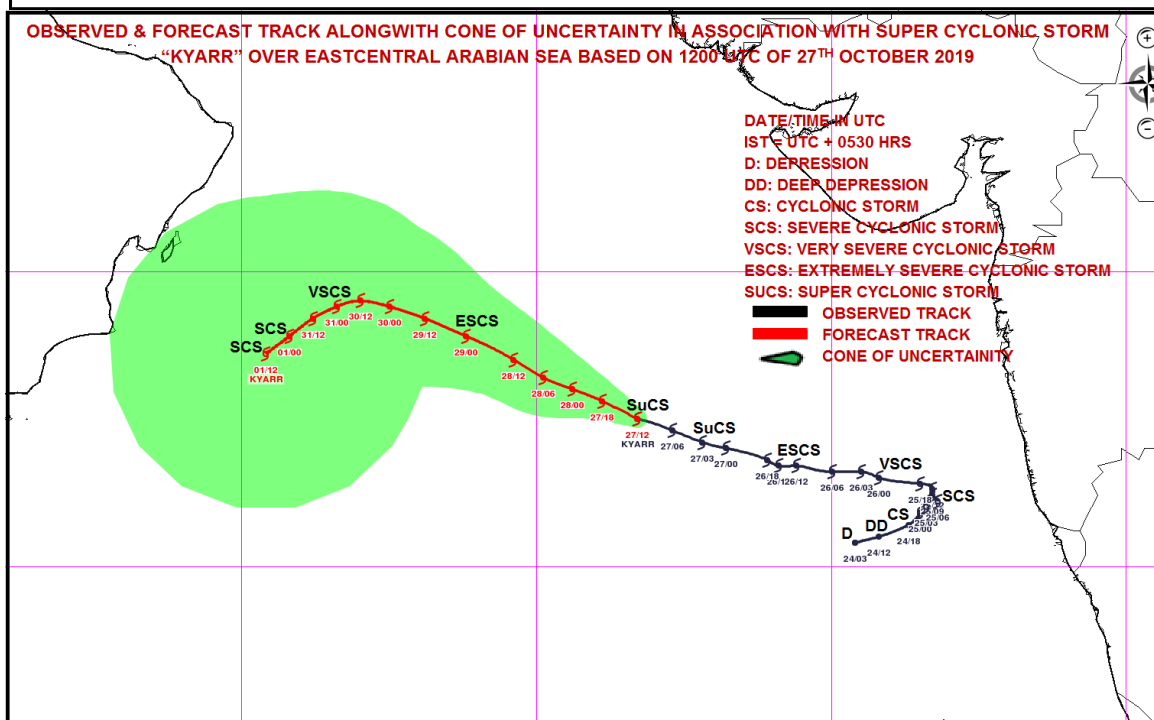
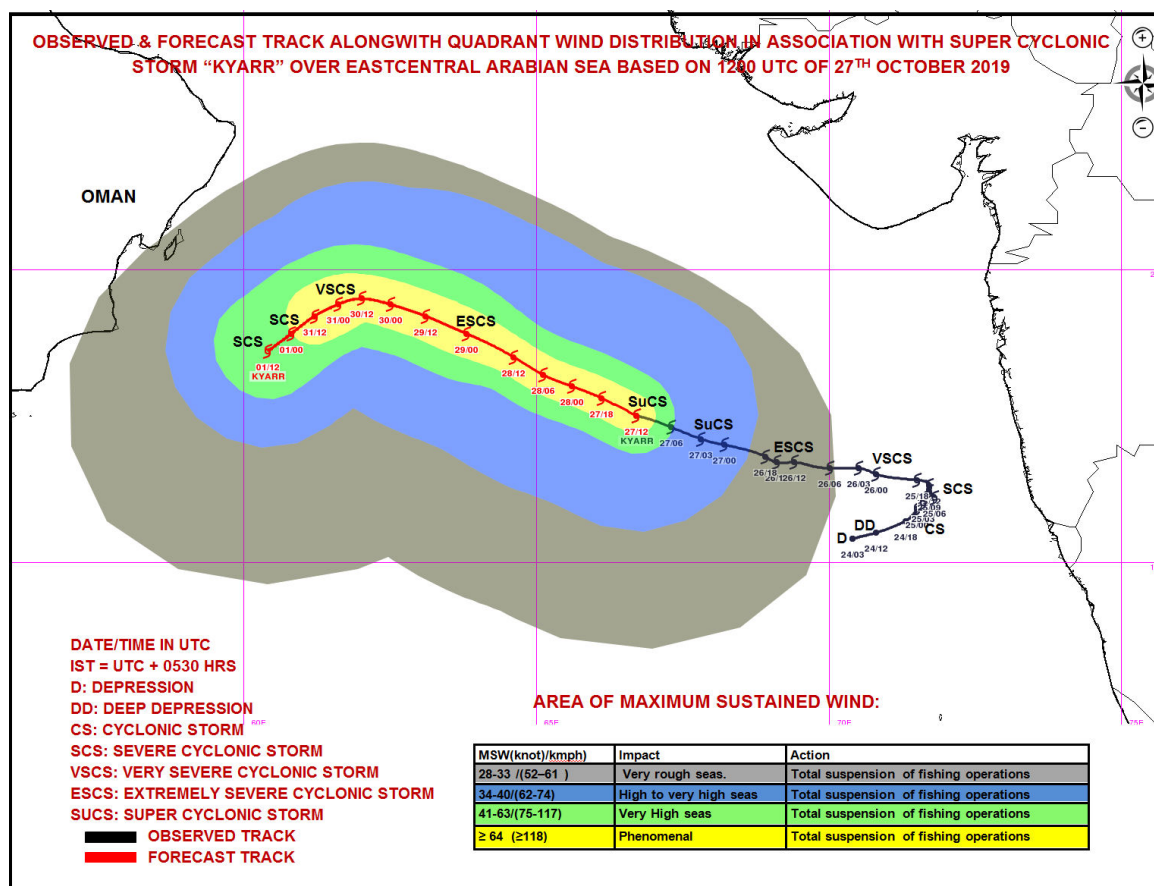
IMG_TIR1_TEMP 10.8 um 27-10-2019/(1500 to 1526) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1045 HOURS IST

DATED: 27.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 10 Kmph during past 06 hrs and lay centred at 2030 hrs IST of today, the 27th October, 2019 near latitude 17.7°N and longitude 66.5°E over Eastcentral Arabian Sea, about 680 km west-southwest of Mumbai (Maharashtra), 1320 km east-northeast of Salalah (Oman) and 860 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/2030	17.7/66.5	240-250 gusting to 275	Super Cyclonic Storm
27.10.19/2330	17.9/66.2	240-250 gusting to 275	Super Cyclonic Storm
28.10.19/0530	18.1/65.4	235-245 gusting to 270	Super Cyclonic Storm
28.10.19/1130	18.3/65.1	225-235 gusting to 260	Super Cyclonic Storm
28.10.19/1730	18.5/64.6	220-230 gusting to 250	Super Cyclonic Storm
29.10.19/0530	18.9/63.8	210-220 gusting to 240	Extremely Severe Cyclonic Storm
29.10.19/1730	19.2/63.1	200-210 gusting to 230	Extremely Severe Cyclonic Storm
30.10.19/0530	19.4/62.5	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/1730	19.5/62.0	160-170 gusting to 185	Extremely Severe Cyclonic Storm
31.10.19/0530	19.4/61.6	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1730	19.2/61.2	125-135 gusting to 150	Very Severe Cyclonic Storm
01.11.19/0530	18.9/60.8	105-115 gusting to 125	Severe Cyclonic Storm
01.11.19/1730	18.8/60.4	90-100 gusting to 110	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 240-250 kmph gusting to 275 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is likely to reduce gradually becoming 220-230 kmph gusting to 255 kmph by 28th evening.
- Gale wind, speed reaching 210-220 kmph gusting to 240 kmph, likely to prevail over west-central Arabian Sea from 28th October and decrease gradually becoming 105-115 gusting to 125 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

The next bulletin will be issued at 0230 hrs IST of 28th October, 2019.

(V R DURAI)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

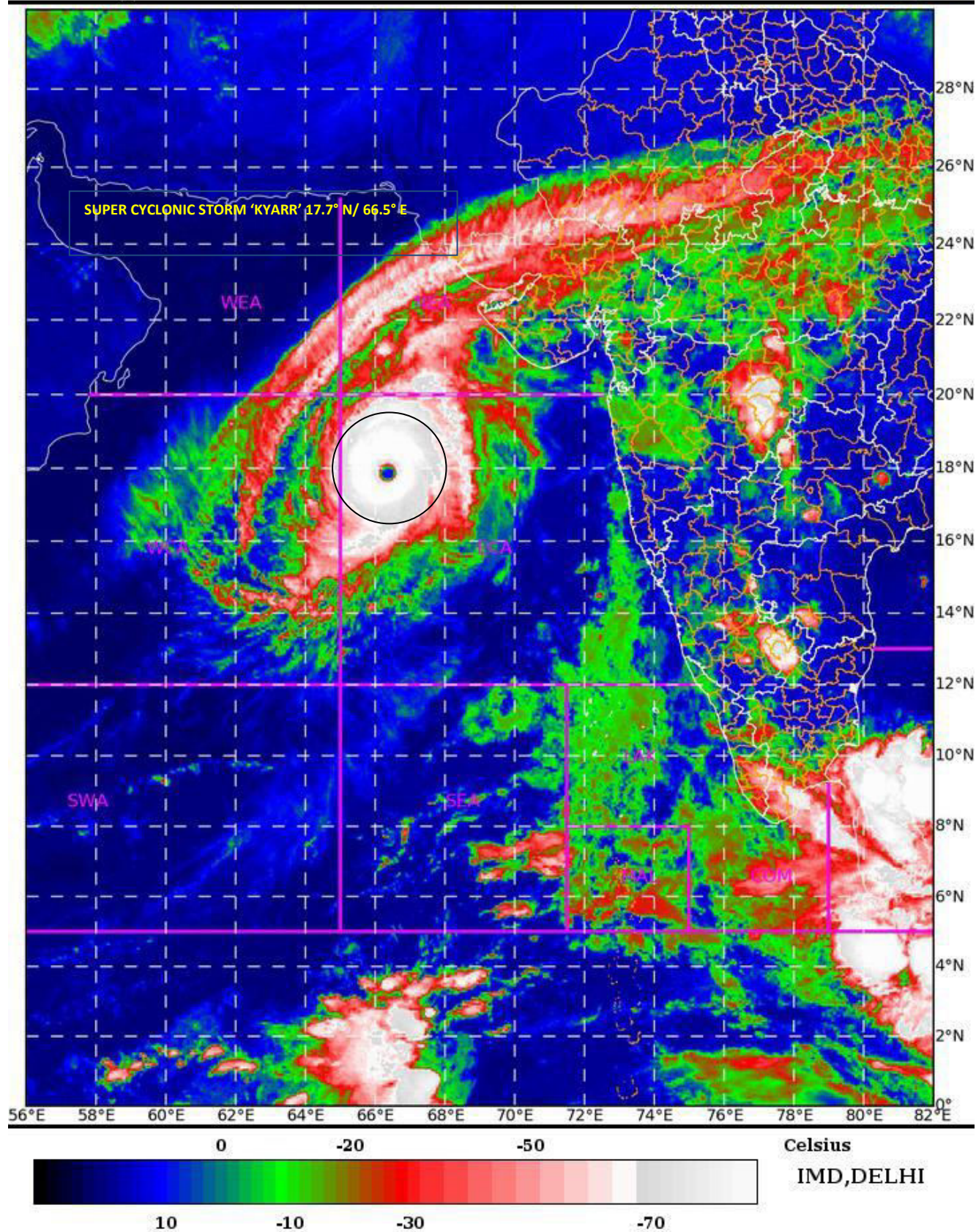
SAT : INSAT-3D IMG

27-10-2019/(1600 to 1626) GMT

IMG_TIR1_TEMP 10.8 um

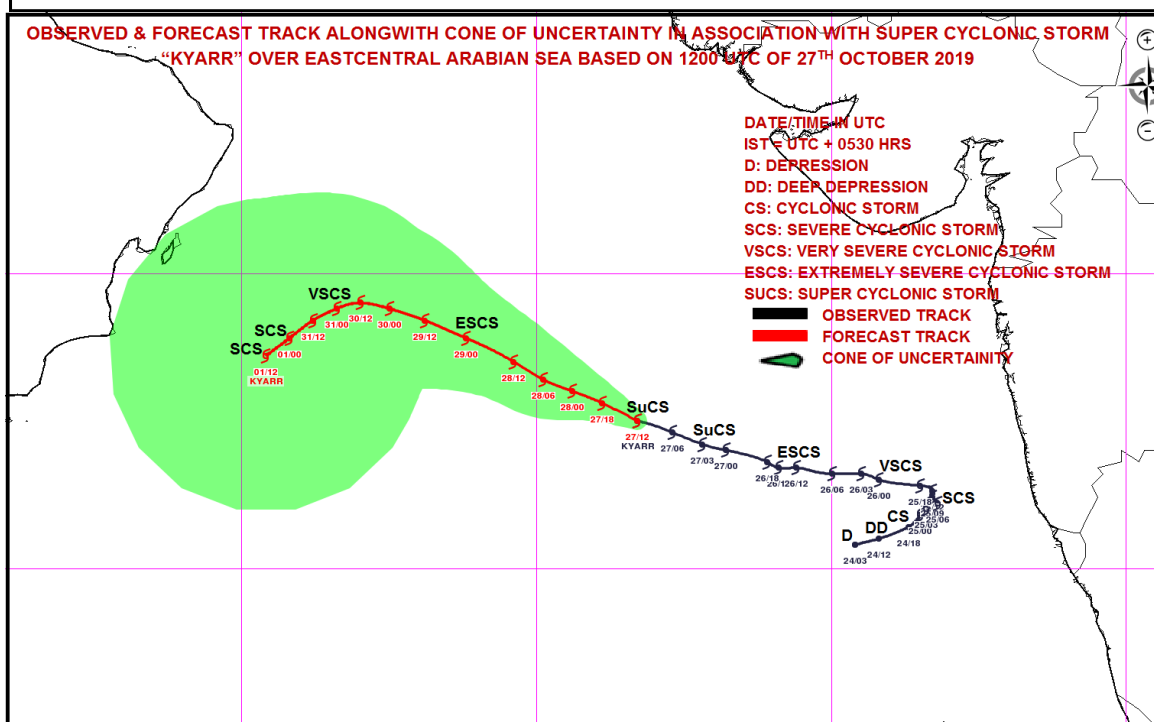
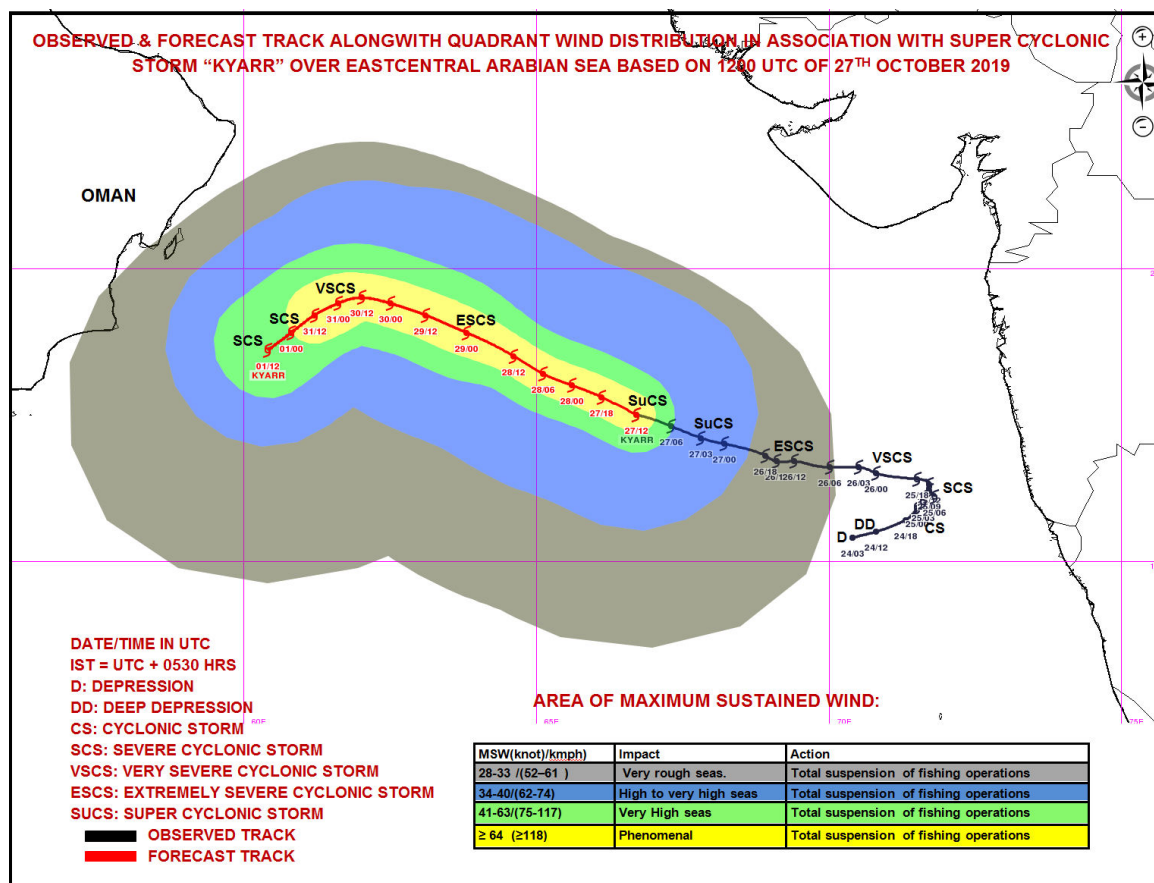
27-10-2019/(2130 to 2156) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0200 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 10 Kmph during past 06 hrs and lay centred at 2330 hrs IST of 27th October, 2019 near latitude 17.9°N and longitude 66.3°E over Eastcentral Arabian Sea, about 700 km west-southwest of Mumbai (Maharashtra), 1300 km east-northeast of Salalah (Oman) and 830 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
27.10.19/2330	17.9/66.3	240-250 gusting to 275	Super Cyclonic Storm
28.10.19/0530	18.2/65.6	235-245 gusting to 270	Super Cyclonic Storm
28.10.19/1130	18.4/65.1	225-235 gusting to 260	Super Cyclonic Storm
28.10.19/1730	18.6/64.6	220-230 gusting to 250	Super Cyclonic Storm
28.10.19/2330	18.8/64.2	220-230 gusting to 250	Super Cyclonic Storm
29.10.19/1130	19.1/63.5	210-220 gusting to 240	Extremely Severe Cyclonic Storm
29.10.19/2330	19.4/62.8	200-210 gusting to 230	Extremely Severe Cyclonic Storm
30.10.19/1130	19.5/62.3	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/2330	19.4/61.8	150-160 gusting to 175	Very Severe Cyclonic Storm
31.10.19/1130	19.3/61.4	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/2330	19.1/61.0	125-135 gusting to 150	Very Severe Cyclonic Storm
01.11.19/1130	18.9/60.6	105-115 gusting to 125	Severe Cyclonic Storm
01.11.19/2330	18.7/60.2	90-100 gusting to 110	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 240-250 kmph gusting to 275 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is likely to reduce gradually becoming 220-230 kmph gusting to 255 kmph by 28th evening.
- Gale wind, speed reaching 210-220 kmph gusting to 240 kmph, likely to prevail over west-central Arabian Sea from 28th October and decrease gradually becoming 105-115 gusting to 125 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

The next bulletin will be issued at 0530 hrs IST of 28th October, 2019.

(V R DURAI)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

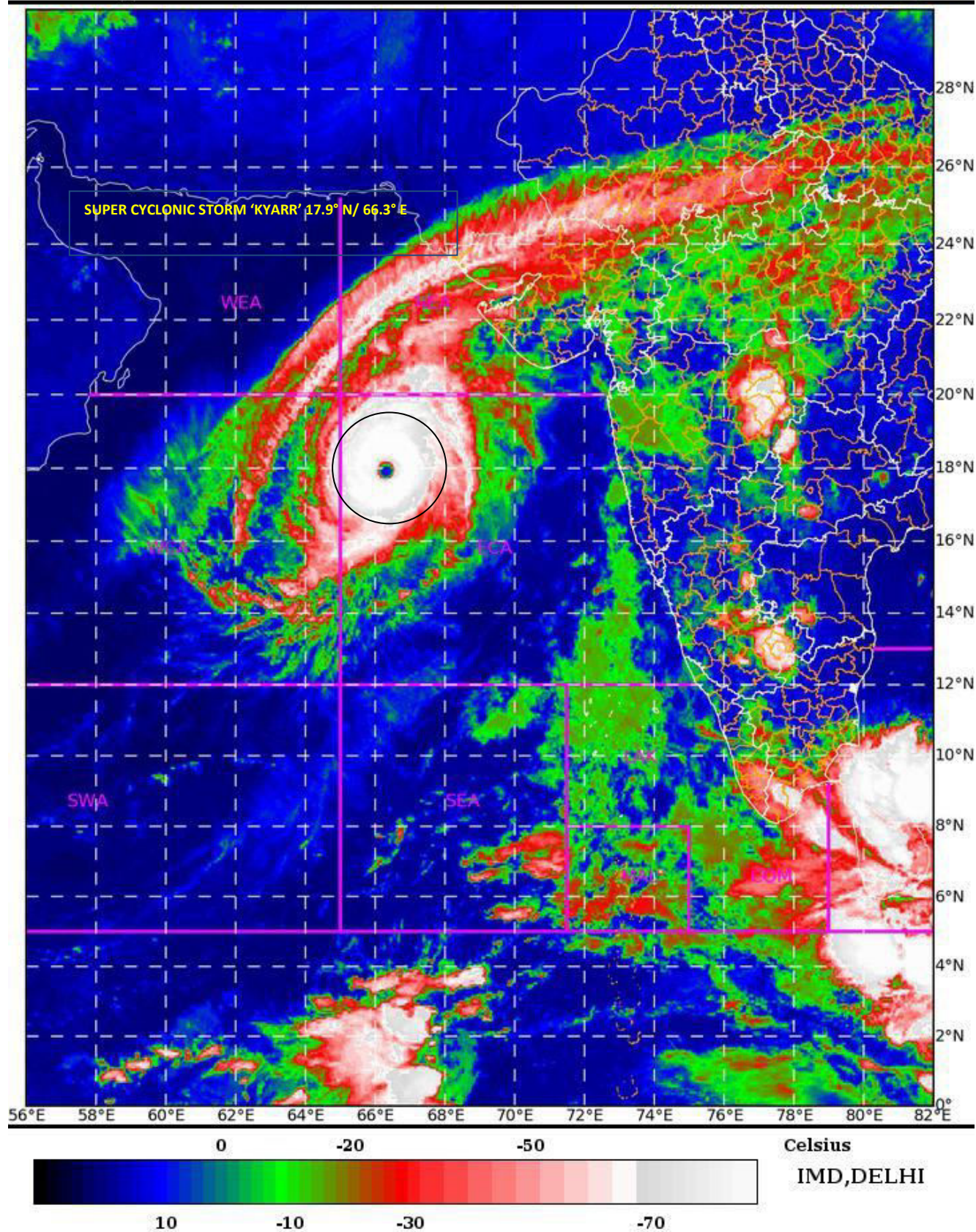
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27-10-2019/(1630 to 1656) GMT

IMG_TIR1_TEMP 10.8 um

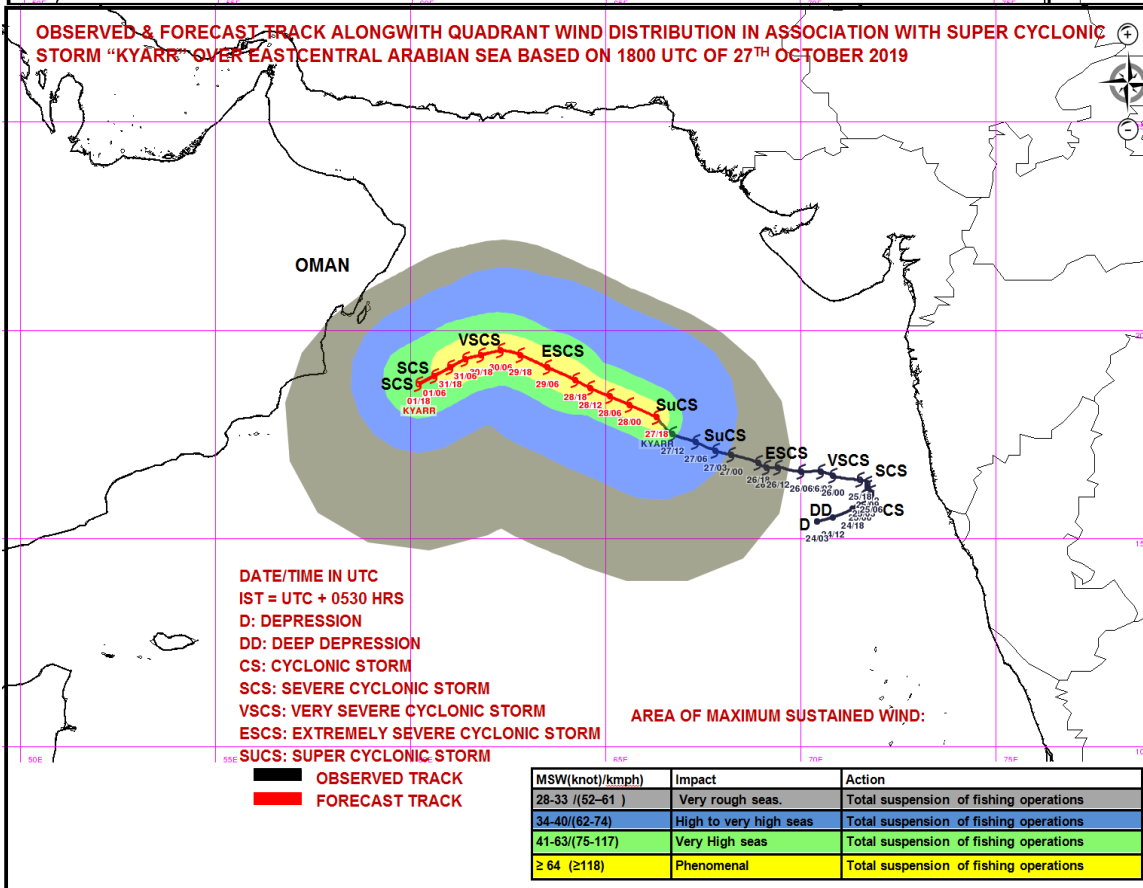
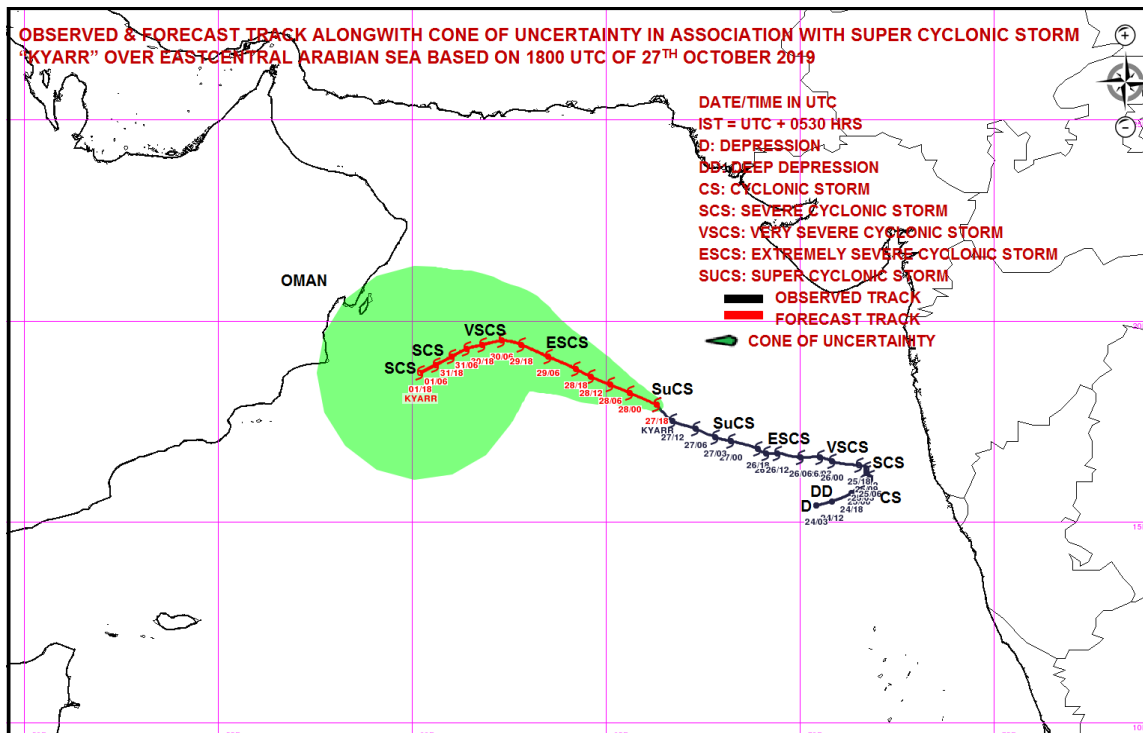
27-10-2019/(2200 to 2226) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0530 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 15 Kmph during past 06 hrs and lay centred at 0230 hrs IST of 28th October, 2019 near latitude 18.0°N and longitude 65.7°E over Eastcentral Arabian Sea, about 760 km west-southwest of Mumbai (Maharashtra), 1240 km east-northeast of Salalah (Oman) and 770 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/0230	18.0/65.7	235-245 gusting to 270	Super Cyclonic Storm
28.10.19/0530	18.2/65.4	235-245 gusting to 270	Super Cyclonic Storm
28.10.19/1130	18.4/65.1	225-235 gusting to 260	Super Cyclonic Storm
28.10.19/1730	18.6/64.6	220-230 gusting to 250	Super Cyclonic Storm
28.10.19/2330	18.8/64.2	220-230 gusting to 250	Super Cyclonic Storm
29.10.19/1130	19.1/63.5	210-220 gusting to 240	Extremely Severe Cyclonic Storm
29.10.19/2330	19.4/62.8	200-210 gusting to 230	Extremely Severe Cyclonic Storm
30.10.19/1130	19.5/62.3	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/2330	19.4/61.8	150-160 gusting to 175	Very Severe Cyclonic Storm
31.10.19/1130	19.3/61.4	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/2330	19.1/61.0	125-135 gusting to 150	Very Severe Cyclonic Storm
01.11.19/1130	18.9/60.6	105-115 gusting to 125	Severe Cyclonic Storm
01.11.19/2330	18.7/60.2	90-100 gusting to 110	Severe 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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 240-250 kmph gusting to 275 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is likely to reduce gradually becoming 220-230 kmph gusting to 255 kmph by 28th evening.
- Gale wind, speed reaching 210-220 kmph gusting to 240 kmph, likely to prevail over west-central Arabian Sea from 28th October and decrease gradually becoming 105-115 gusting to 125 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from the evening of 31st October.
- It is very likely to become phenomenal around the system centre over westcentral Arabian Sea from 28th to 30th October evening and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th and into west central Arabian Sea from 28th October to 01st November 2019.

The next bulletin will be issued at 0830 hrs IST of 28th October, 2019.

(V R DURAI)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

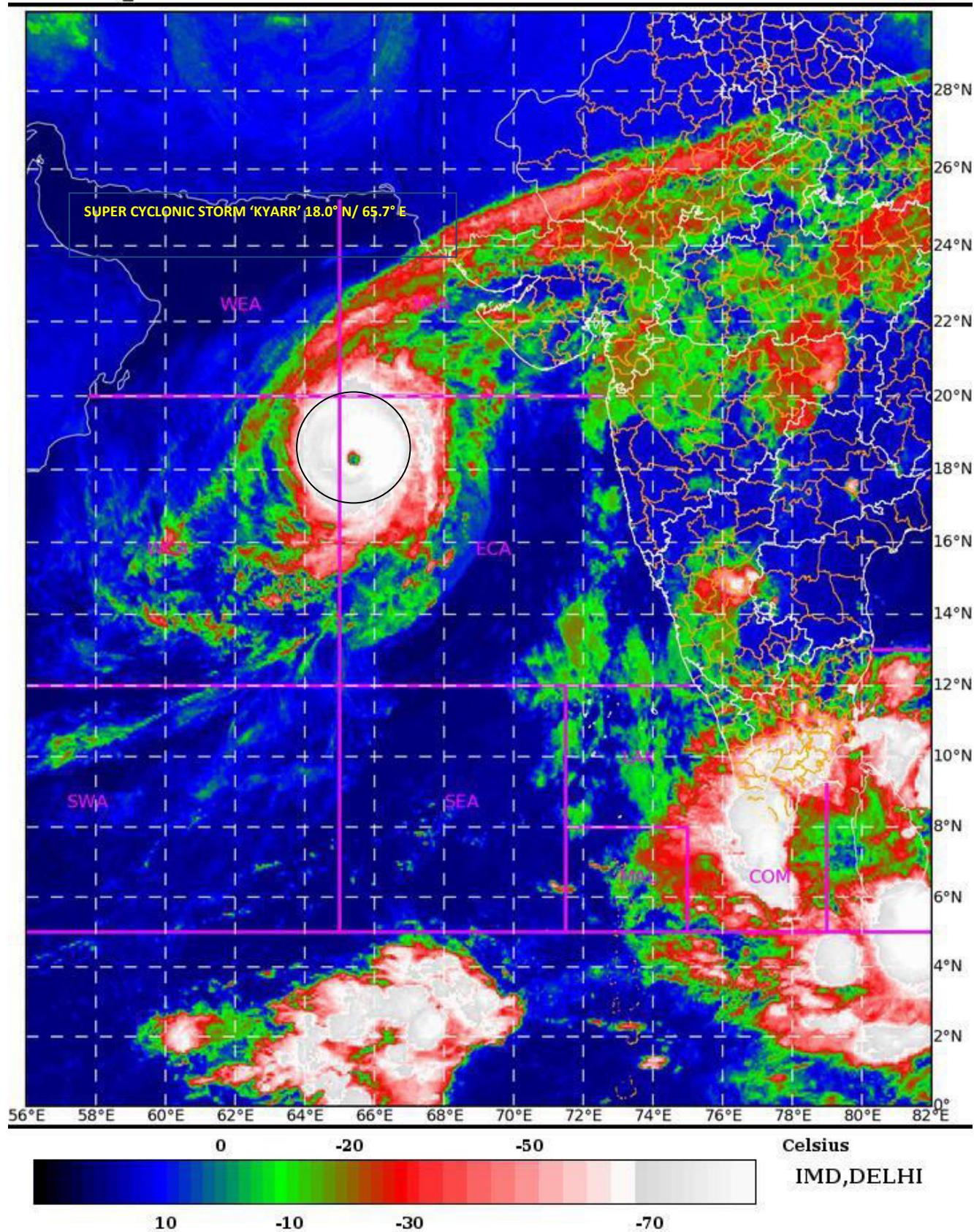
SAT : INSAT-3D IMG

27-10-2019/(2300 to 2326) GMT

IMG_TIR1_TEMP 10.8 um

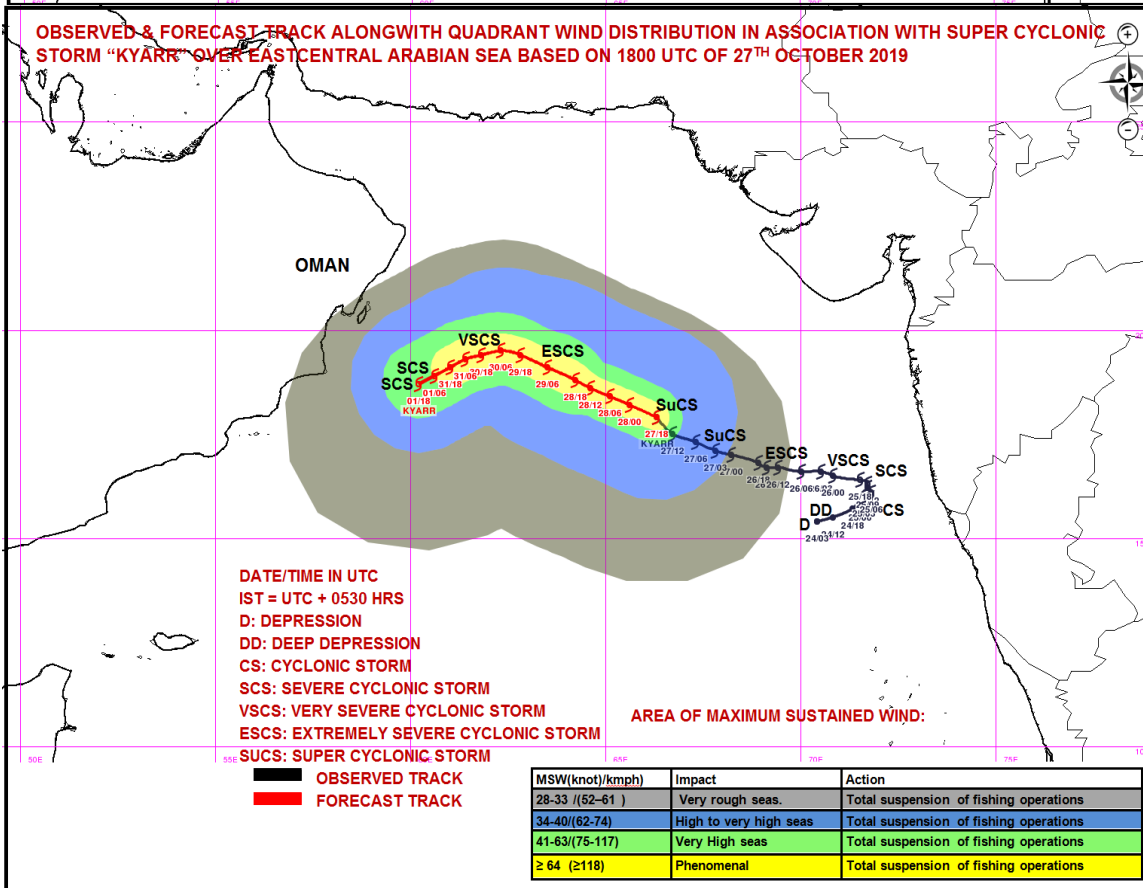
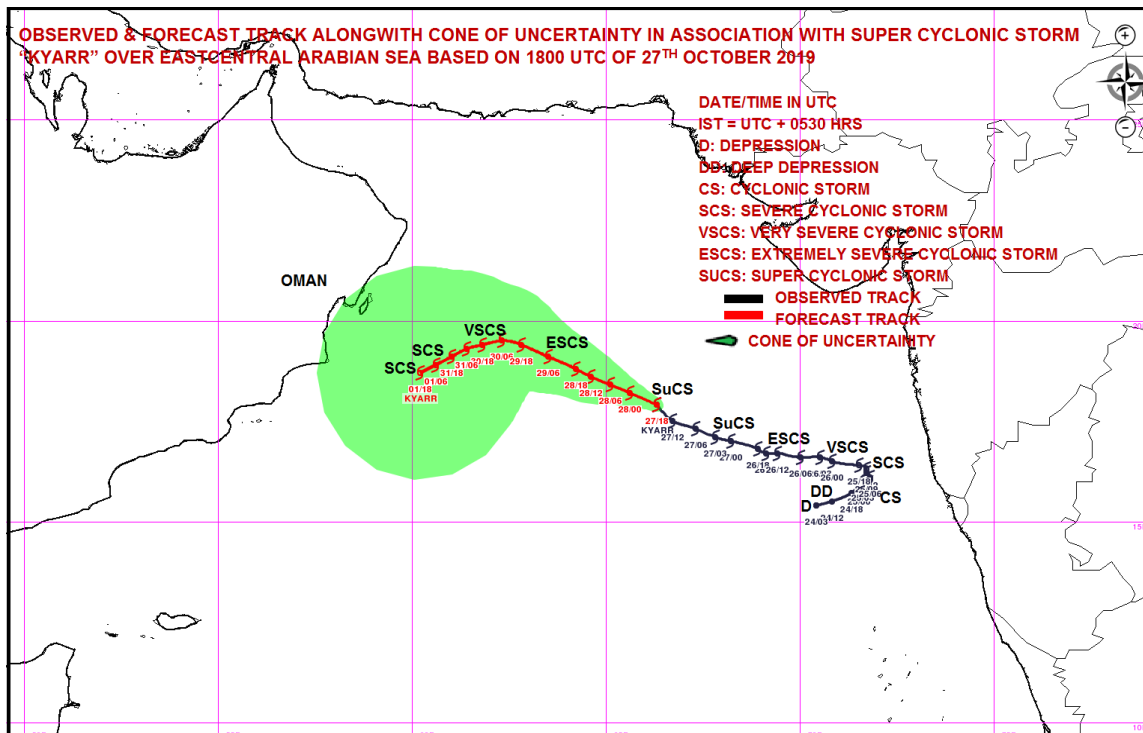
28-10-2019/(0430 to 0456) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0830 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 16 Kmph during past 06 hrs and lay centred at 0530 hrs IST of 28th October, 2019 near latitude 18.1°N and longitude 65.4°E over Eastcentral Arabian Sea, about 790 km west-southwest of Mumbai (Maharashtra), 1200 km east-northeast of Salalah (Oman) and 740 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards towards Oman coast during next 5 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October evening and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/0530	18.1/65.4	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/1130	18.4/64.8	220-230 gusting to 255	Super Cyclonic Storm
28.10.19/1730	18.6/64.3	210-220 gusting to 240	Extremely Severe Cyclonic Storm
28.10.19/2330	18.8/63.9	200-210 gusting to 220	Extremely Severe Cyclonic Storm
29.10.19/0530	18.9/63.6	190-200 gusting to 220	Extremely Severe Cyclonic Storm
29.10.19/1730	19.1/63.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/0530	19.2/62.5	170-180 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1730	19.2/62.2	155-165 gusting to 180	Very Severe Cyclonic Storm
31.10.19/0530	19.1/61.5	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1730	18.9/61.1	125-135 gusting to 145	Very Severe Cyclonic Storm
01.11.19/0530	18.5/60.6	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/1730	18.0/60.0	95-105 gusting to 115	Severe Cyclonic Storm
02.11.19/0530	17.4/59.3	80-90 gusting to 100	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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 230-240 kmph gusting to 265 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is likely to reduce gradually becoming 190-200 kmph gusting to 220 kmph by 29th morning and decrease gradually becoming 110-120 gusting to 130 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from 31st October.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into west central Arabian Sea till 2nd November 2019.

The next bulletin will be issued at 1130 hrs IST of 28th October, 2019.

(V R DURAI)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

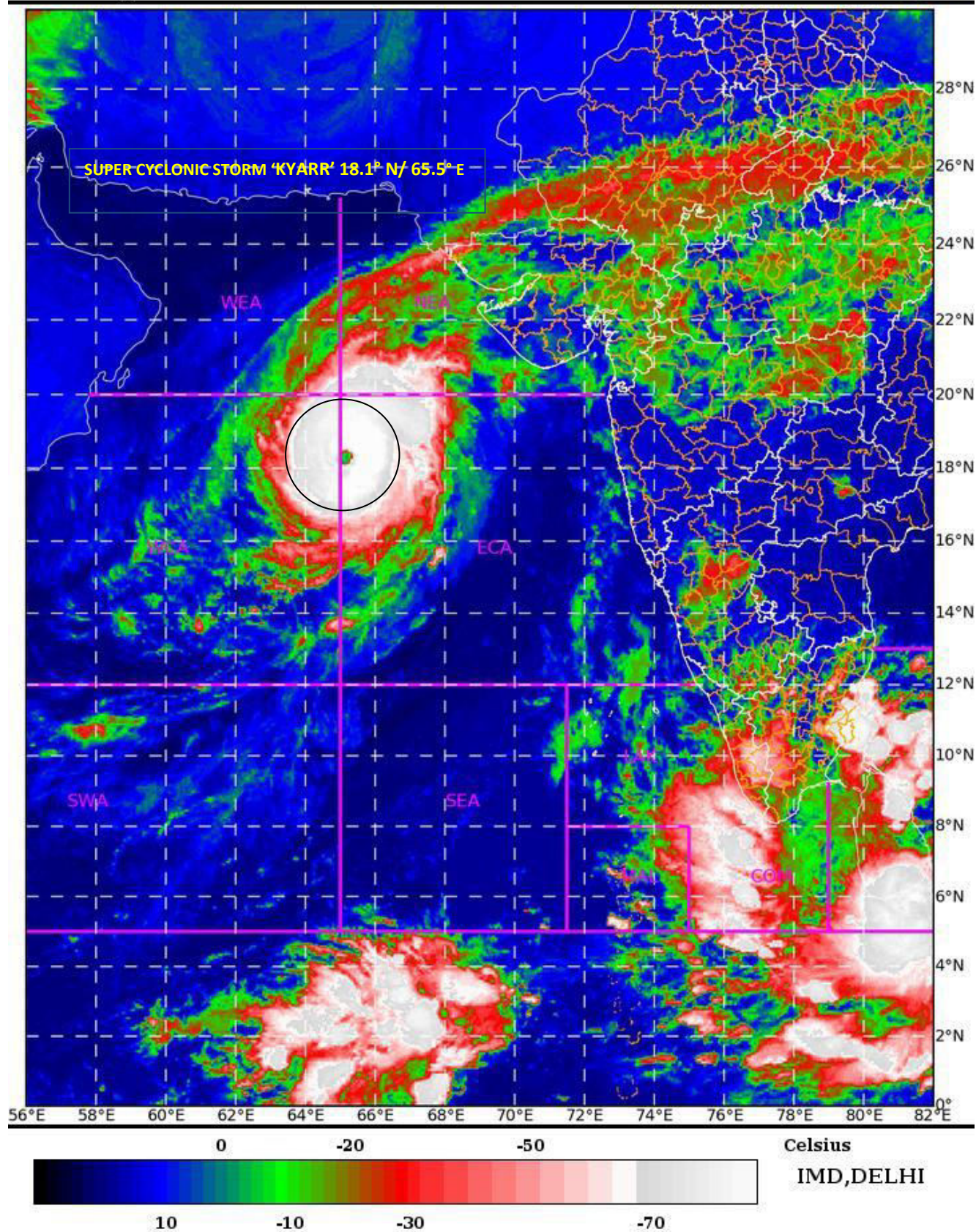
SAT : INSAT-3D IMG

28-10-2019/(0130 to 0156) GMT

IMG_TIR1_TEMP 10.8 um

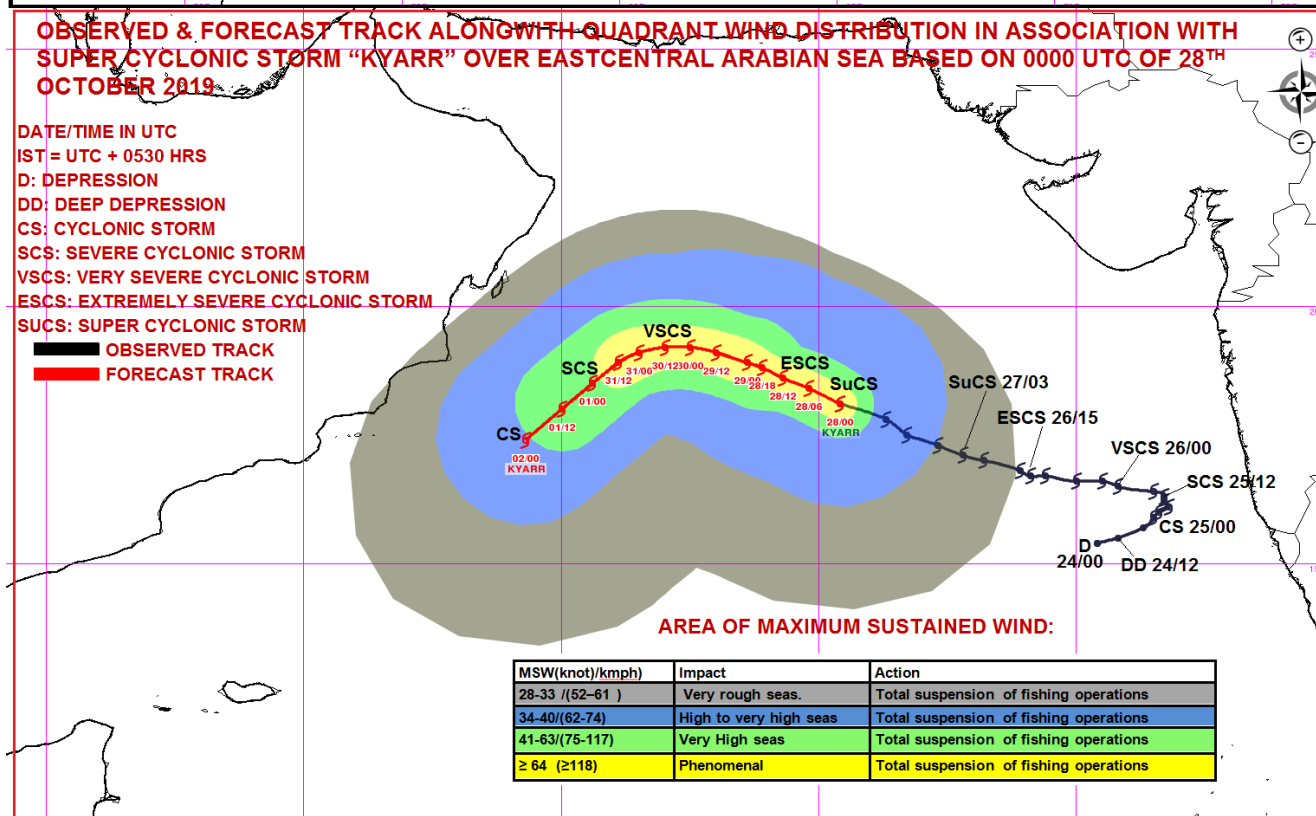
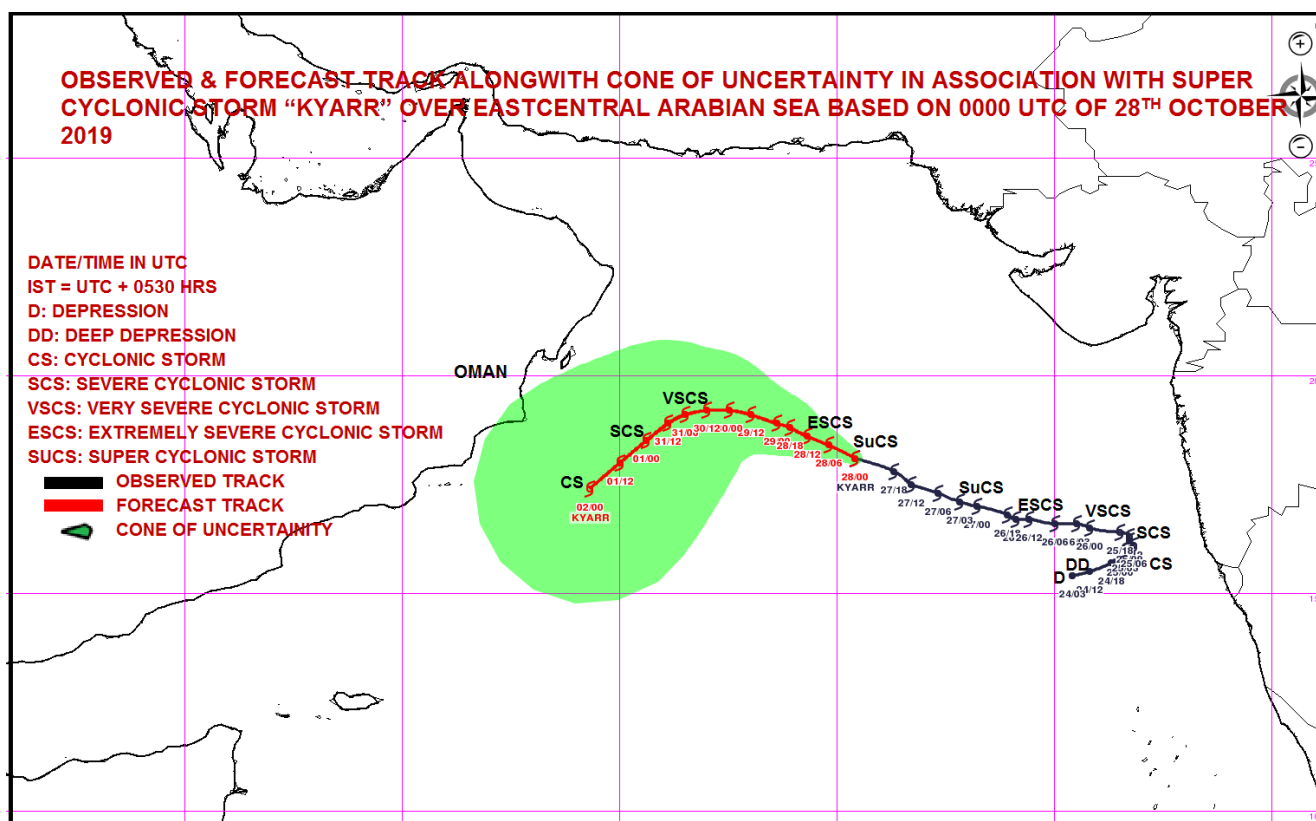
28-10-2019/(0700 to 0726) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1130 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Eastcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 13 Kmph during past 06 hrs and lay centred at 0830 hrs IST of 28th October, 2019 near latitude 18.2°N and longitude 65.0°E over Eastcentral Arabian Sea, about 830 km west-southwest of Mumbai (Maharashtra), 1160 km east-northeast of Salalah (Oman) and 690 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till 28th October evening and weaken gradually thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/0830	18.2/65.0	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/1130	18.4/64.8	220-230 gusting to 255	Super Cyclonic Storm
28.10.19/1730	18.6/64.3	210-220 gusting to 240	Extremely Severe Cyclonic Storm
28.10.19/2330	18.8/63.9	200-210 gusting to 220	Extremely Severe Cyclonic Storm
29.10.19/0530	18.9/63.6	190-200 gusting to 220	Extremely Severe Cyclonic Storm
29.10.19/1730	19.1/63.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/0530	19.2/62.5	170-180 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1730	19.2/62.2	155-165 gusting to 180	Very Severe Cyclonic Storm
31.10.19/0530	19.1/61.5	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1730	18.9/61.1	125-135 gusting to 145	Very Severe Cyclonic Storm
01.11.19/0530	18.5/60.6	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/1730	18.0/60.0	95-105 gusting to 115	Severe Cyclonic Storm
02.11.19/0530	17.4/59.3	80-90 gusting to 100	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.

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 230-240 kmph gusting to 265 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is very likely to reduce gradually becoming 190-200 kmph gusting to 220 kmph by 29th October morning and 110-120 gusting to 130 kmph by 1st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from 31st October.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into west central Arabian Sea till 2nd November 2019.

The next bulletin will be issued at 1430 hrs IST of 28th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

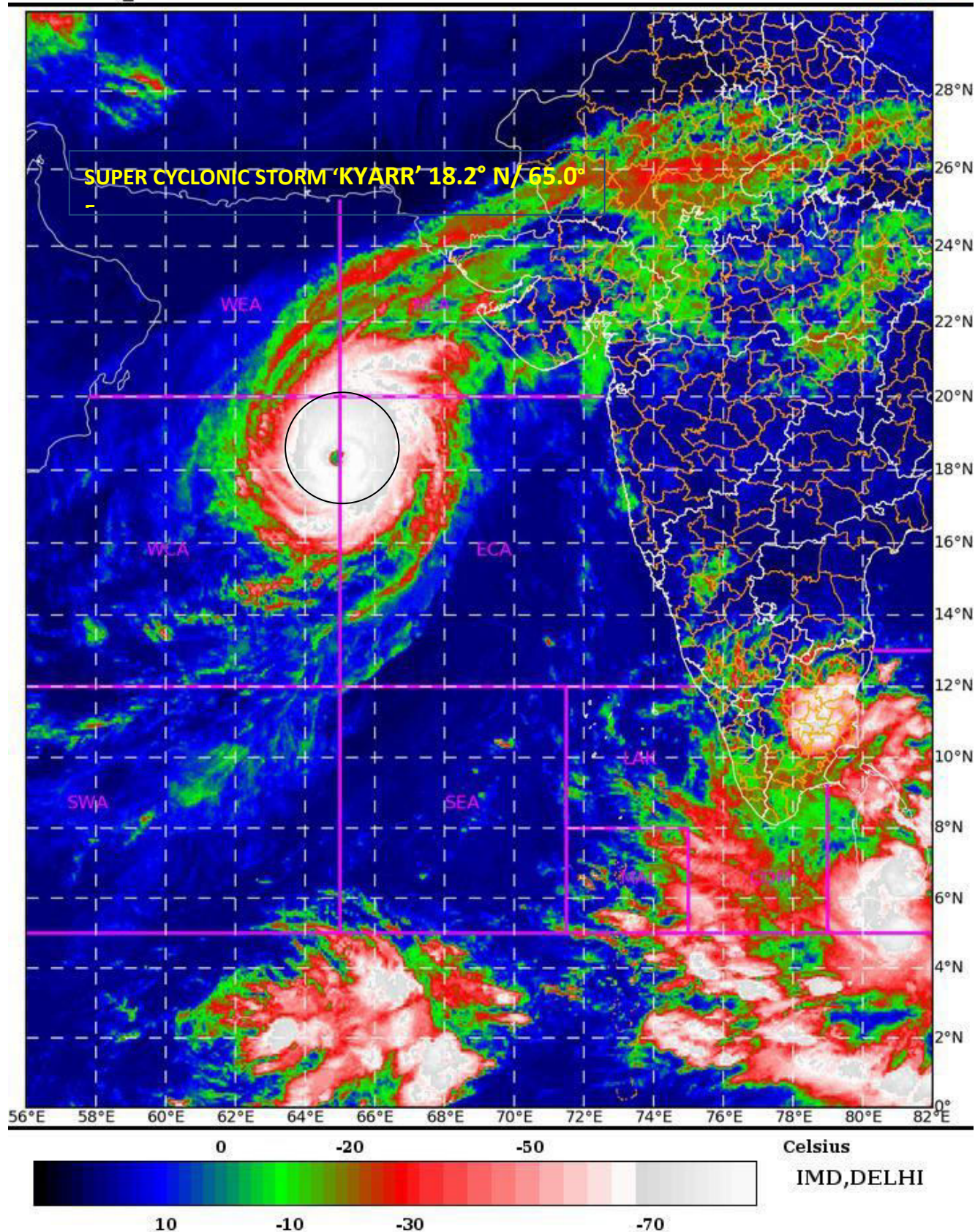
SAT : INSAT-3D IMG

28-10-2019/(0400 to 0427) GMT

IMG_TIR1_TEMP 10.8 um

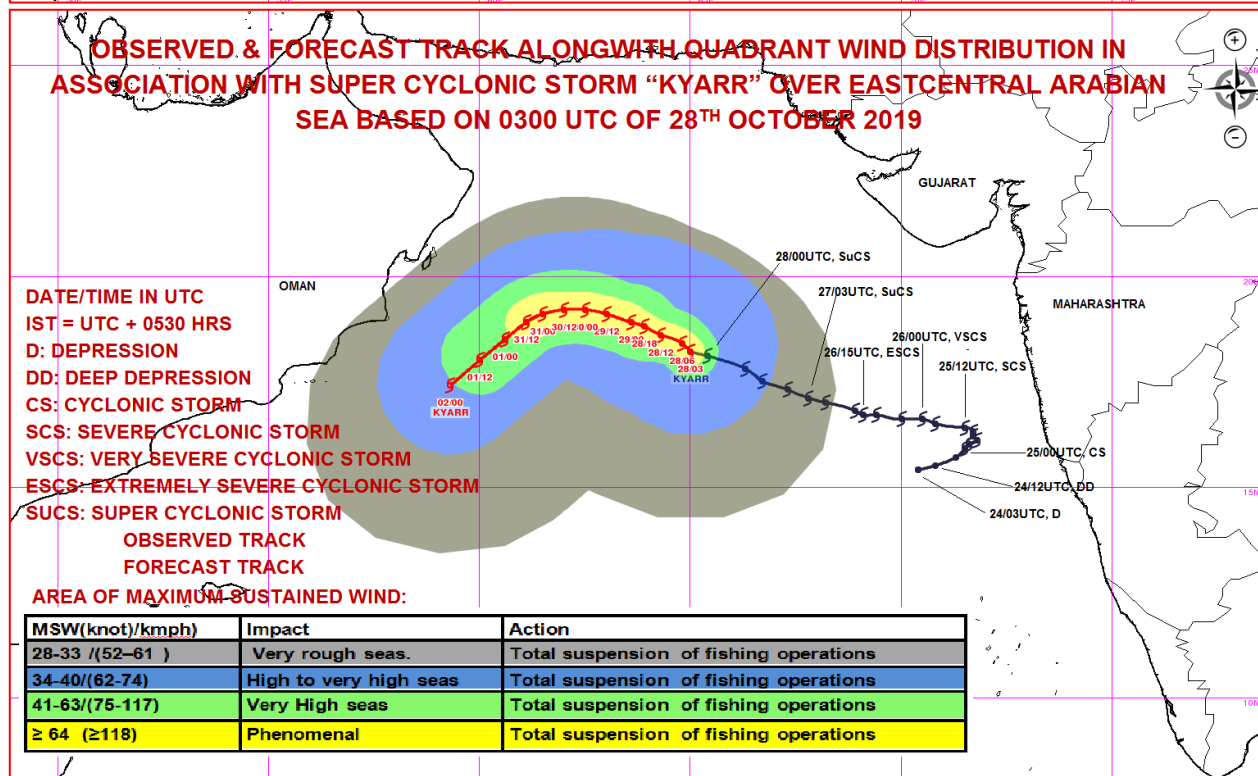
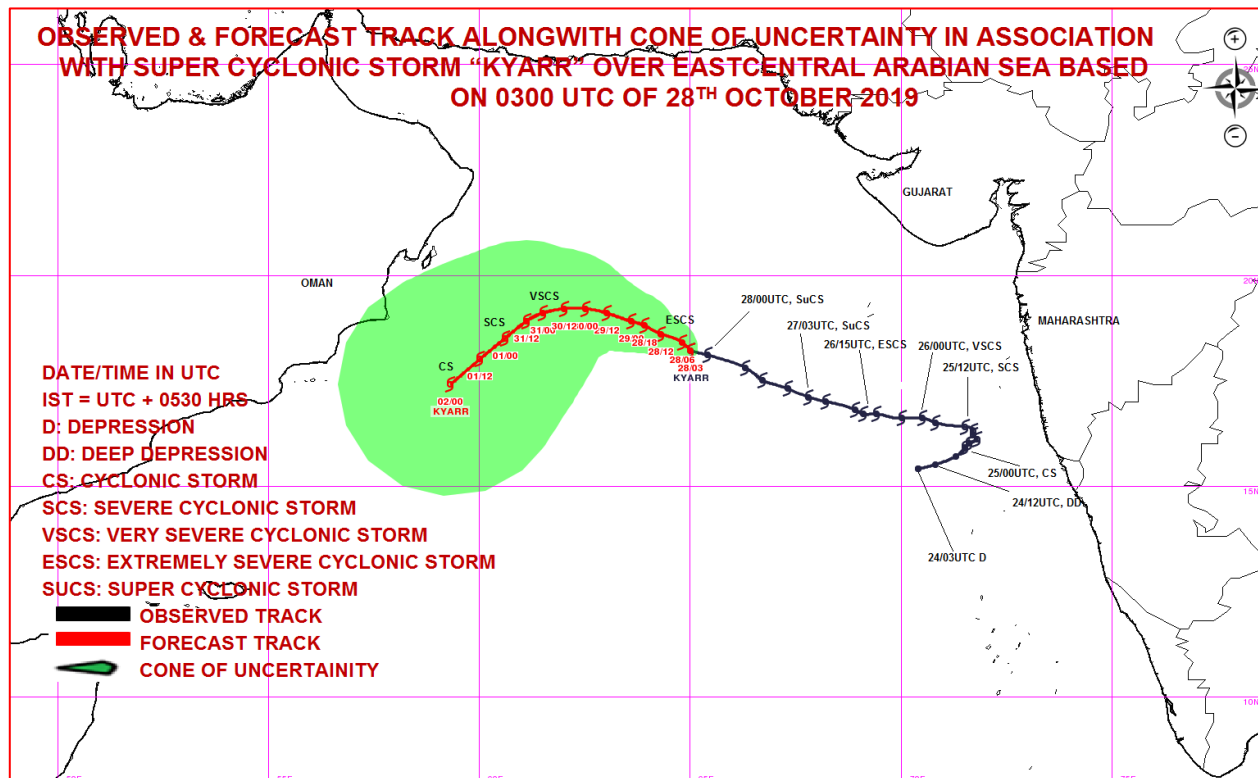
28-10-2019/(0930 to 0957) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1430 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral Arabian Sea

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

(a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 13 Kmph during past 06 hrs and lay centred at 1130 hrs IST of 28th October, 2019 near latitude 18.3°N and longitude 64.7°E over eastcentral and adjoining westcentral Arabian Sea, about 860 km west-southwest of Mumbai (Maharashtra), 1130 km east-northeast of Salalah (Oman) and 660 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till the night of 28th October and weaken gradually 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/1130	18.3/64.7	225-235 gusting to 260	Super Cyclonic Storm
28.10.19/1730	18.5/64.3	225-235 gusting to 260	Super Cyclonic Storm
28.10.19/2330	18.7/63.9	215-225 gusting to 245	Extremely Severe Cyclonic Storm
29.10.19/0530	18.8/63.6	210-220 gusting to 240	Extremely Severe Cyclonic Storm
29.10.19/1130	18.9/63.3	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/2330	19.0/62.7	180-190 gusting to 210	Extremely Severe Cyclonic Storm
30.10.19/1130	19.1/62.2	160-170 gusting to 185	Very Severe Cyclonic Storm
30.10.19/2330	18.9/61.5	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1130	18.3/60.6	125-135 gusting to 150	Very Severe Cyclonic Storm
31.10.19/2330	17.6/59.6	105-115 gusting to 130	Severe Cyclonic Storm
01.11.19/1130	16.7/58.5	85-95 gusting to 105	Cyclonic Storm
01.11.19/2330	15.8/57.3	70-80 gusting to 90	Cyclonic Storm
02.11.19/1130	15.0/56.0	50-60 gusting to 70	Deep Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 225-235 kmph gusting to 260 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is very likely to reduce gradually becoming 190-200 kmph gusting to 220 kmph by 29th October morning and 110-120 gusting to 130 kmph by 31st November morning.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from 31st October.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into west central Arabian Sea till 2nd November 2019.

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

A Low pressure area has formed over equatorial Indian Ocean off south Sri Lanka coast. The system is likely to become more marked over Comorin area & neighbourhood during next 24 hours and concentrate into a depression over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas during the subsequent 48 hours.

Warnings:

(i) **Rainfall:** Light to moderate rainfall at most places with heavy falls at isolated places likely over south Kerala and south Tamilnadu during next 3 days and very heavy falls at isolated places also likely over south Kerala and south Tamilnadu on 29th and 30th October. Light to moderate rainfall at

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.

most places with very heavy falls at isolated places on 29th and extremely heavy falls at isolated places on 30th October over Lakshadweep area.

(ii) Wind warning

- Strong wind speed reaching 20-30 kmph gusting to 40 kmph likely to prevail over equatorial Indian Ocean and adjoining southwest Bay of Bengal off south Sri Lanka coast on 28th; wind speed reaching 30-40 kmph gusting to 50 kmph likely to prevail over Comorin area and neighbourhood on 29th and Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area and neighbourhood on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen out at above sea areas are advised to return to coast by 29th morning. The fishermen are also advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea on 30th and 31st October, 2019.

The next bulletin will be issued at 1730 hrs IST of 28th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

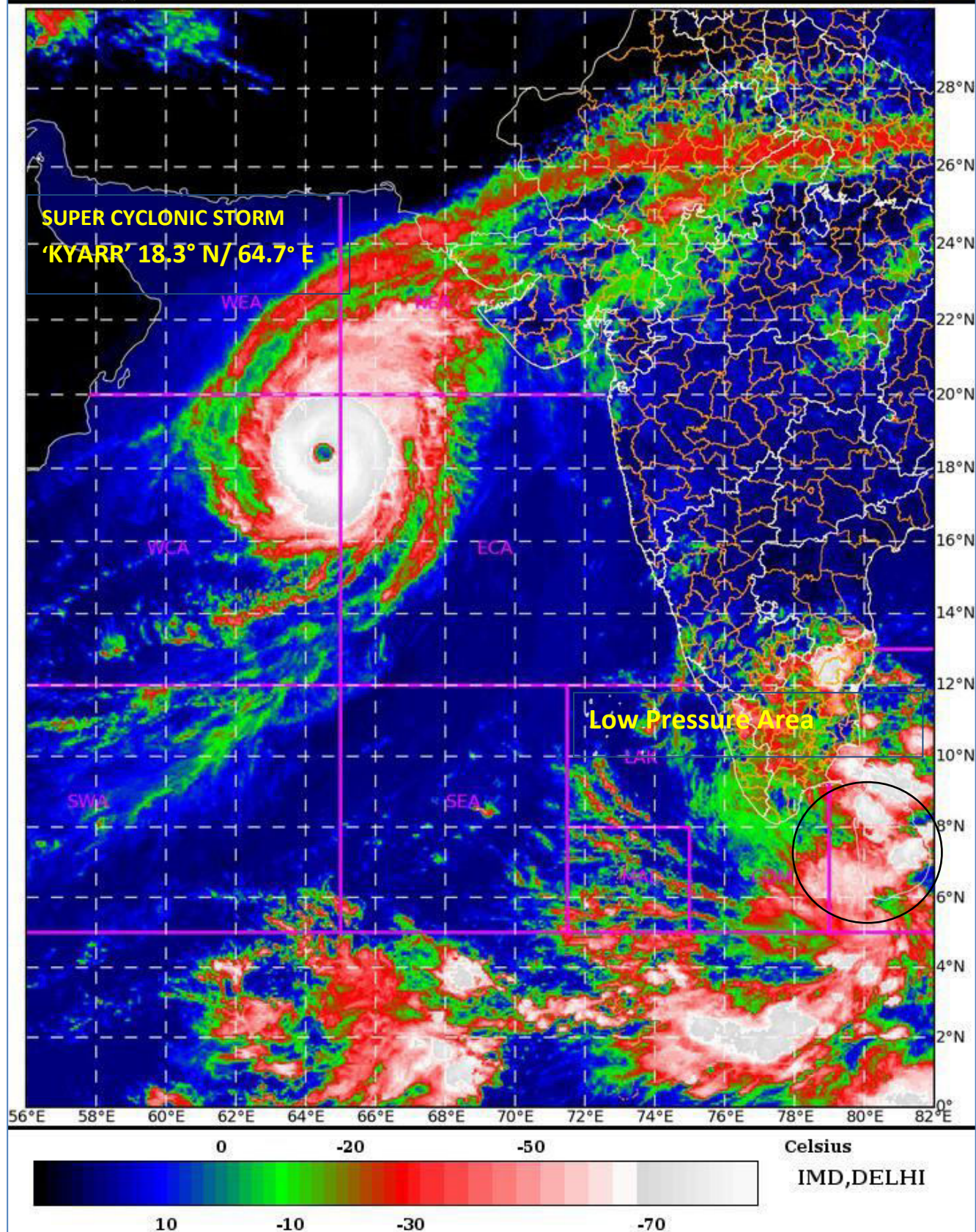
SAT : INSAT-3D IMG

28-10-2019/(0730 to 0757) GMT

IMG_TIR1_TEMP 10.8 um

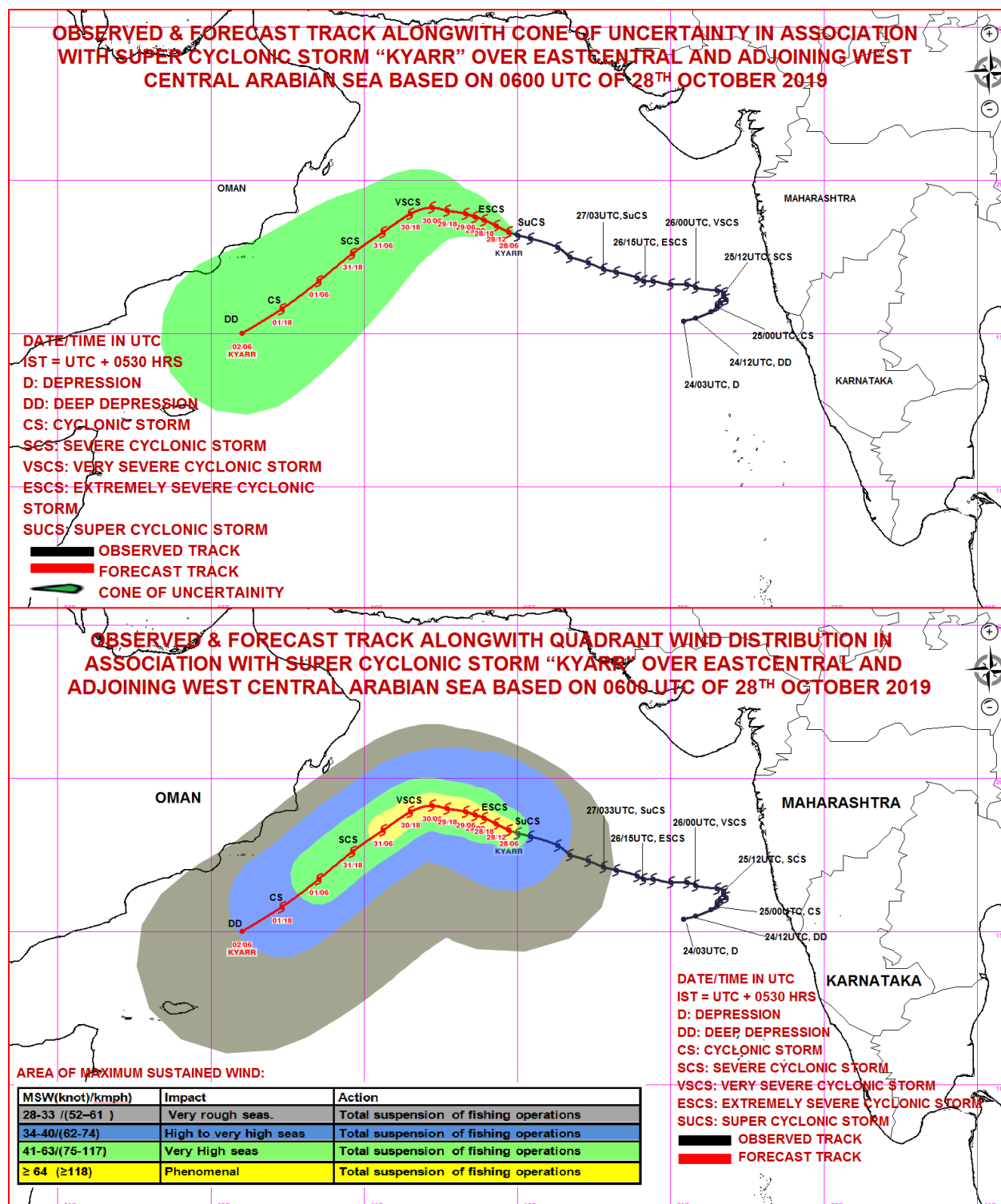
28-10-2019/(1300 to 1327) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1700 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral Arabian Sea

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

(a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 09 Kmph during past 06 hrs and lay centred at 1430 hrs IST of 28th October, 2019 near latitude 18.4°N and longitude 64.5°E over eastcentral and adjoining westcentral Arabian Sea, about 880 km west-southwest of Mumbai (Maharashtra), 1110 km east-northeast of Salalah (Oman) and 640 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till the morning hours of 29th October and weaken gradually 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/1430	18.4/64.5	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/1730	18.5/64.3	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/2330	18.7/63.9	230-240 gusting to 265	Super Cyclonic Storm
29.10.19/0530	18.8/63.6	225-235 gusting to 260	Super Cyclonic Storm
29.10.19/1130	18.9/63.3	215-225 gusting to 250	Extremely Severe Cyclonic Storm
29.10.19/2330	19.0/62.7	190-200 gusting to 220	Extremely Severe Cyclonic Storm
30.10.19/1130	19.1/62.2	165-175 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/2330	18.9/61.5	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1130	18.3/60.6	125-135 gusting to 150	Very Severe Cyclonic Storm
31.10.19/2330	17.6/59.6	105-115 gusting to 130	Severe Cyclonic Storm
01.11.19/1130	16.7/58.5	85-95 gusting to 105	Severe Cyclonic Storm
01.11.19/2330	15.8/57.3	70-80 gusting to 90	Cyclonic Storm
02.11.19/1130	15.0/56.0	50-60 gusting to 70	Deep Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 230-240 kmph gusting to 265 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is very likely to reduce gradually becoming 190-200 kmph gusting to 220 kmph by the night of 29th October and 105-115 gusting to 130 kmph by the night of 31st October.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till 30th October and will improve gradually thereafter becoming very rough to high from 31st October.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into west central Arabian Sea till 2nd November 2019.

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

The Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast persists. The system is likely to become more marked over Comorin area & neighbourhood during next 24 hours and concentrate into a depression over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas during the subsequent 48 hours.

Warnings:

(i) **Rainfall:** Light to moderate rainfall at most places with heavy falls at isolated places likely over south Kerala and south Tamilnadu during next 3 days and very heavy falls at isolated places also

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.

likely over south Kerala and south Tamilnadu on 29th and 30th October. Light to moderate rainfall at most places with very heavy falls at isolated places on 29th and extremely heavy falls at isolated places on 30th October over Lakshadweep area.

(ii) Wind warning

- Strong wind speed reaching 20-30 kmph gusting to 40 kmph likely to prevail over Equatorial Indian Ocean and adjoining southwest Bay of Bengal off south Sri Lanka coast on 28th; wind speed reaching 30-40 kmph gusting to 50 kmph likely to prevail over Comorin area and neighbourhood on 29th and Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area and neighbourhood on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iv) Fishermen Warning

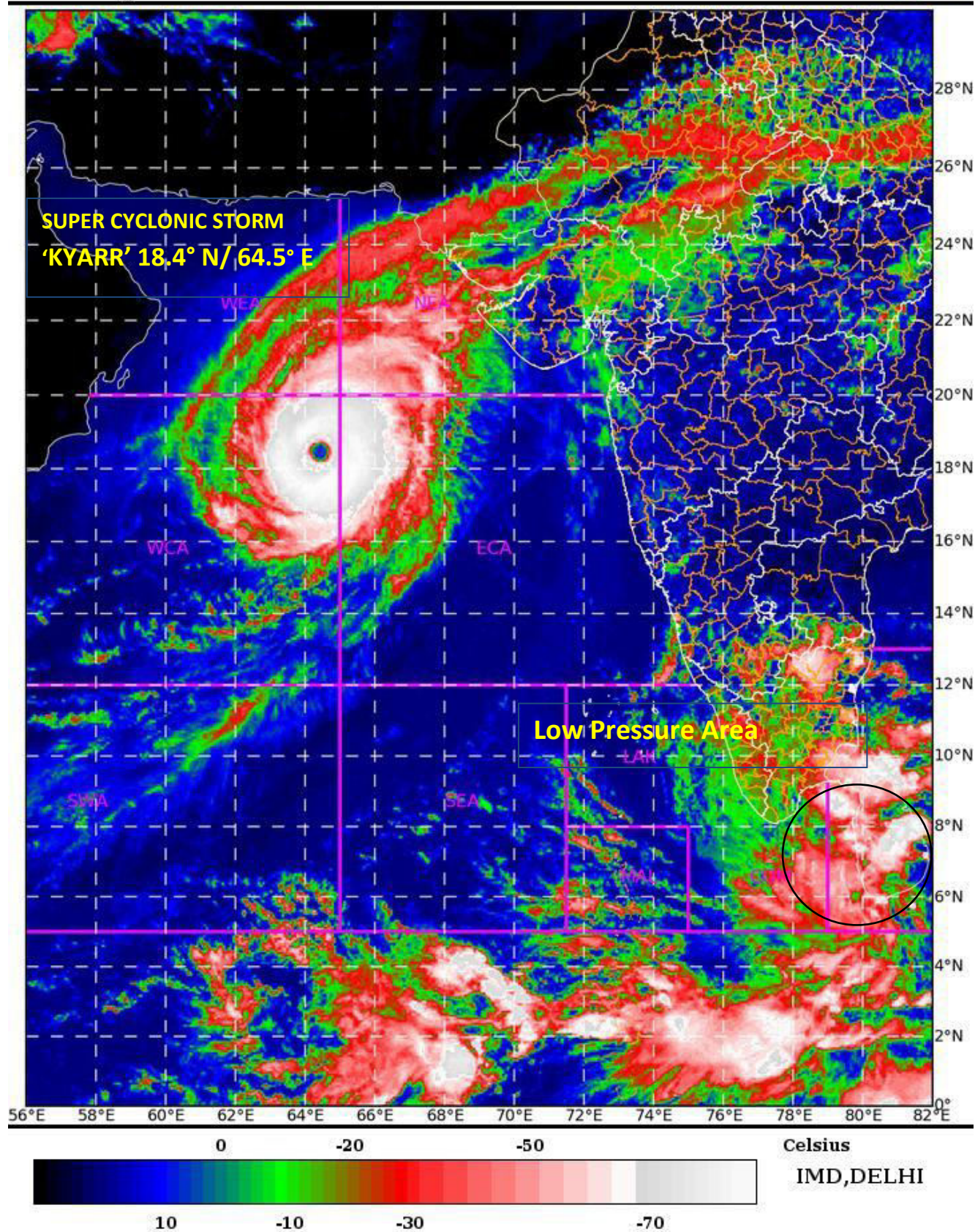
- The fishermen out at above sea areas are advised to return to coast by 29th morning. The fishermen are also advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea on 30th and 31st October, 2019.

The next bulletin will be issued at 2030 hrs IST of 28th October, 2019.

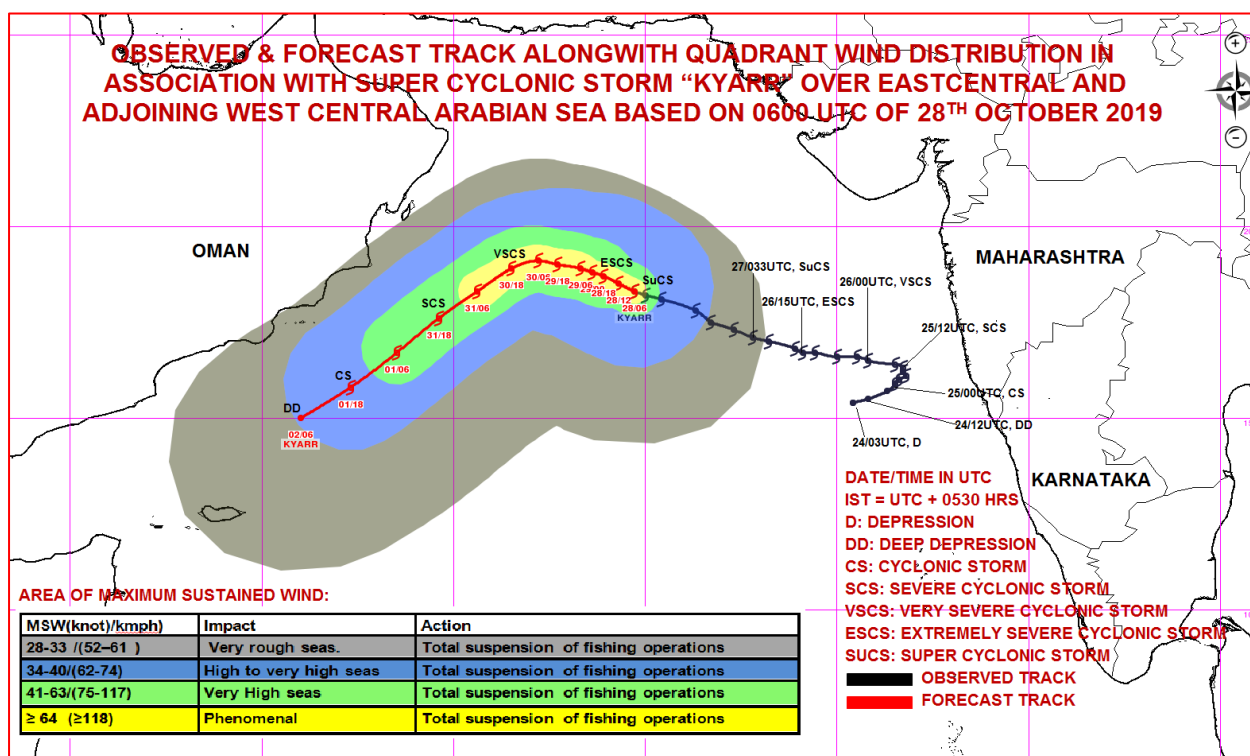
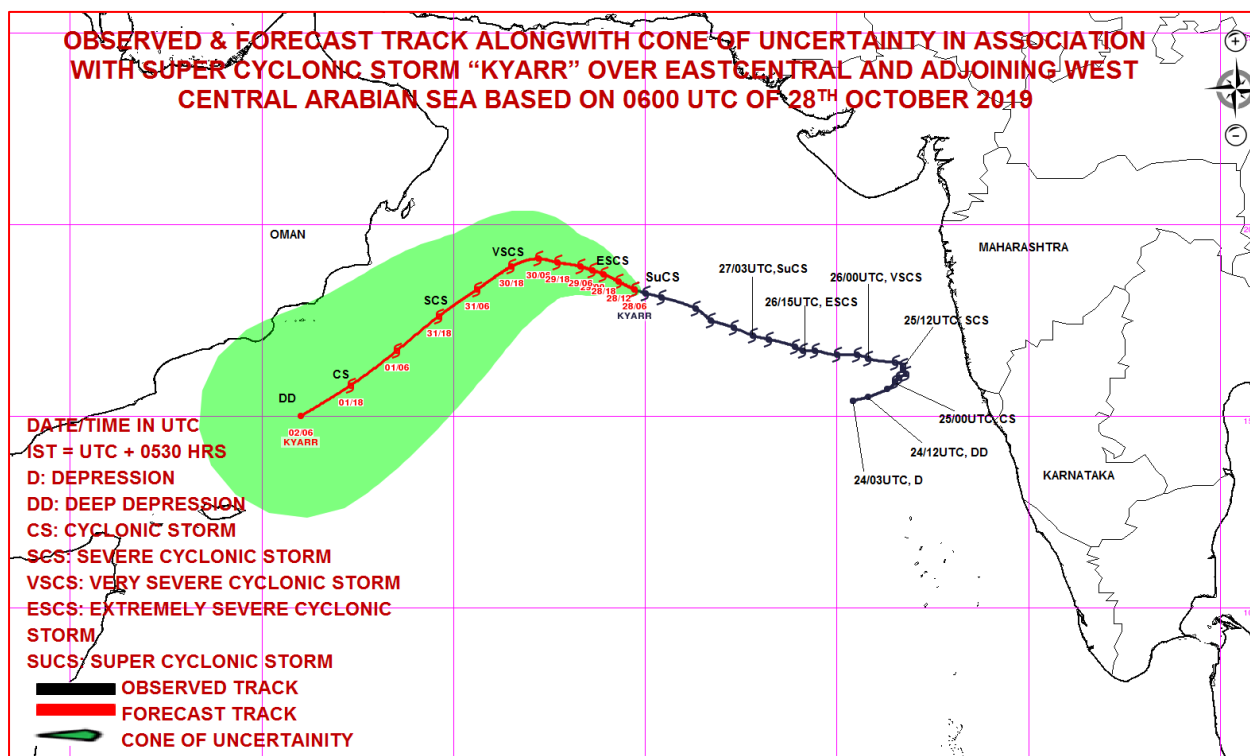
**(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi**

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG 28-10-2019/(0900 to 0926) GMT
 IMG_TIR1_TEMP 10.8 um 28-10-2019/(1430 to 1456) IST
 ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 2000 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral Arabian Sea

(b) Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast.

(a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral Arabian Sea moved west-northwestwards with a speed of 06 Kmph during past 06 hrs and lay centred at 1730 hrs IST of 28th October, 2019 near latitude 18.5°N and longitude 64.3°E over eastcentral and adjoining westcentral Arabian Sea, about 880 km west-southwest of Mumbai (Maharashtra), 1110 km east-northeast of Salalah (Oman) and 610 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till the morning hours of 29th October and weaken gradually 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/1730	18.5/64.3	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/2330	18.7/63.9	230-240 gusting to 265	Super Cyclonic Storm
29.10.19/0530	18.8/63.6	225-235 gusting to 260	Super Cyclonic Storm
29.10.19/1130	18.9/63.3	215-225 gusting to 250	Extremely Severe Cyclonic Storm
29.10.19/1730	18.9/63.0	200-210 gusting to 230	Extremely Severe Cyclonic Storm
30.10.19/0530	19.0/62.5	190-200 gusting to 220	Extremely Severe Cyclonic Storm
30.10.19/1730	18.7/61.9	165-175 gusting to 190	Extremely Severe Cyclonic Storm
31.10.19/0530	18.6/61.1	145-155 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1730	18.2/60.1	125-135 gusting to 150	Very Severe Cyclonic Storm
01.11.19/0530	17.2/59.0	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/1730	16.3/57.9	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/0530	15.4/56.6	70-80 gusting to 90	Cyclonic Storm
02.11.19/1730	14.6/55.4	50-60 gusting to 70	Deep Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 230-240 kmph gusting to 265 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is very likely to reduce gradually becoming 200-210 kmph gusting to 230 kmph by the evening of 29th October and 165-175 gusting to 190 kmph by the evening of 30th October.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till the evening of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into west central Arabian Sea till 2nd November 2019.

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

The Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast persists. The system is likely to become more marked over Comorin area & neighbourhood during next 24 hours and concentrate into a depression over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas during the subsequent 48 hours.

Warnings:

(i) Rainfall: Light to moderate rainfall at most places with heavy falls at isolated places likely over south Kerala and south Tamilnadu during next 3 days and very heavy falls at isolated places also likely over south Kerala and south Tamilnadu on 29th and 30th October. Light to moderate rainfall at

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.

most places with very heavy falls at isolated places on 29th and extremely heavy falls at isolated places on 30th October over Lakshadweep area.

(ii) Wind warning

- Strong wind speed reaching 20-30 kmph gusting to 40 kmph likely to prevail over Equatorial Indian Ocean and adjoining southwest Bay of Bengal off south Sri Lanka coast on 28th; wind speed reaching 30-40 kmph gusting to 50 kmph likely to prevail over Comorin area and neighbourhood on 29th and Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area and neighbourhood on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen out at above sea areas are advised to return to coast by 29th morning. The fishermen are also advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea on 30th and 31st October, 2019.

The next bulletin will be issued at 2330 hrs IST of 28th October, 2019.

(Sunitha Devi.S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

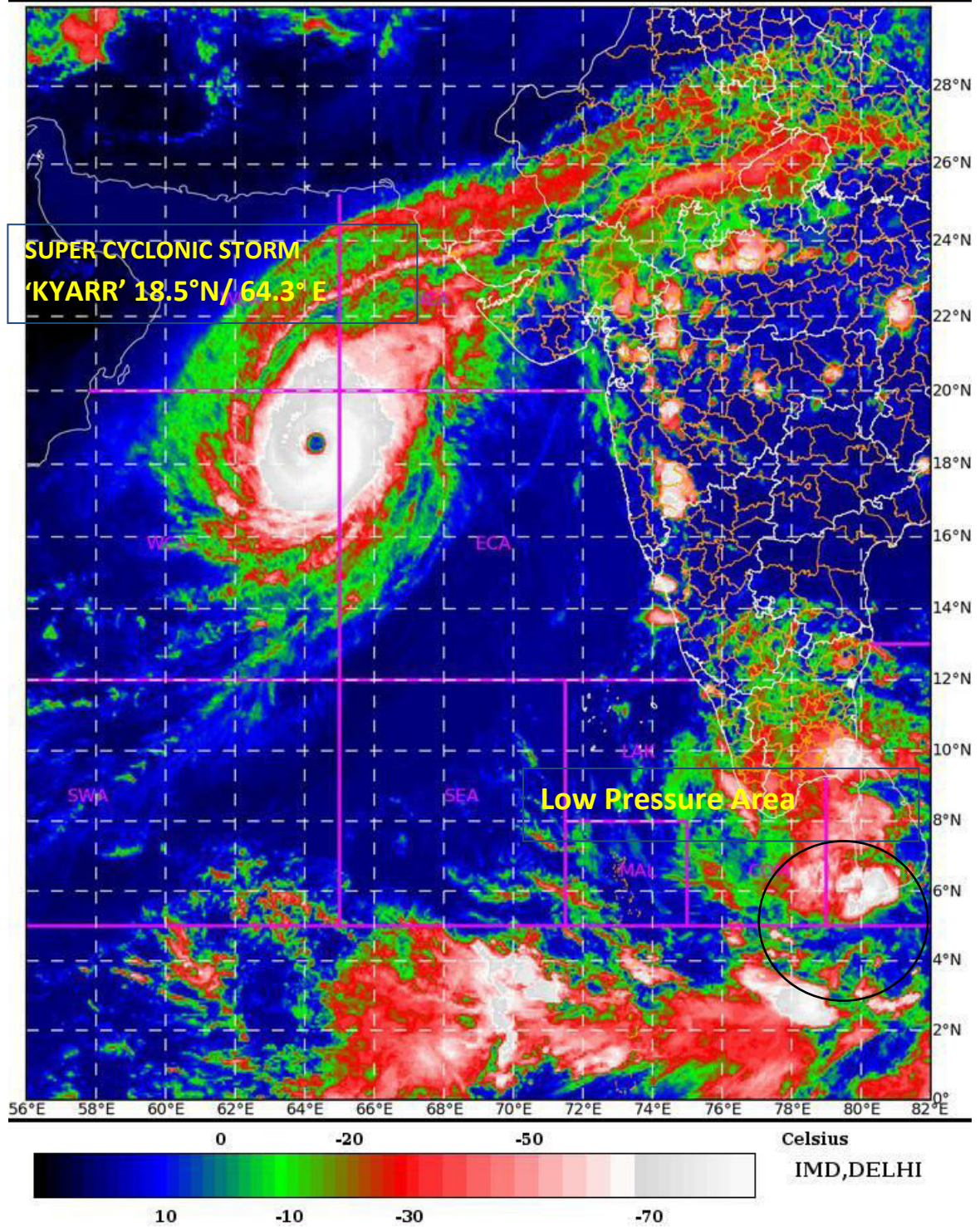
SAT : INSAT-3D IMG

28-10-2019/(1200 to 1226) GMT

IMG_TIR1_TEMP 10.8 um

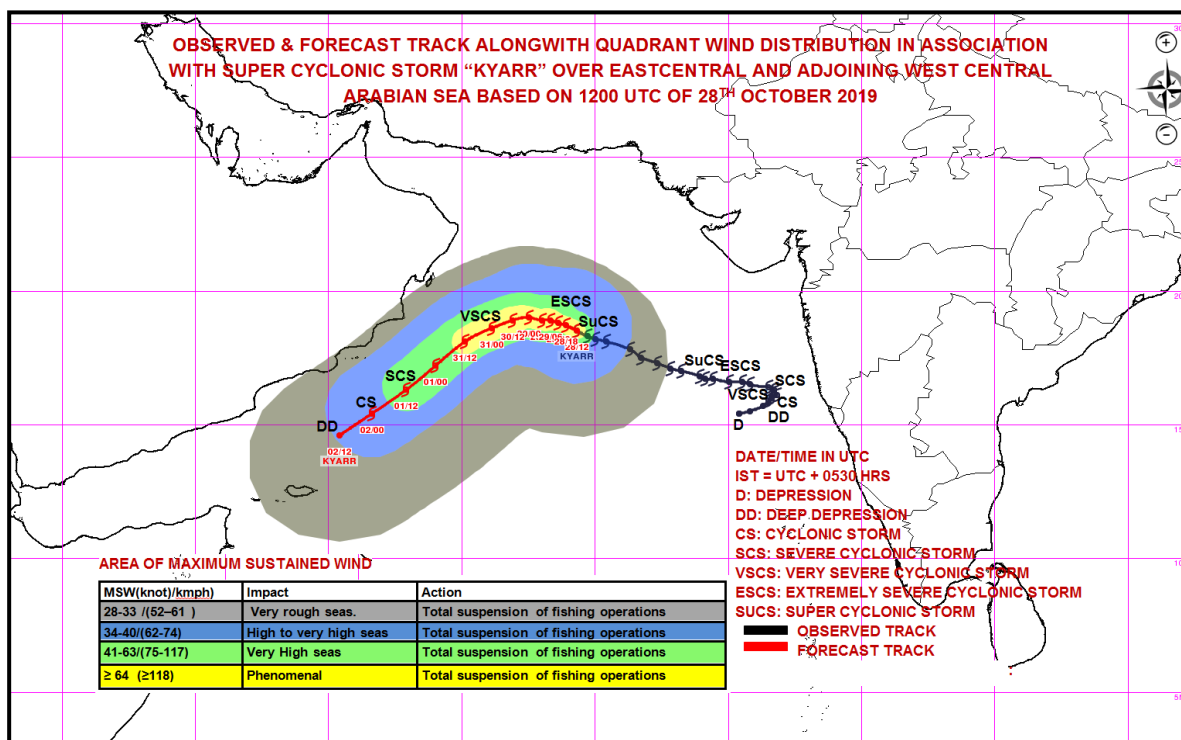
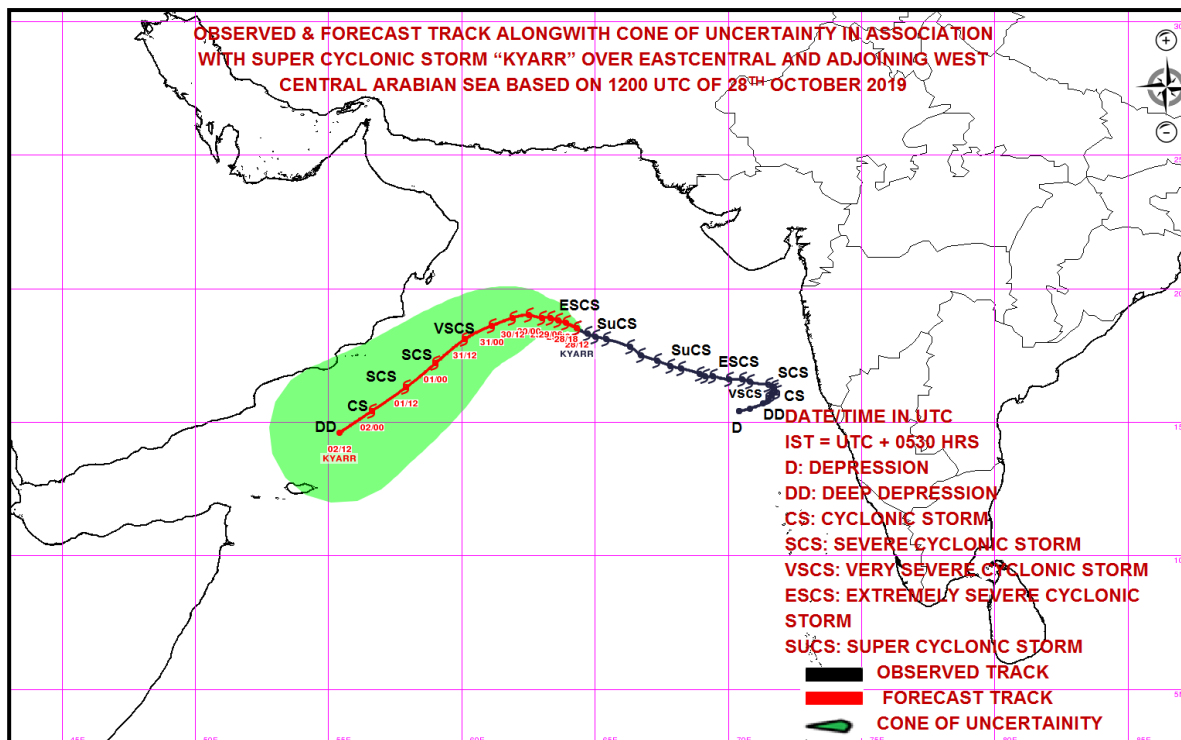
28-10-2019/(1730 to 1756) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 2200 HOURS IST

DATED: 28.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral & north Arabian Sea

(b) Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast.

(a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over eastcentral and adjoining westcentral & north Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral and adjoining westcentral Arabian Sea moved west-northwestwards with a speed of 09 Kmph during past 06 hrs and lay centred at 2030 hrs IST of 28th October, 2019 near latitude 18.7°N and longitude 64.1°E over eastcentral and adjoining westcentral & north Arabian Sea, about 920 km west-southwest of Mumbai (Maharashtra), 1080 km east-northeast of Salalah (Oman) and 590 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to maintain the intensity of a Super Cyclonic Storm till the morning hours of 29th October and weaken gradually 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/2030	18.7/64.1	230-240 gusting to 265	Super Cyclonic Storm
28.10.19/2330	18.7/63.9	230-240 gusting to 265	Super Cyclonic Storm
29.10.19/0530	18.8/63.6	225-235 gusting to 260	Super Cyclonic Storm
29.10.19/1130	18.9/63.3	215-225 gusting to 250	Extremely Severe Cyclonic Storm
29.10.19/1730	18.9/63.0	200-210 gusting to 230	Extremely Severe Cyclonic Storm
30.10.19/0530	19.0/62.5	190-200 gusting to 220	Extremely Severe Cyclonic Storm
30.10.19/1730	18.7/61.9	165-175 gusting to 190	Extremely Severe Cyclonic Storm
31.10.19/0530	18.6/61.1	145-155 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1730	18.2/60.1	125-135 gusting to 150	Very Severe Cyclonic Storm
01.11.19/0530	17.2/59.0	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/1730	16.3/57.9	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/0530	15.4/56.6	70-80 gusting to 90	Cyclonic Storm
02.11.19/1730	14.6/55.4	50-60 gusting to 70	Deep Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 230-240 kmph gusting to 265 kmph, is prevailing around the system centre over eastcentral & adjoining westcentral Arabian Sea. It is very likely to reduce gradually becoming 200-210 kmph gusting to 230 kmph by the evening of 29th October and 165-175 gusting to 190 kmph by the evening of 30th October.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till the evening of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into west central Arabian Sea till 2nd November 2019.

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

The Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast persists. The system is likely to become more marked over Comorin area & neighbourhood during next 24 hours and concentrate into a depression over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas during the subsequent 48 hours.

Warnings:

(i) **Rainfall:** Light to moderate rainfall at most places with heavy falls at isolated places likely over south Kerala and south Tamilnadu during next 3 days and very heavy falls at isolated places also

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.

likely over south Kerala and south Tamilnadu on 29th and 30th October. Light to moderate rainfall at most places with very heavy falls at isolated places on 29th and extremely heavy falls at isolated places on 30th October over Lakshadweep area.

(ii) Wind warning

- Strong wind speed reaching 20-30 kmph gusting to 40 kmph likely to prevail over Equatorial Indian Ocean and adjoining southwest Bay of Bengal off south Sri Lanka coast on 28th; wind speed reaching 30-40 kmph gusting to 50 kmph likely to prevail over Comorin area and neighbourhood on 29th and Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area and neighbourhood on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen out at above sea areas are advised to return to coast by 29th morning. The fishermen are also advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea on 30th and 31st October, 2019.

The next bulletin will be issued at 0230 hrs IST of tomorrow, the 29th October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

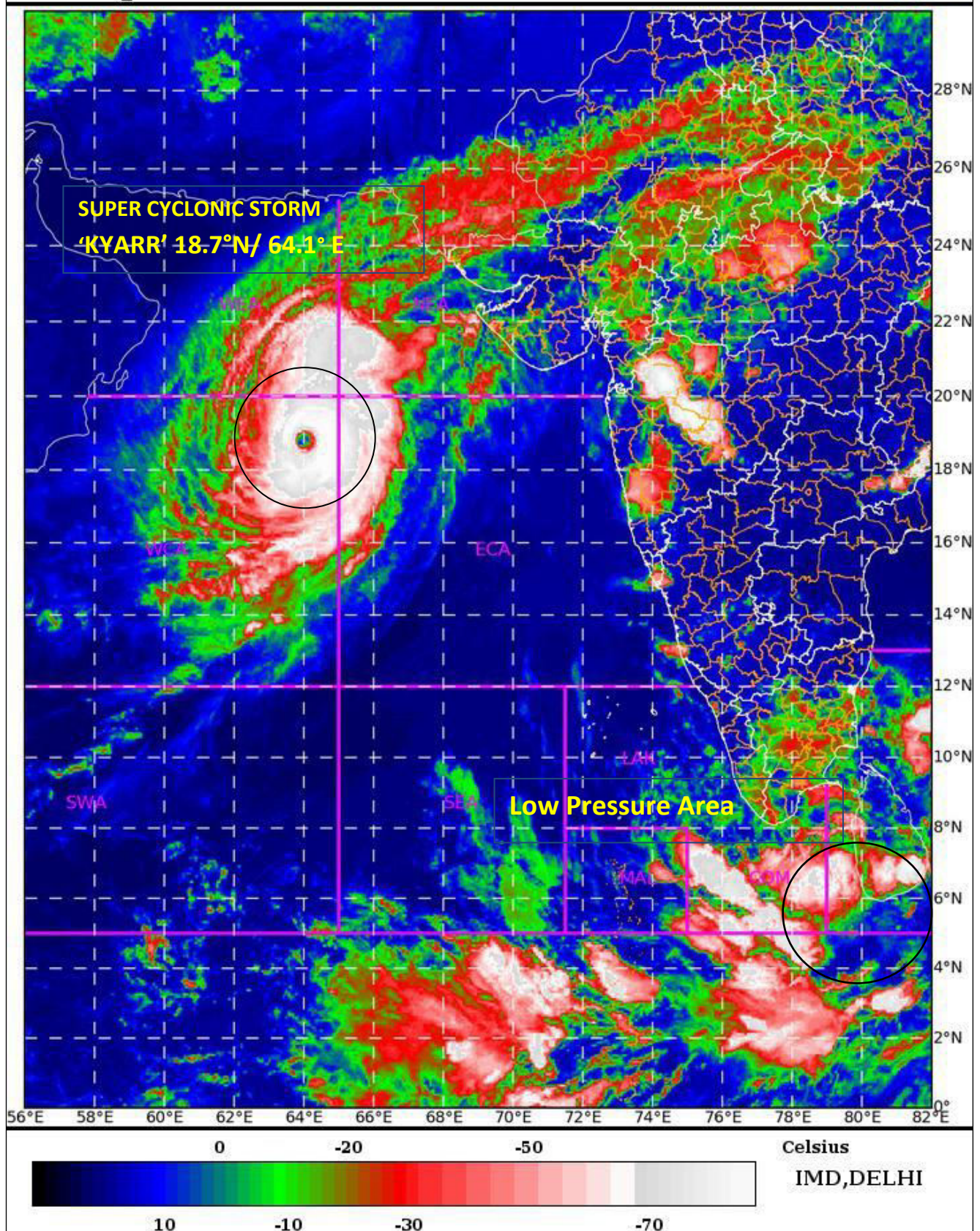
SAT : INSAT-3D IMG

28-10-2019/(1530 to 1556) GMT

IMG_TIR1_TEMP 10.8 um

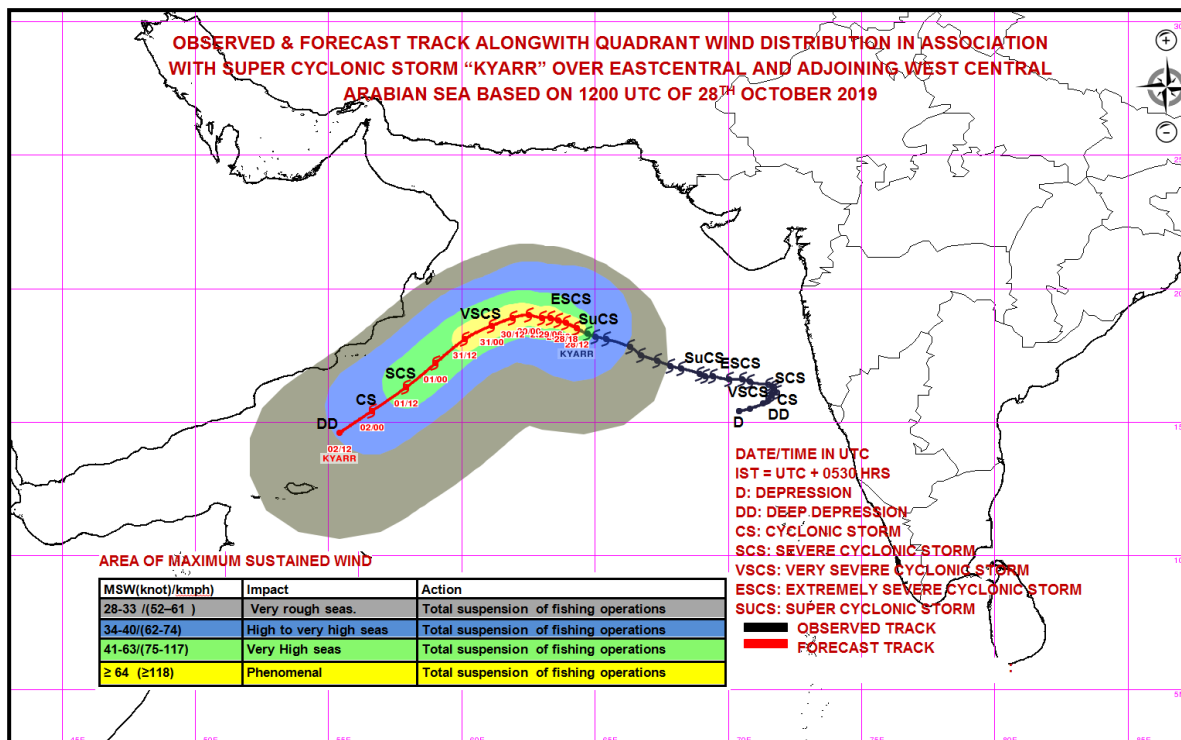
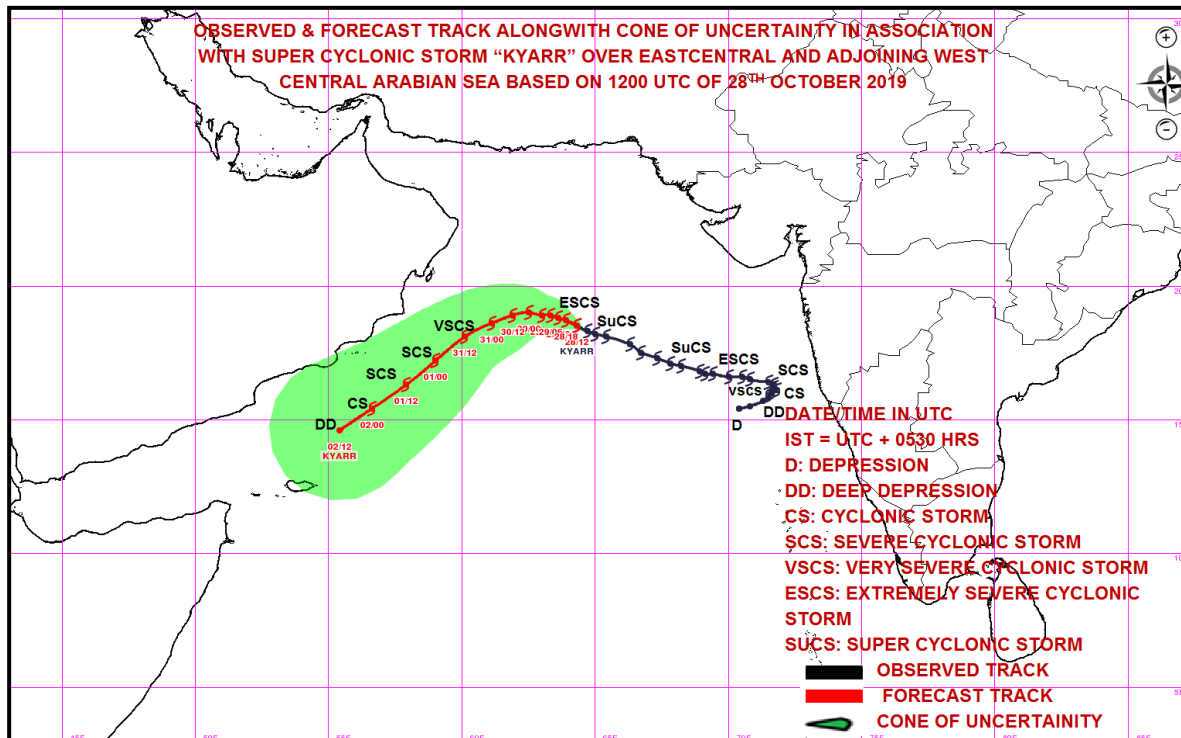
28-10-2019/(2100 to 2126) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0200 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea

(b) Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast.

(a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over eastcentral and adjoining westcentral & north Arabian Sea moved west-northwestwards with a speed of 09 Km/h during past 06 hrs and lay centred at 2330 hrs IST of 28th October, 2019 near latitude 18.8°N and longitude 63.9°E over westcentral and adjoining eastcentral & north Arabian Sea, about 940 km west-southwest of Mumbai (Maharashtra), 1060 km east-northeast of Salalah (Oman) and 560 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October evening, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into an Extremely Severe Cyclonic Storm during next 12 hours, into a Very Severe Cyclonic Storm during subsequent 24 hours and further into a Severe Cyclonic Storm by 31st October morning.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
28.10.19/2330	18.8/63.9	225-235 gusting to 260	Super Cyclonic Storm
29.10.19/0530	18.9/63.6	220-230 gusting to 255	Super Cyclonic Storm
29.10.19/1130	19.0/63.3	210-220 gusting to 240	Extremely Severe Cyclonic Storm
29.10.19/1730	19.0/62.9	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/2330	18.9/62.5	190-200 gusting to 220	Extremely Severe Cyclonic Storm
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30.10.19/2330	18.7/61.5	140-150 gusting to 165	Very Severe Cyclonic Storm
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31.10.19/2330	17.7/59.5	100-110 gusting to 120	Severe Cyclonic Storm
01.11.19/1130	16.7/58.4	90-100 gusting to 110	Severe Cyclonic Storm
01.11.19/2330	15.8/57.3	70-80 gusting to 90	Cyclonic Storm
02.11.19/1130	15.0/56.0	50-60 gusting to 70	Deep Depression
02.11.19/2330	14.2/54.8	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 225-235 kmph gusting to 260 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 200-210 kmph gusting to 230 kmph by the evening of 29th October and 165-175 gusting to 190 kmph by the evening of 30th October.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till the evening of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into westcentral Arabian Sea till 2nd November 2019.

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

The Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast persists. The system is likely to become more marked over Comorin area & neighbourhood during next 24 hours and concentrate into a depression over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas during the subsequent 48 hours.

Warnings:

(i) Rainfall: Light to moderate rainfall at most places with heavy falls at isolated places likely over south Kerala and south Tamilnadu during next 3 days and very heavy falls at isolated places also likely over south Kerala and south Tamilnadu on 29th and 30th October. Light to moderate rainfall at

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.

most places with very heavy falls at isolated places on 29th and extremely heavy falls at isolated places on 30th October over Lakshadweep area.

(ii) Wind warning

- Strong wind speed reaching 20-30 kmph gusting to 40 kmph likely to prevail over Equatorial Indian Ocean and adjoining southwest Bay of Bengal off south Sri Lanka coast and wind speed reaching 30-40 kmph gusting to 50 kmph over Comorin area and neighbourhood on 29th and Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area and neighbourhood on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen out at above sea areas are advised to return to coast by 29th morning. The fishermen are also advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea on 30th and 31st October, 2019.

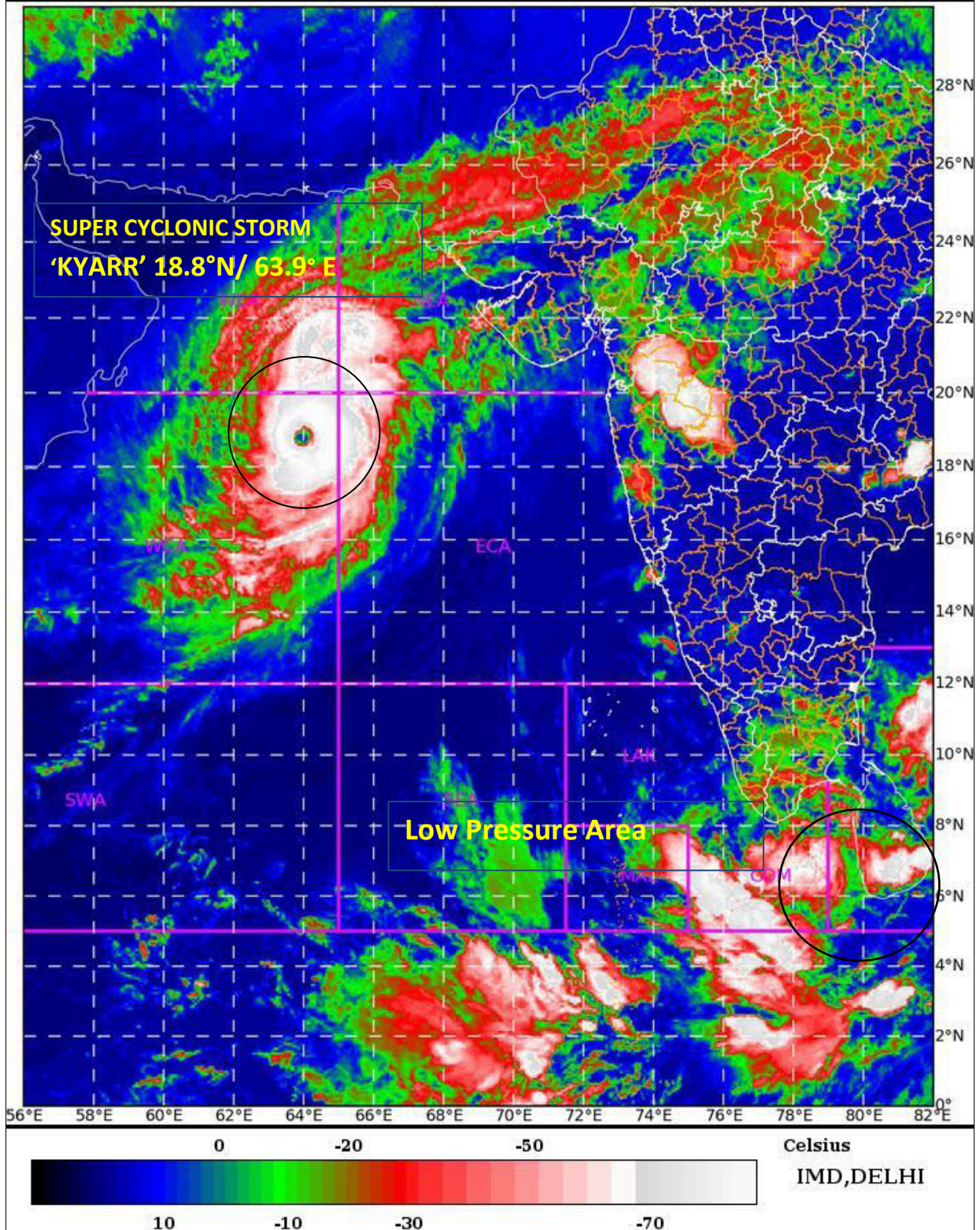
The next bulletin will be issued at 0530 hrs IST of today, the 29th October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

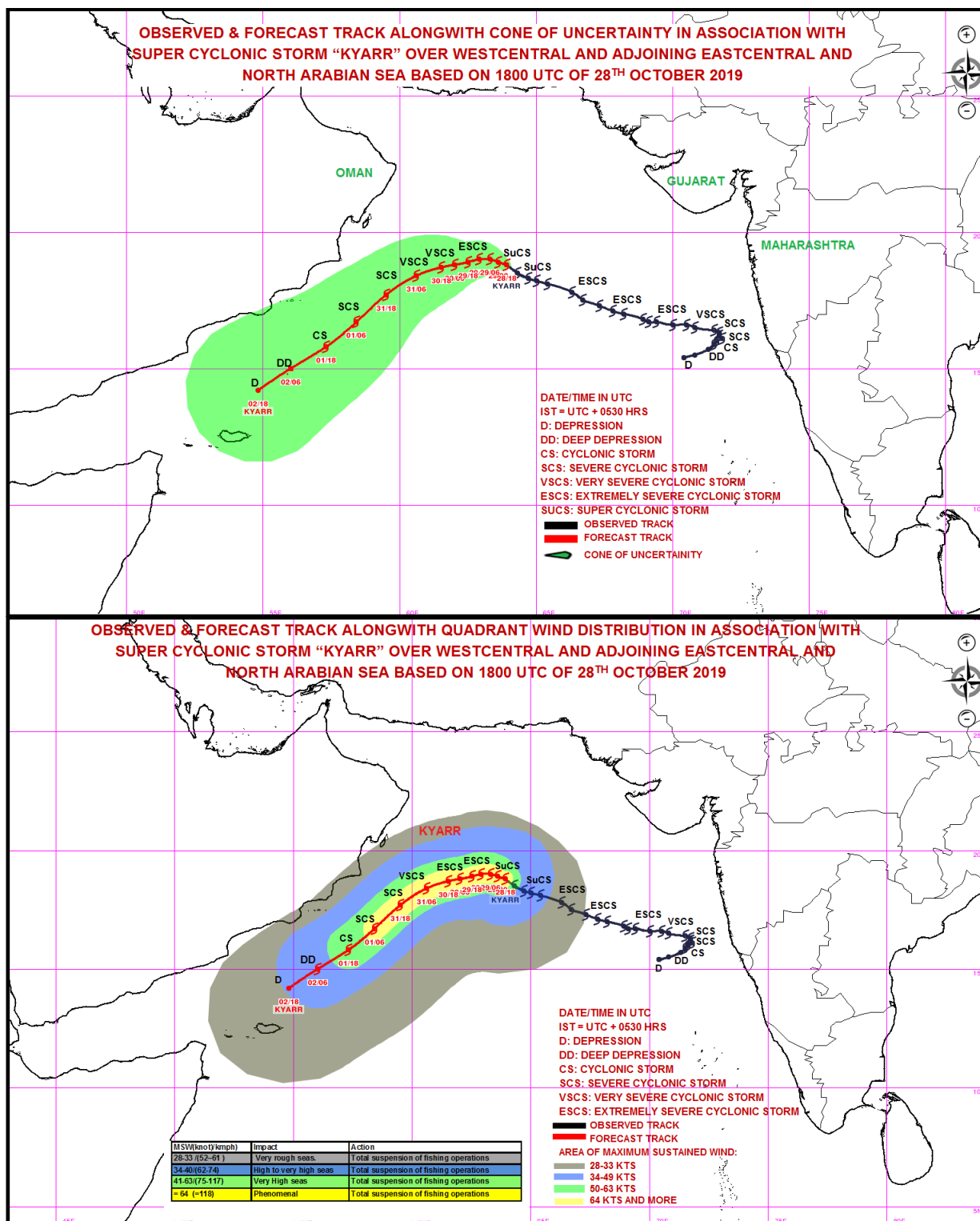
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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 28-10-2019/(1630 to 1656) GMT
 IMG_TIR1_TEMP 10.8 um 28-10-2019/(2200 to 2226) IST
 ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0330 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea

(b) Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast.

(a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over Westcentral and adjoining eastcentral & north Arabian Sea moved west-northwestwards with a speed of 06 Kmph during past 06 hrs and lay centred at 0230 hrs IST of 29th October, 2019 near latitude 18.9°N and longitude 63.8°E, about 950 km west-southwest of Mumbai (Maharashtra), 1050 km east-northeast of Salalah (Oman) and 550 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October evening, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into an Extremely Severe Cyclonic Storm during next 12 hours, into a Very Severe Cyclonic Storm during subsequent 24 hours and further into a Severe Cyclonic Storm by 31st October morning.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/0230	18.9/63.8	225-235 gusting to 260	Super Cyclonic Storm
29.10.19/0530	18.9/63.6	220-230 gusting to 255	Super Cyclonic Storm
29.10.19/1130	19.0/63.3	210-220 gusting to 240	Extremely Severe Cyclonic Storm
29.10.19/1730	19.0/62.9	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/2330	18.9/62.5	190-200 gusting to 220	Extremely Severe Cyclonic Storm
30.10.19/1130	18.8/62.0	165-175 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/2330	18.7/61.5	140-150 gusting to 165	Very Severe Cyclonic Storm
31.10.19/1130	18.4/60.6	120-130 gusting to 145	Very Severe Cyclonic Storm
31.10.19/2330	17.7/59.5	100-110 gusting to 120	Severe Cyclonic Storm
01.11.19/1130	16.7/58.4	90-100 gusting to 110	Severe Cyclonic Storm
01.11.19/2330	15.8/57.3	70-80 gusting to 90	Cyclonic Storm
02.11.19/1130	15.0/56.0	50-60 gusting to 70	Deep Depression
02.11.19/2330	14.2/54.8	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 225-235 kmph gusting to 260 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 200-210 kmph gusting to 230 kmph by the evening of 29th October and 165-175 gusting to 190 kmph by the evening of 30th October.

(iii) Sea condition

- Sea condition will be phenomenal over eastcentral Arabian Sea around the system centre till the evening of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.
- Sea condition will also be phenomenal over westcentral Arabian Sea till 31st October and will become High to very High during the subsequent 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into westcentral Arabian Sea till 2nd November 2019.

(b) Low pressure area over equatorial Indian Ocean off south Sri Lanka coast.

The Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast persists. The system is likely to become more marked over Comorin area & neighbourhood during next 24 hours and concentrate into a depression over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas during the subsequent 48 hours.

Warnings:

(i) Rainfall: Light to moderate rainfall at most places with heavy falls at isolated places likely over south Kerala and south Tamilnadu during next 3 days and very heavy falls at isolated places also likely over south Kerala and south Tamilnadu on 29th and 30th October. Light to moderate rainfall at

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.

most places with very heavy falls at isolated places on 29th and extremely heavy falls at isolated places on 30th October over Lakshadweep area.

(ii) Wind warning

- Strong wind speed reaching 20-30 kmph gusting to 40 kmph likely to prevail over Equatorial Indian Ocean and adjoining southwest Bay of Bengal off south Sri Lanka coast and wind speed reaching 30-40 kmph gusting to 50 kmph over Comorin area and neighbourhood on 29th and Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area and neighbourhood on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen out at above sea areas are advised to return to coast by 29th morning. The fishermen are also advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea on 30th and 31st October, 2019.

The next bulletin will be issued at 0830 hrs IST of today, the 29th October, 2019.

**(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi**

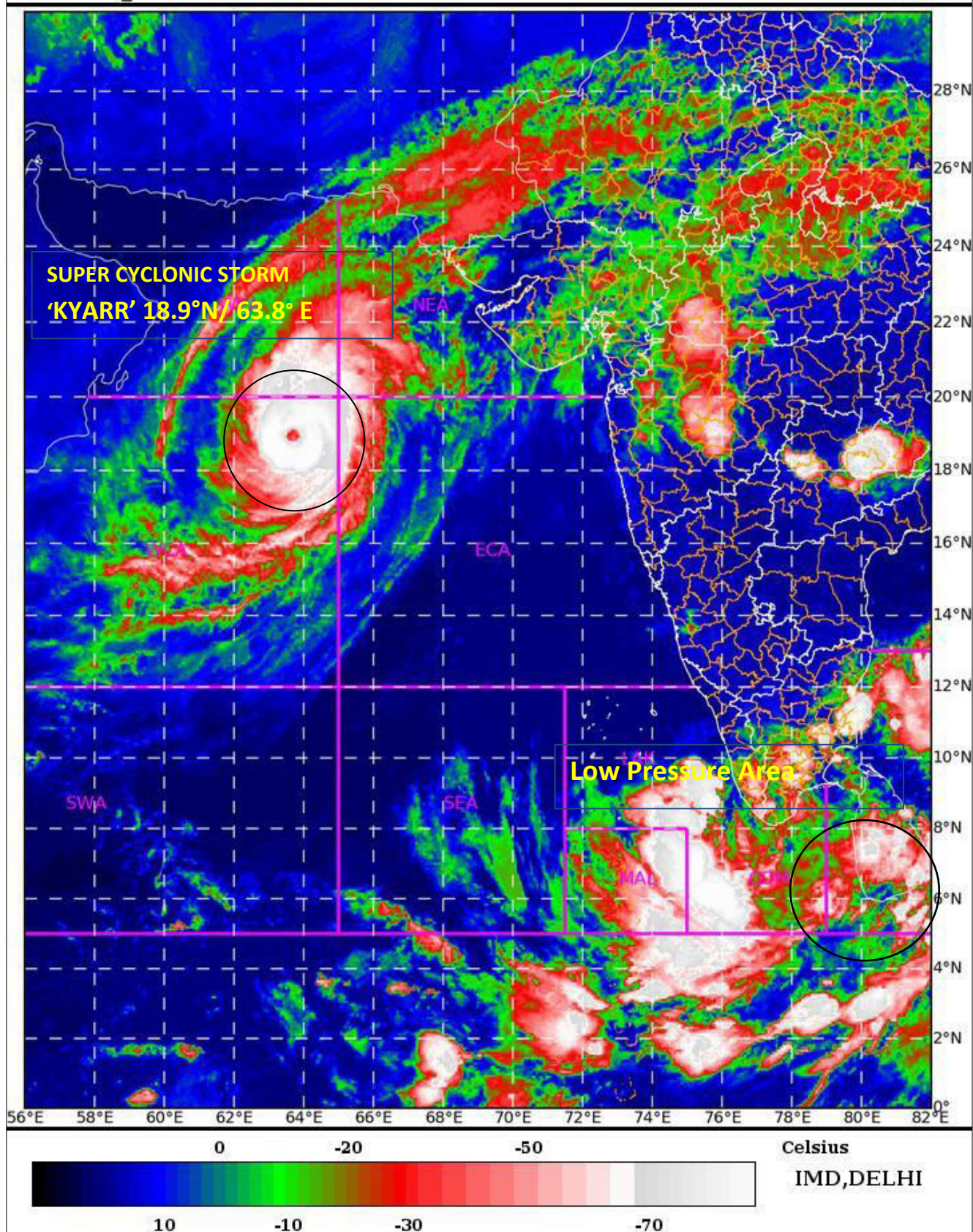
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

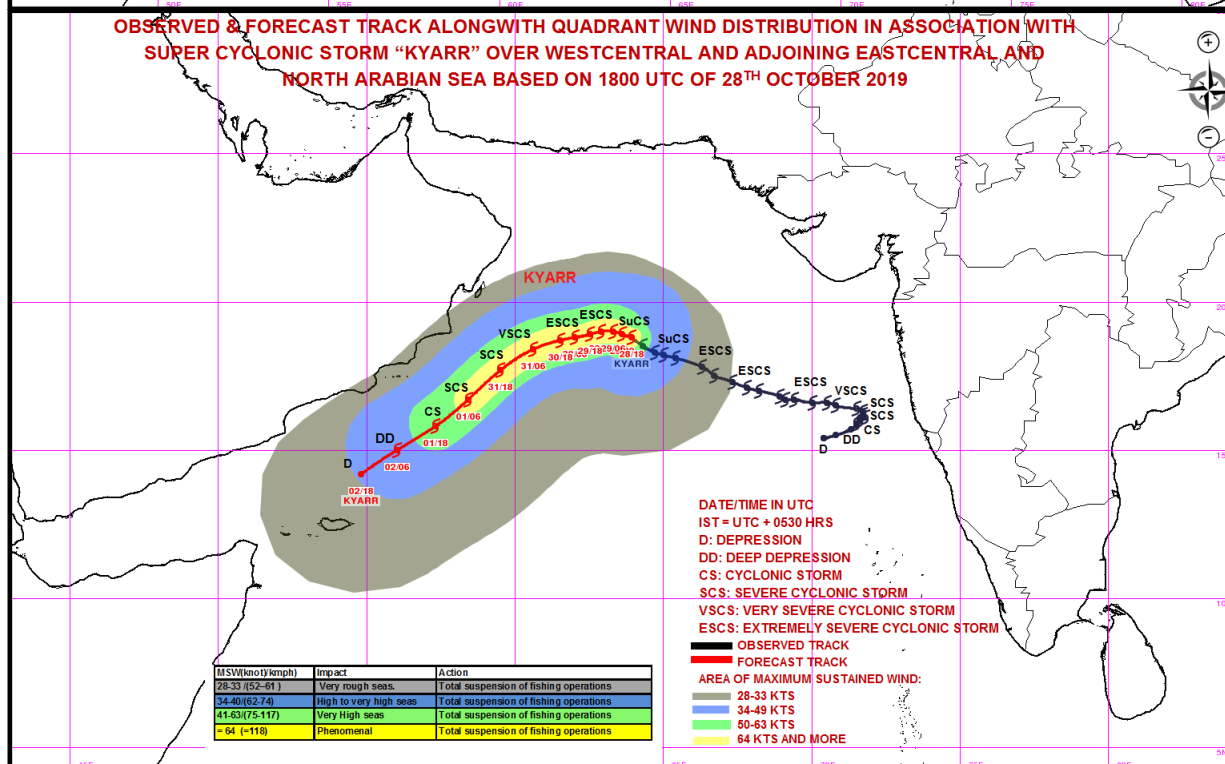
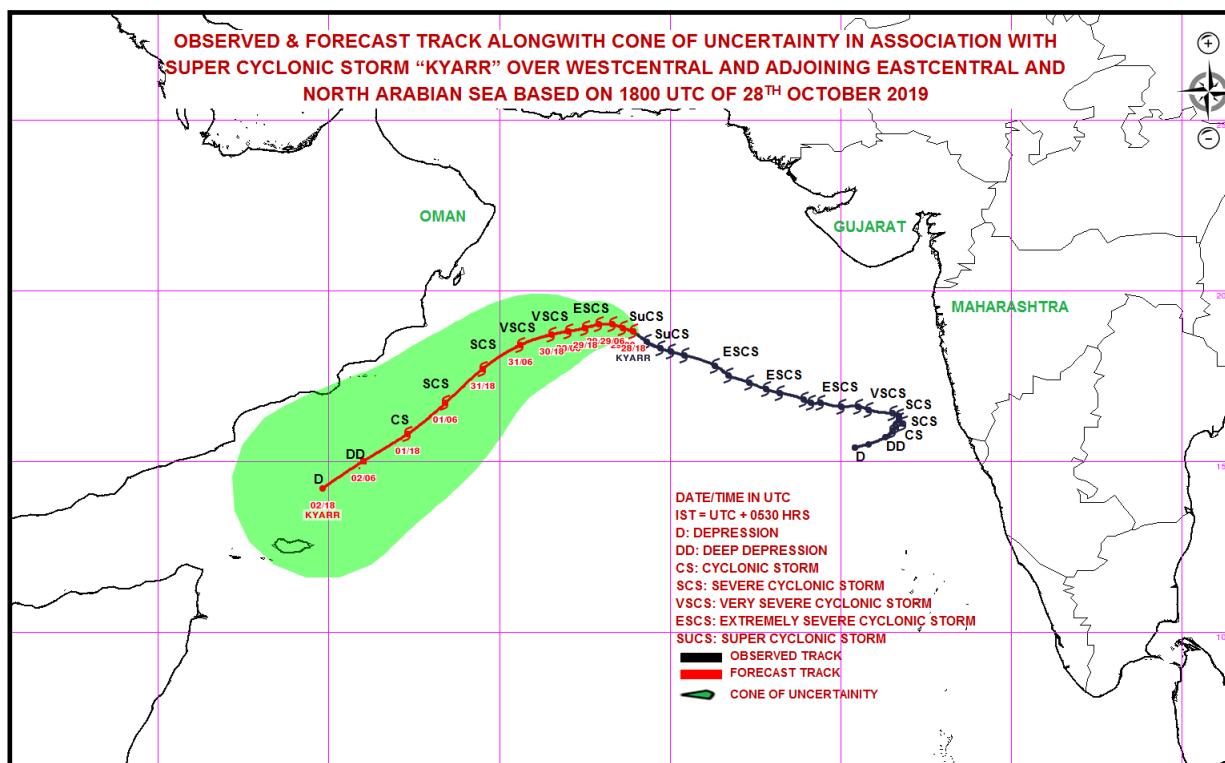
SAT : INSAT-3D IMG 28-10-2019/(2100 to 2126) GMT

IMG_TIR1_TEMP 10.8 um 29-10-2019/(0230 to 0256) IST

ARABIAN SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0830 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

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CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

(a) Super Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over Westcentral and adjoining eastcentral & north Arabian Sea moved west-northwestwards with a speed of 09 Kmph during past 06 hrs and lay centred at 0530 hrs IST of 29th October, 2019 near latitude 19.1°N and longitude 63.5°E, about 980 km west of Mumbai (Maharashtra), 1020 km east-northeast of Salalah (Oman) and 510 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October morning, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into an Extremely Severe Cyclonic Storm during next 06 hours, into a Very Severe Cyclonic Storm during subsequent 24 hours and further into a Severe Cyclonic Storm by 31st October morning.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/0530	19.1/63.5	220-230 gusting to 255	Super Cyclonic Storm
29.10.19/1130	19.2/63.2	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/1730	19.3/62.9	190-200 gusting to 220	Extremely Severe Cyclonic Storm
29.10.19/2330	19.4/62.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
30.10.19/0530	19.4/62.1	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1730	19.3/61.4	140-150 gusting to 170	Very Severe Cyclonic Storm
31.10.19/0530	19.0/60.7	120-130 gusting to 140	Very Severe Cyclonic Storm
31.10.19/1730	18.6/60.0	100-110 gusting to 120	Severe Cyclonic Storm
01.11.19/0530	17.6/59.0	80-90 gusting to 100	Cyclonic Storm
01.11.19/1730	16.6/57.9	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	15.6/56.6	50-60 gusting to 70	Deep Depression
02.11.19/1730	14.6/55.4	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 220-230 kmph gusting to 250 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 160-170 kmph gusting to 190 kmph by the morning of 30th October and 120-130 gusting to 150 kmph by the morning of 31st October and decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the morning of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea till 29th October and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

The Low pressure area over Equatorial Indian Ocean off south Sri Lanka coast now lies as a Well Marked Low Pressure Area over Comorin Area & adjoining Equatorial Indian Ocean. It is likely to concentrate into a depression over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas during next 24 hours.

Warnings:

(i) **Rainfall:** Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala and south Tamilnadu during next 3 days and very heavy falls at isolated places also likely over south Kerala and south Tamilnadu on 29th and 30th October. Light to moderate rainfall

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.

at most places with very heavy falls at isolated places on 29th and extremely heavy falls at isolated places on 30th & 31st October over Lakshadweep area.

(ii) Wind warning

- Strong wind, speed reaching 30-40 kmph gusting to 50 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and neighbourhood on 29th and Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, likely to prevail over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area and neighbourhood on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea on 30th and 31st October, 2019.

The next bulletin will be issued at 1130 hrs IST of today, the 29th October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

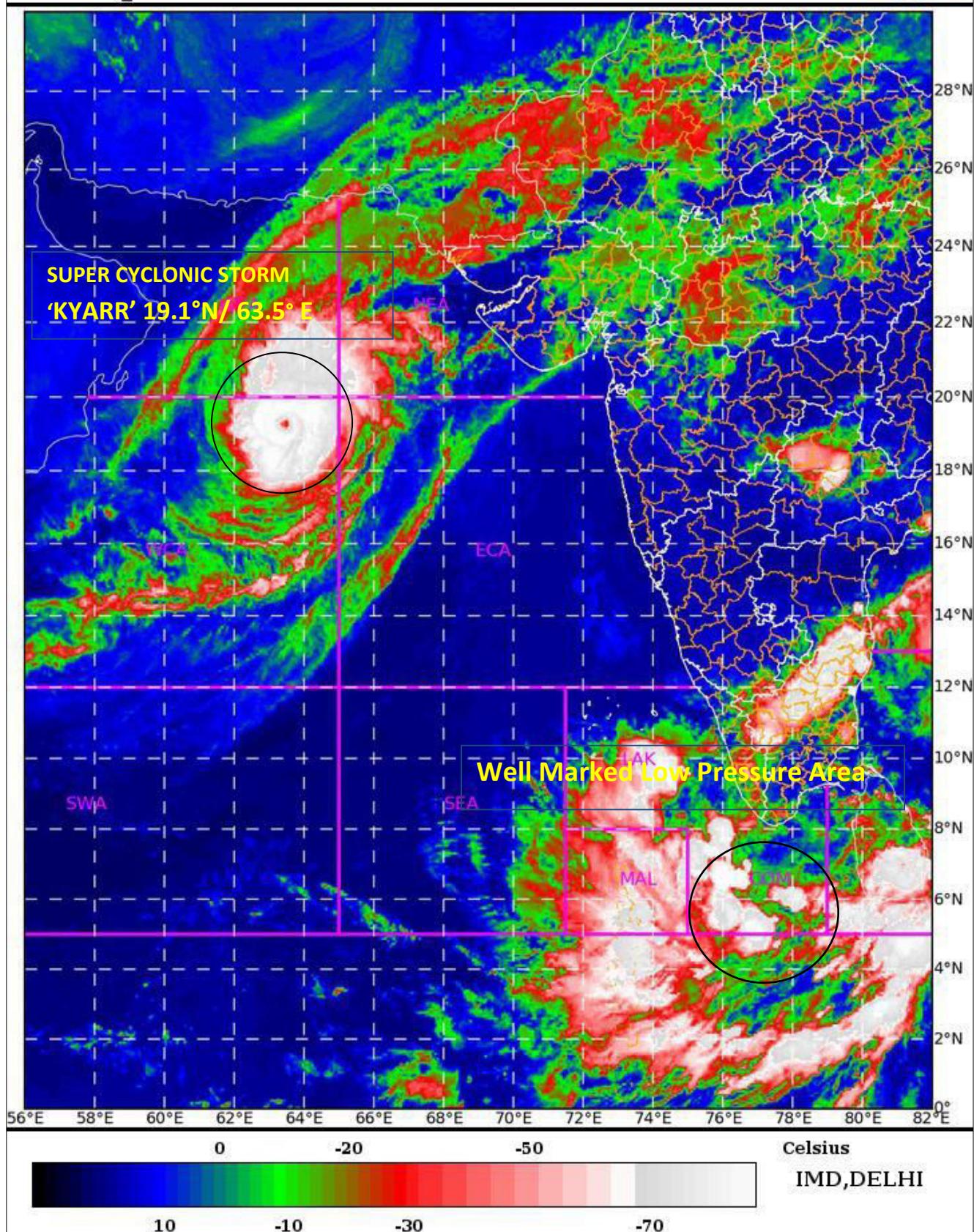
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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 29-10-2019/(0200 to 0226) GMT

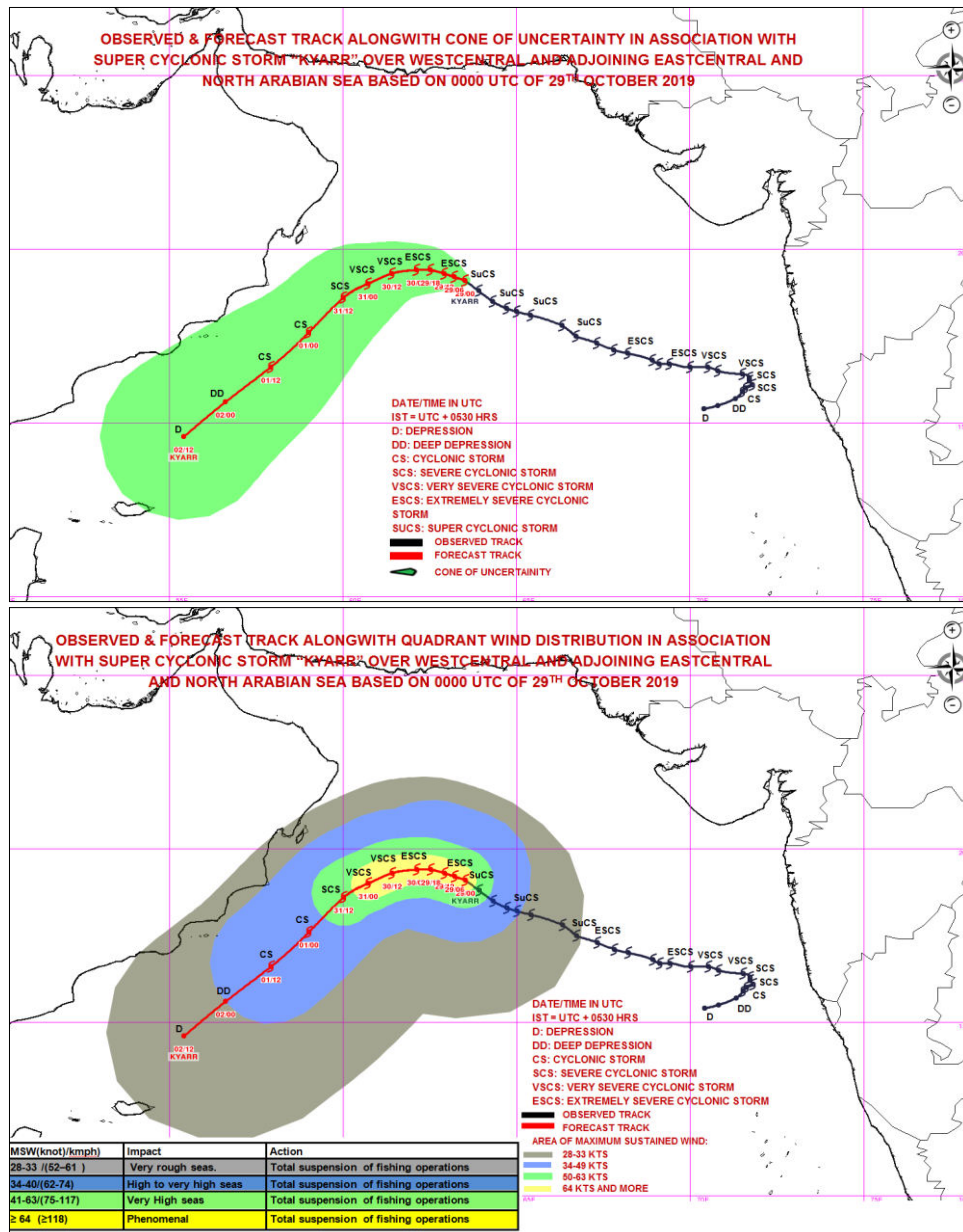
IMG_TIR1_TEMP 10.8 um 29-10-2019/(0730 to 0756) IST

ARABIAN SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1130 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

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DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

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UNI (FAX NO. 23355841)

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ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

(a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Super Cyclonic Storm 'Kyarr'** over Westcentral and adjoining eastcentral & north Arabian Sea moved west-northwestwards with a speed of 09 Kmph during past 06 hrs, weakened into an **Extremely Severe Cyclonic Storm** over Westcentral and adjoining eastcentral & north Arabian Sea and lay centred at 0830 hrs IST of 29th October, 2019 near latitude 19.2°N and longitude 63.4°E, about 990 km west of Mumbai (Maharashtra), 1010 km east-northeast of Salalah (Oman) and 500 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October morning, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into a Very Severe Cyclonic Storm during the morning of 30th October and further into a Severe Cyclonic Storm by the evening of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/0830	19.2/63.4	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/1130	19.2/63.2	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/1730	19.3/62.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
29.10.19/2330	19.4/62.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/0530	19.4/62.1	140-150 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1730	19.3/61.4	130-140 gusting to 150	Very Severe Cyclonic Storm
31.10.19/0530	19.0/60.7	120-130 gusting to 140	Very Severe Cyclonic Storm
31.10.19/1730	18.6/60.0	100-110 gusting to 120	Severe Cyclonic Storm
01.11.19/0530	17.6/59.0	80-90 gusting to 100	Cyclonic Storm
01.11.19/1730	16.6/57.9	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	15.6/56.6	50-60 gusting to 70	Deep Depression
02.11.19/1730	14.6/55.4	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 200-210 kmph gusting to 230 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 140-150 kmph gusting to 170 kmph by the morning of 30th October and 120-130 gusting to 140 kmph by the morning of 31st October and decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the morning of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

The Well Marked Low Pressure Area over Comorin Area & adjoining Equatorial Indian Ocean persists. It is likely to concentrate into a depression over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea during next 24 hours. It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during subsequent 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala, Lakshadweep and south Tamilnadu during next 3 days. Heavy to very heavy falls at isolated places also likely over Lakshadweep during next 24 hours; over south Tamilnadu during next 48 hours and over south Kerala during next 72 hours. Extremely heavy falls are likely over Lakshadweep Islands on 30th and 31st October.
- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30th and 31st October.

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.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and Maldives area, 30-40 Kmph gusting to 50 Kmph over south Tamilnadu coast, Gulf of Mannar and adjoining southwest Bay of Bengal during next 24 hours.
- Squally wind, speed reaching 45-55 kmph gusting to 65 kmph, likely to prevail over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea and along & off Kerala coast on 30th October.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph over southeast Arabian Sea and adjoining Lakshadweep-Maldives areas and Squally wind speed reaching 45-55 Kmph gusting to 65 kmph along & off Kerala and south Karnataka coasts on 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area & adjoining Equatorial Indian Ocean and Maldives area on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas and along & off Kerala, south Karnataka coasts on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into south Tamilnadu coast during next 24 hours and over Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea and along & off Kerala, south Karnataka coasts during next 72 hours.

The next bulletin will be issued at 1430 hrs IST of today, the 29th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

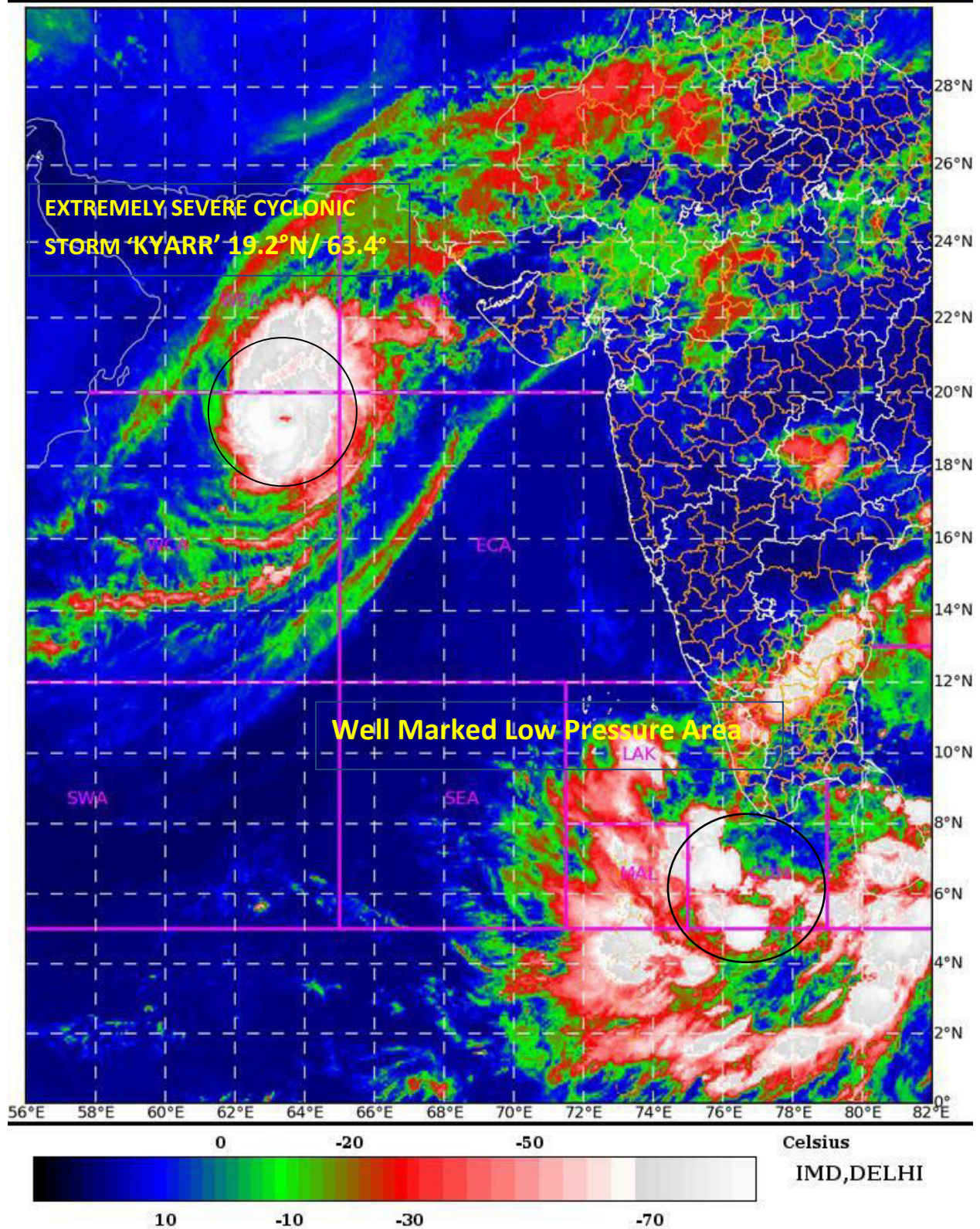
SAT : INSAT-3D IMG

29-10-2019/(0300 to 0326) GMT

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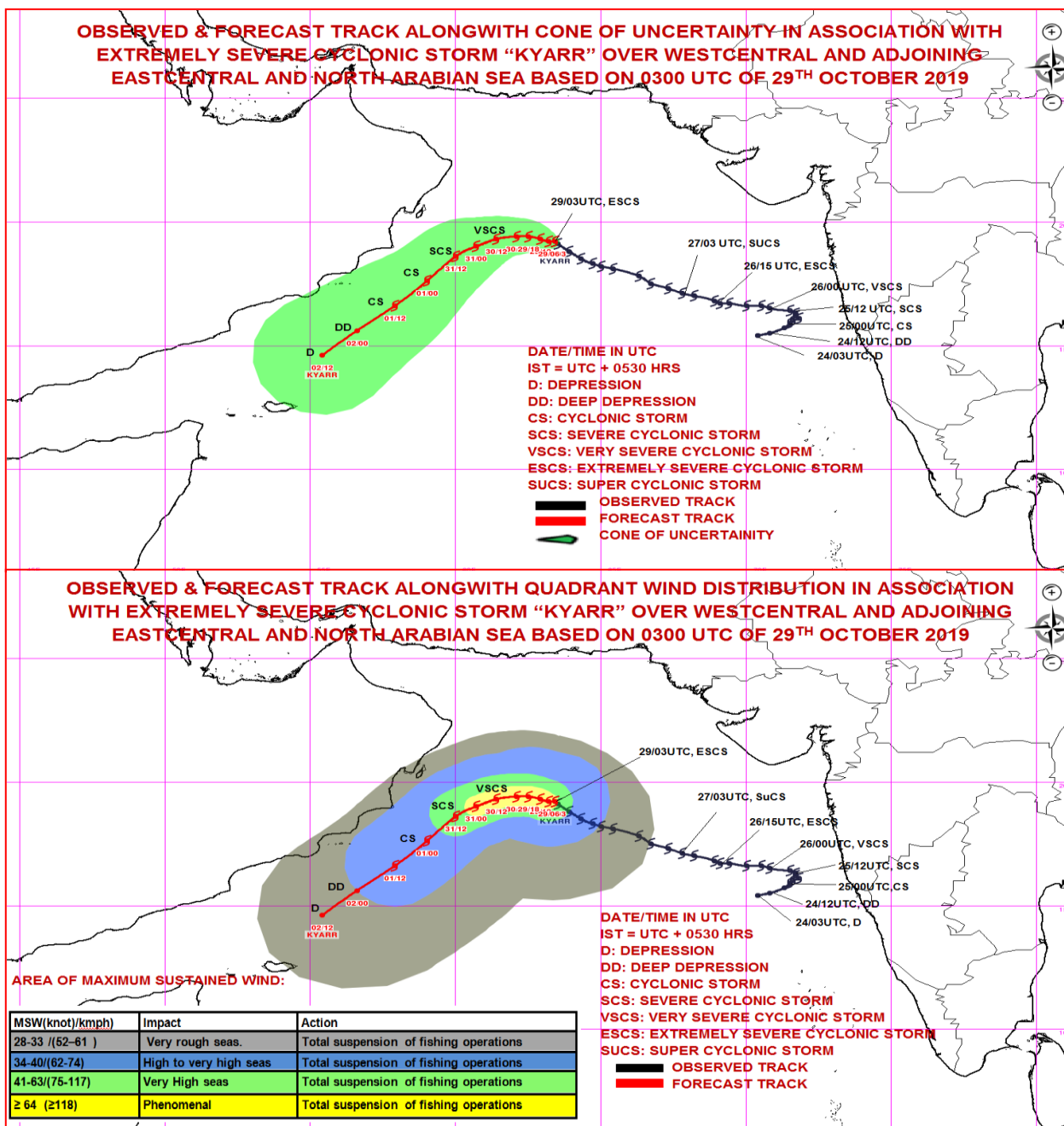
29-10-2019/(0830 to 0856) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1400 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

(a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Extremely Severe Cyclonic Storm 'Kyarr'** over Westcentral and adjoining eastcentral & north Arabian Sea moved west-northwestwards with a speed of 06 Kmph during past 06 hrs and lay centred at 1130 hrs IST of 29th October, 2019 near latitude 19.3°N and longitude 63.2°E, about 1010 km west-northwest of Mumbai (Maharashtra), 990 km east-northeast of Salalah (Oman) and 470 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October morning, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into a Very Severe Cyclonic Storm during the morning of 30th October and further into a Severe Cyclonic Storm by the morning of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/1130	19.3/63.2	200-210 gusting to 230	Extremely Severe Cyclonic Storm
29.10.19/1730	19.4/62.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
29.10.19/2330	19.5/62.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/0530	19.5/62.1	140-150 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1130	19.5/61.7	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/2330	19.2/61.0	120-130 gusting to 140	Very Severe Cyclonic Storm
31.10.19/1130	18.9/60.4	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/2330	18.2/59.5	80-90 gusting to 100	Cyclonic Storm
01.11.19/1130	17.2/58.4	60-70 gusting to 80	Cyclonic Storm
01.11.19/2330	16.2/57.3	50-60 gusting to 70	Deep Depression
02.11.19/1130	15.2/56.0	30-40 gusting to 50	Depression
02.11.19/2330	14.2/55.0	25-35 gusting to 45	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 200-210 kmph gusting to 230 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 140-150 kmph gusting to 170 kmph by the morning of 30th October and 100-110 gusting to 120 kmph by the morning of 31st October and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the morning of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

The Well Marked Low Pressure Area over Comorin Area & adjoining Equatorial Indian Ocean persists. It is likely to concentrate into a depression over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea during next 24 hours. It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during subsequent 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala, Lakshadweep and south Tamilnadu during next 3 days. Heavy to very heavy falls at isolated places also likely over Lakshadweep during next 24 hours; over south Tamilnadu during next 48 hours and over south Kerala during next 72 hours. Extremely heavy falls are likely over Lakshadweep Islands on 30th and 31st October.

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.

- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30th and 31st October.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and Maldives area, 35-45 Kmph gusting to 55 Kmph along & off Kerala coast and Lakshadweep area 30-40 Kmph gusting to 50 Kmph over south Tamilnadu coast, Gulf of Mannar and adjoining southwest Bay of Bengal during next 24 hours.
- Squally wind, speed reaching 45-55 kmph gusting to 65 kmph, likely to prevail over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea and along & off Kerala coast on 30th October.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph over southeast Arabian Sea and adjoining Lakshadweep-Maldives areas and Squally wind speed reaching 45-55 Kmph gusting to 65 kmph along & off Kerala and south Karnataka coasts on 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area & adjoining Equatorial Indian Ocean and Maldives area on 29th and southeast Arabian Sea & adjoining Lakshadweep-Maldives areas and along & off Kerala, south Karnataka coasts on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into south Tamilnadu coast during next 24 hours and over Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea and along & off Kerala, south Karnataka coasts during next 72 hours.

The next bulletin will be issued at 1730 hrs IST of today, the 29th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

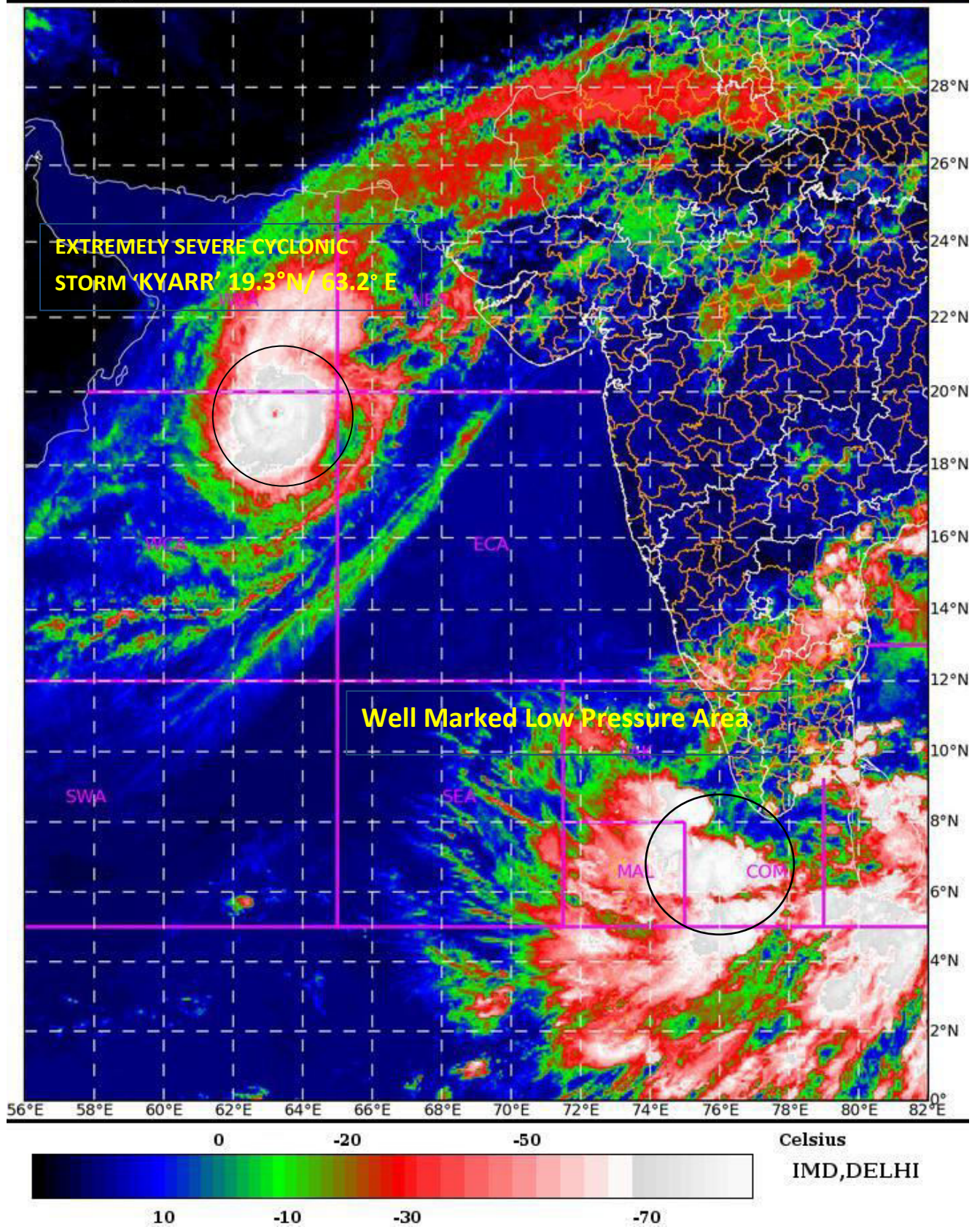
SAT : INSAT-3D IMG

29-10-2019/(0600 to 0627) GMT

IMG_TIR1_TEMP 10.8 um

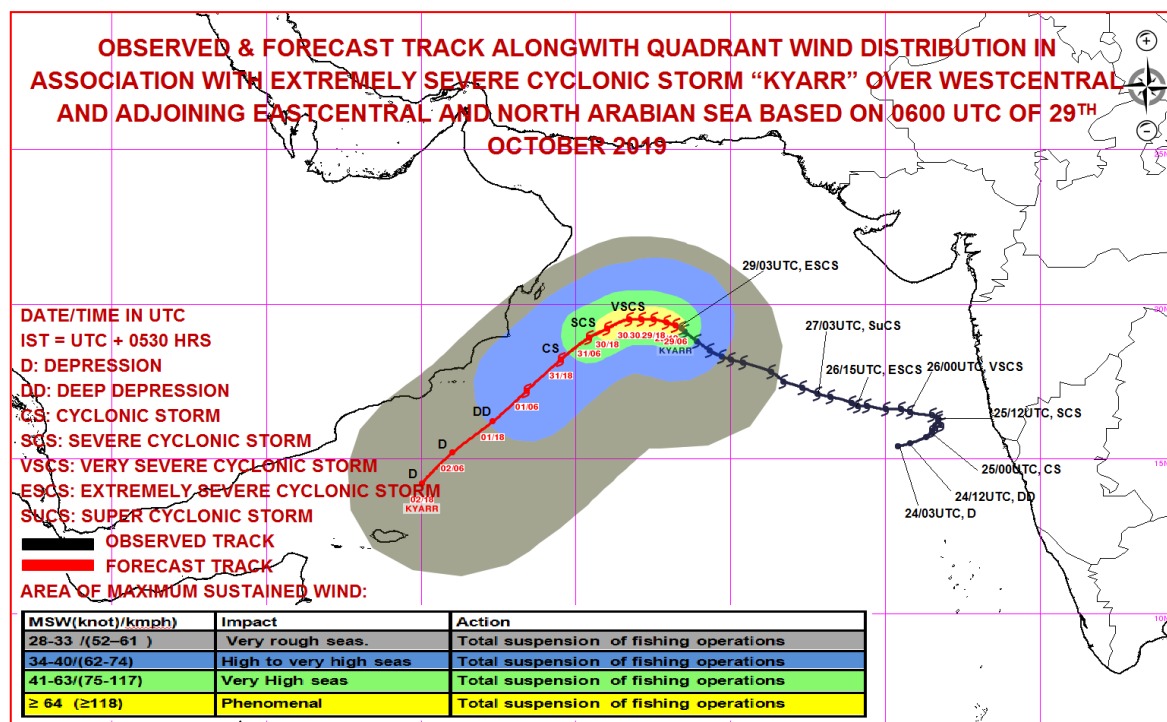
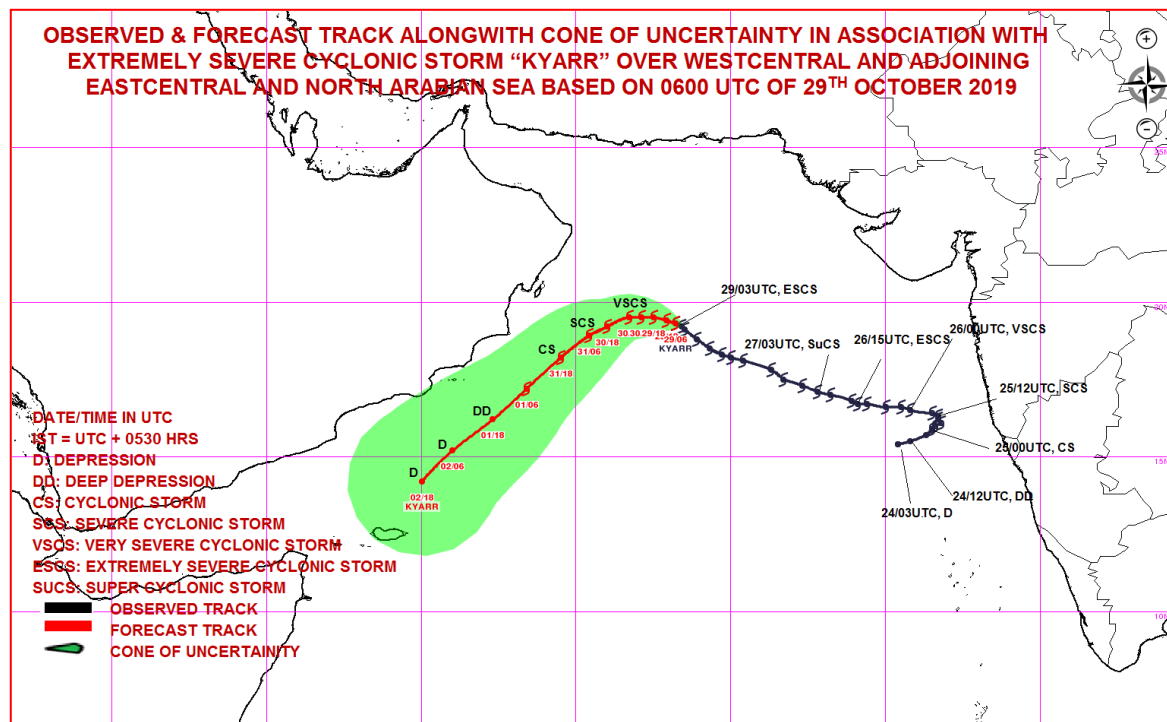
29-10-2019/(1130 to 1157) IST

ARABIAN SEA



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 (ARB/03/2019)

TIME OF ISSUE: 1630 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea.

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

(a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Extremely Severe Cyclonic Storm 'Kyarr'** over Westcentral and adjoining eastcentral & north Arabian Sea moved west-northwestwards with a speed of 06 Kmph during past 06 hrs and lay centred at 1430 hrs IST of 29th October, 2019 near latitude 19.4°N and longitude 63.1°E, about 1020 km west-northwest of Mumbai (Maharashtra), 980 km east-northeast of Salalah (Oman) and 460 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October morning, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into a Very Severe Cyclonic Storm during the morning of 30th October and further into a Severe Cyclonic Storm by the morning of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/1430	19.4/63.1	190-200 gusting to 220	Extremely Severe Cyclonic Storm
29.10.19/1730	19.5/62.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
29.10.19/2330	19.6/62.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/0530	19.6/62.1	140-150 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1130	19.5/61.7	130-140 gusting to 150	Very Severe Cyclonic Storm
30.10.19/2330	19.2/61.0	120-130 gusting to 140	Very Severe Cyclonic Storm
31.10.19/1130	18.9/60.4	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/2330	18.2/59.5	80-90 gusting to 100	Cyclonic Storm
01.11.19/1130	17.2/58.4	60-70 gusting to 80	Cyclonic Storm
01.11.19/2330	16.2/57.3	50-60 gusting to 70	Deep Depression
02.11.19/1130	15.2/56.0	30-40 gusting to 50	Depression
02.11.19/2330	14.2/55.0	25-35 gusting to 45	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 190-200 kmph gusting to 220 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 140-150 kmph gusting to 170 kmph by the morning of 30th October and 100-110 gusting to 120 kmph by the morning of 31st October and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the morning of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean.

The Well Marked Low Pressure Area over Comorin Area & adjoining Equatorial Indian Ocean persists. It is likely to concentrate into a depression over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea during next 24 hours. It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during subsequent 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala, Lakshadweep and south Tamilnadu during next 3 days. Heavy to very heavy falls at isolated places also likely over Lakshadweep during next 24 hours; over south Tamilnadu during next 48 hours and over south Kerala during next 72 hours. Extremely heavy falls are likely over Lakshadweep Islands on 30th and 31st October.

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.

- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30th and 31st October.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and Maldives area, 35-45 Kmph gusting to 55 Kmph along & off Kerala coast and Lakshadweep area 30-40 Kmph gusting to 50 Kmph over south Tamilnadu coast, Gulf of Mannar and adjoining southwest Bay of Bengal during next 24 hours.
- Squally wind, speed reaching 45-55 kmph gusting to 65 kmph, likely to prevail over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea and along & off Kerala coast on 30th October.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph, likely to prevail over southeast Arabian Sea and adjoining Lakshadweep-Maldives areas and Squally wind speed reaching 45-55 Kmph gusting to 65 kmph along & off Kerala and south Karnataka coasts on 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area & adjoining Equatorial Indian Ocean and Maldives area on 29th and over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas and along & off Kerala, south Karnataka coasts on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into south Tamilnadu coast during next 24 hours and over Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea and along & off Kerala, south Karnataka coasts during next 72 hours.

The next bulletin will be issued at 2030 hrs IST of today, the 29th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

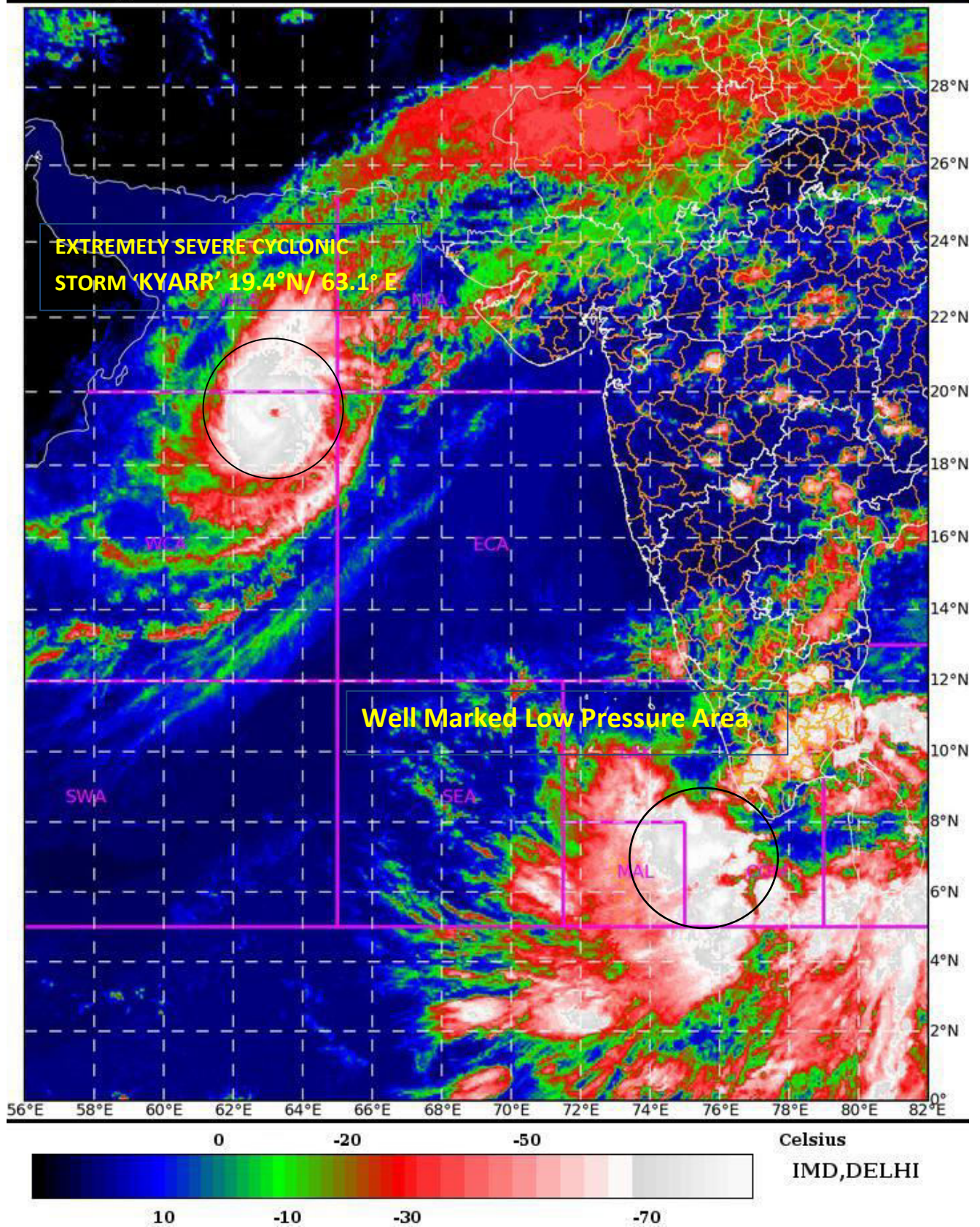
SAT : INSAT-3D IMG

29-10-2019/(0930 to 0956) GMT

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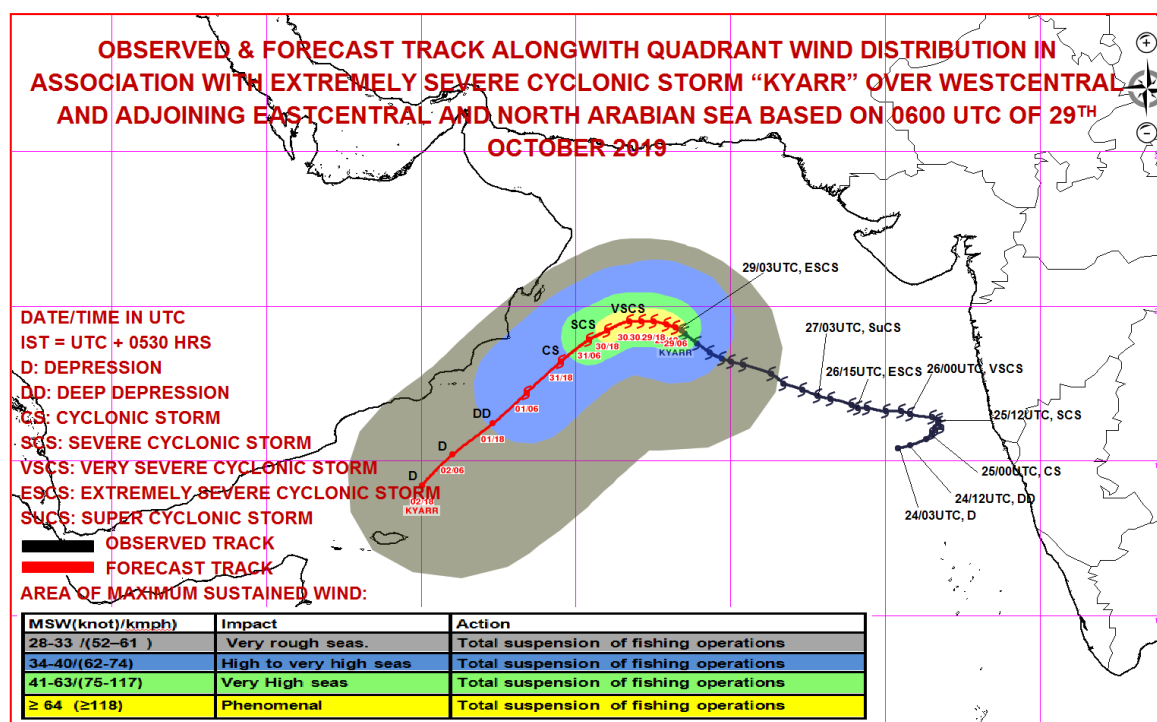
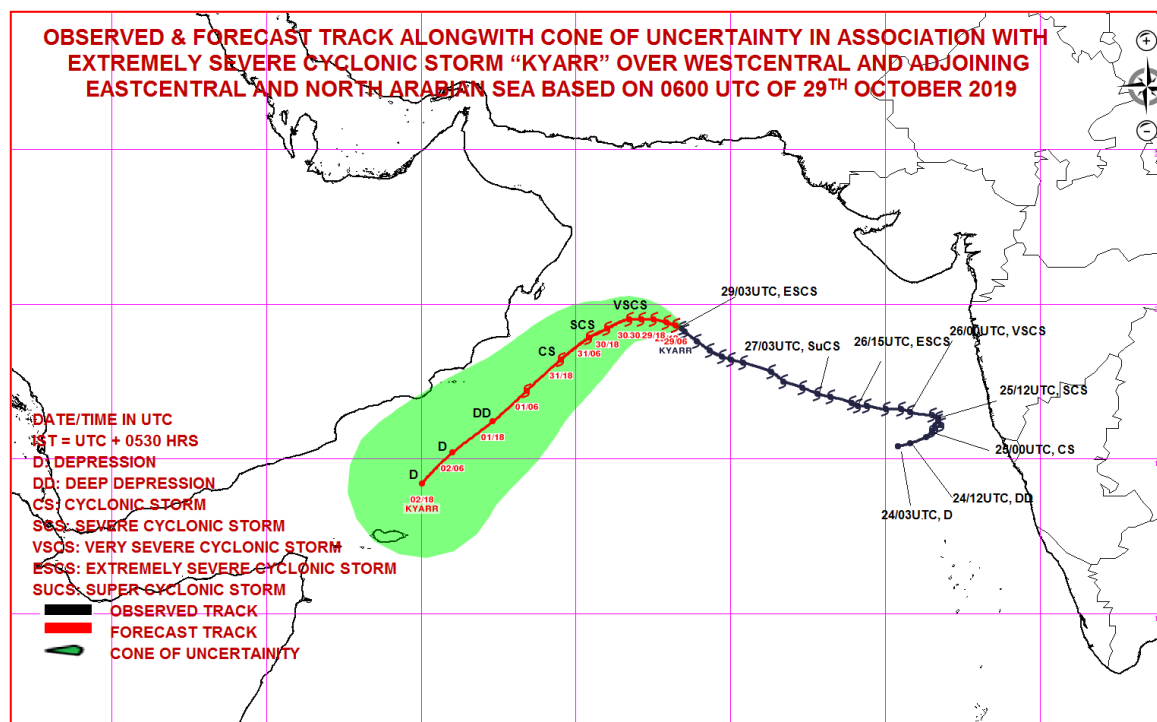
29-10-2019/(1500 to 1526) IST

ARABIAN SEA



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. : 41 (ARB/03/2019)

TIME OF ISSUE: 2000 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

(a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Extremely Severe Cyclonic Storm 'Kyarr'** over Westcentral and adjoining eastcentral & north Arabian Sea moved slowly north-northwestwards with a speed of 04 Kmph during past 06 hrs and lay centred at 1730 hrs IST of 29th October, 2019 near latitude 19.5°N and longitude 63.1°E, about 1020 km west-northwest of Mumbai (Maharashtra), 990 km east-northeast of Salalah (Oman) and 460 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October morning, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into a Very Severe Cyclonic Storm during the morning of 30th October and further into a Severe Cyclonic Storm by the morning of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/1730	19.5/63.1	180-190 gusting to 210	Extremely Severe Cyclonic Storm
29.10.19/2330	19.6/62.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
30.10.19/0530	19.6/62.3	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1130	19.5/61.9	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1730	19.4/61.6	130-140 gusting to 155	Very Severe Cyclonic Storm
31.10.19/0530	19.1/61.1	110-120 gusting to 130	Severe Cyclonic Storm
31.10.19/1730	18.6/60.4	90-100 gusting to 110	Severe Cyclonic Storm
01.11.19/0530	17.7/59.3	70-80 gusting to 90	Cyclonic Storm
01.11.19/1730	16.7/58.2	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	15.7/57.0	50-60 gusting to 70	Deep Depression
02.11.19/1730	14.7/55.9	40-50 gusting to 60	Depression
03.11.19/0530	13.7/54.8	25-35 gusting to 45	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 180-190 kmph gusting to 210 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 160-170 kmph gusting to 190 kmph by the morning of 30th October and 110-120 gusting to 130 kmph by the morning of 31st October and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the morning of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

The Well Marked Low Pressure Area over Comorin Area & adjoining Equatorial Indian Ocean now lies over Lakshadweep-Maldives areas & adjoining Comorin area. It is likely to concentrate into a depression over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea during next 24 hours. It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during subsequent 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala, Lakshadweep and south Tamilnadu during next 3 days. Heavy to very heavy falls at isolated places also likely over Lakshadweep during next 24 hours; over south Tamilnadu during next 48 hours and over south Kerala during next 72 hours. Extremely heavy falls are likely over Lakshadweep Islands on 30th and 31st October.

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.

- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30th and 31st October.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and Maldives area, 35-45 Kmph gusting to 55 Kmph along & off Kerala coast and Lakshadweep area 30-40 Kmph gusting to 50 Kmph over south Tamilnadu coast, Gulf of Mannar and adjoining southwest Bay of Bengal during next 24 hours.
- Squally wind, speed reaching 45-55 kmph gusting to 65 kmph, likely to prevail over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea and along & off Kerala coast on 30th October.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph, likely to prevail over southeast Arabian Sea and adjoining Lakshadweep-Maldives areas and Squally wind speed reaching 45-55 Kmph gusting to 65 kmph along & off Kerala and south Karnataka coasts on 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area & adjoining Equatorial Indian Ocean and Maldives area during next 12 hours and over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas and along & off Kerala, south Karnataka coasts on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into south Tamilnadu coast during next 24 hours and over Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea and along & off Kerala, south Karnataka coasts during next 72 hours.

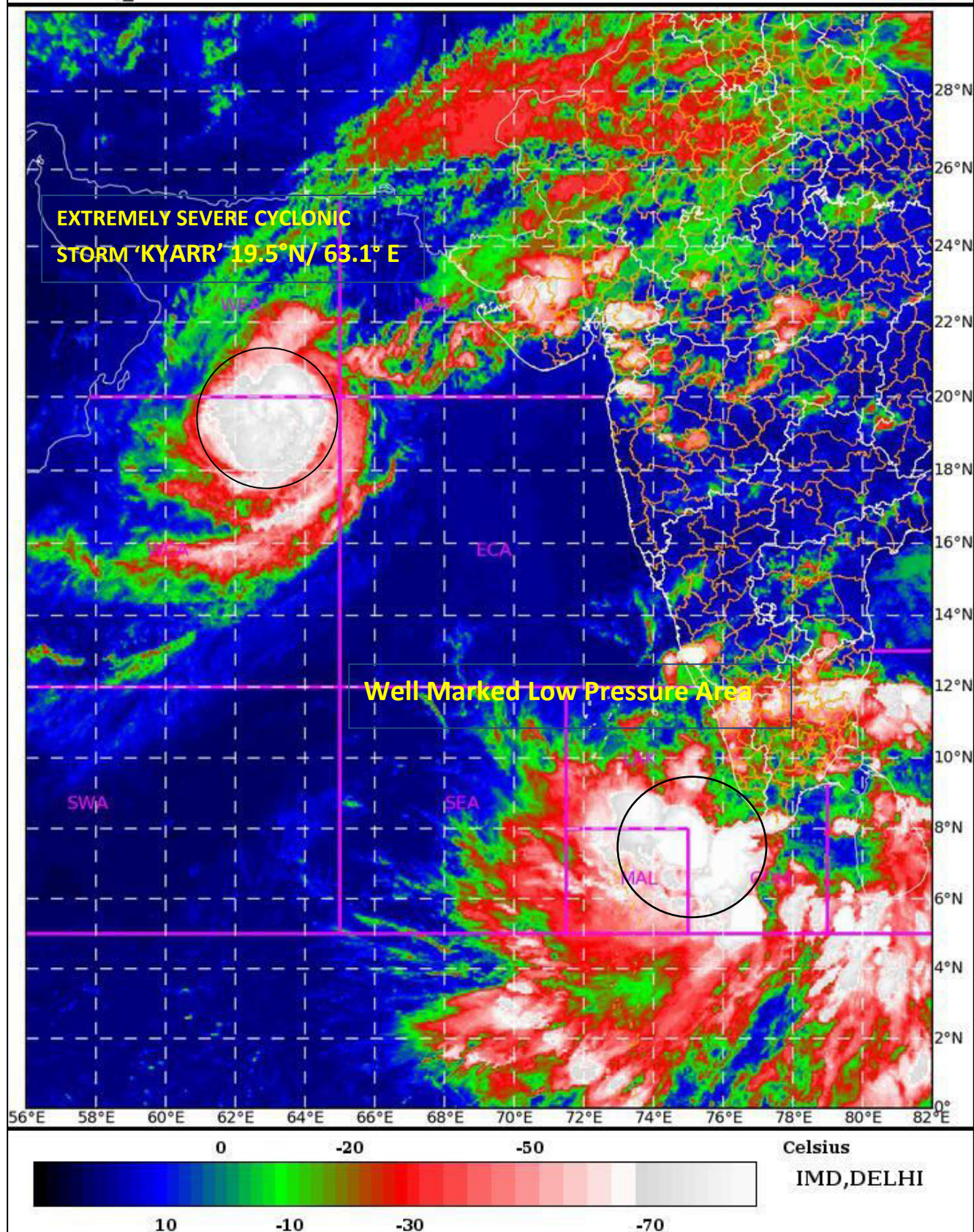
The next bulletin will be issued at 2330 hrs IST of today, the 29th October, 2019.

(Sunitha Devi)
Scientist-E, RSMC, New Delhi

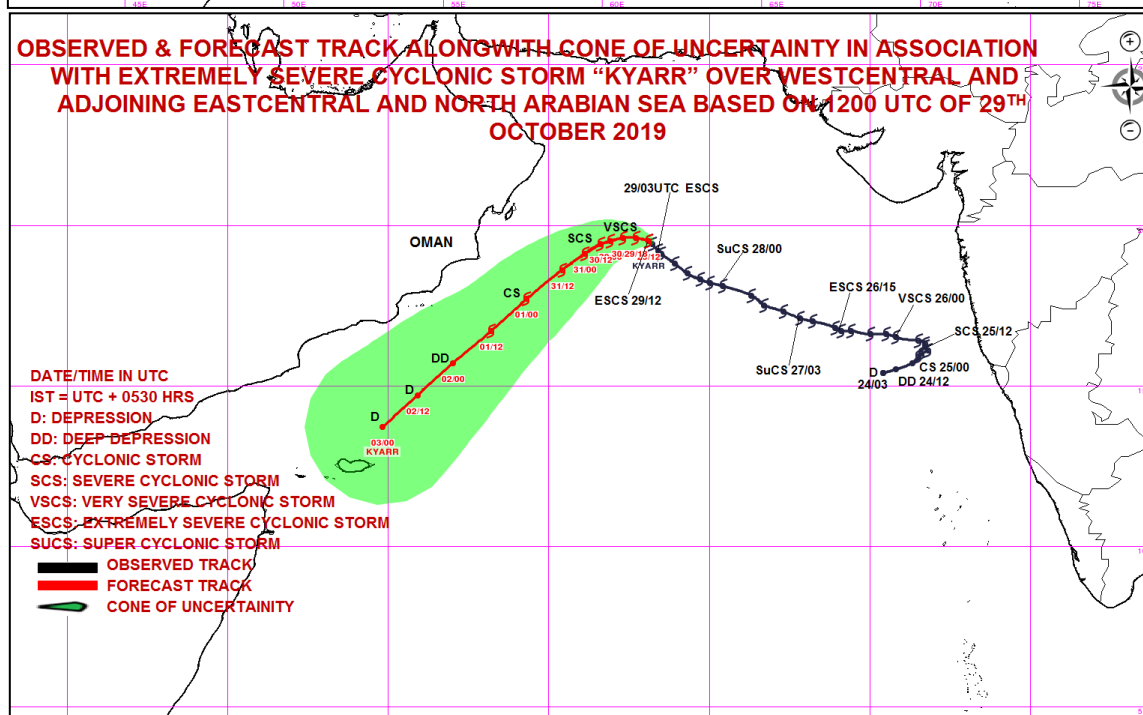
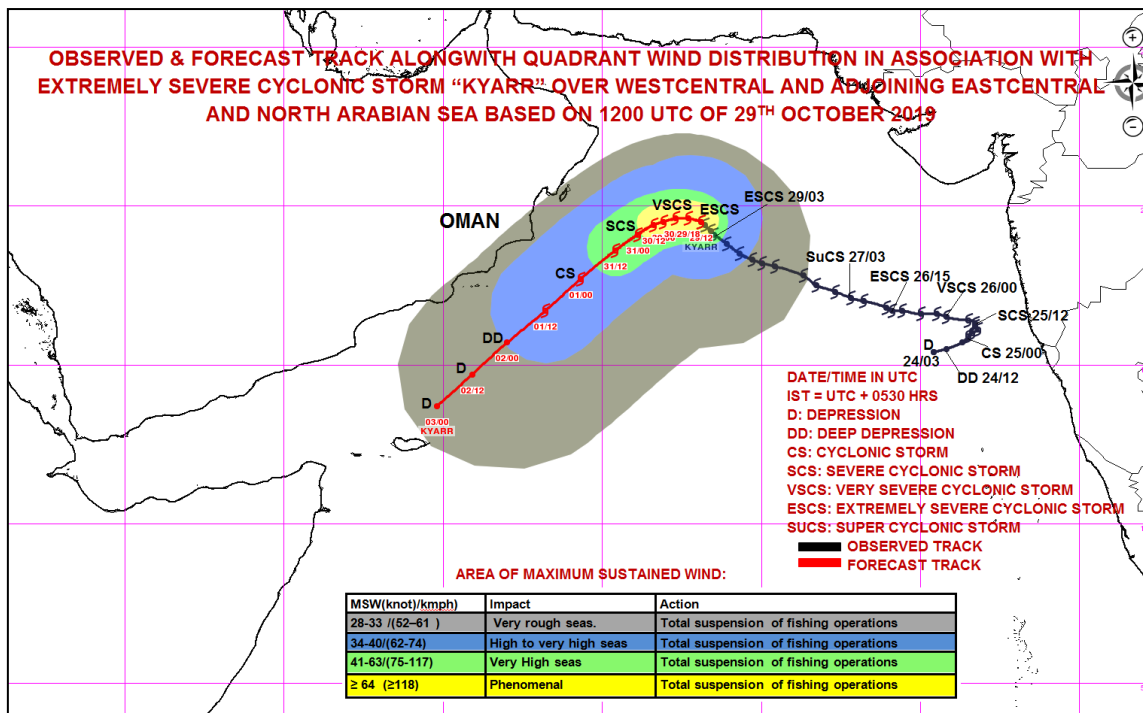
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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 29-10-2019/(1330 to 1356) GMT
 IMG_TIR1_TEMP 10.8 um 29-10-2019/(1900 to 1926) IST
 ARABIAN SEA



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. : 42 (ARB/03/2019)

TIME OF ISSUE: 2220 HOURS IST

DATED: 29.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

(a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Extremely Severe Cyclonic Storm 'Kyarr'** over Westcentral and adjoining eastcentral & north Arabian Sea moved slowly west-northwestwards with a speed of 04 Kmph during past 06 hrs and lay centred at 2030 hrs IST of 29th October, 2019 near latitude 19.5°N and longitude 62.9°E, about 1040 km west-northwest of Mumbai (Maharashtra), 990 km east-northeast of Salalah (Oman) and 440 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October morning, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into a Very Severe Cyclonic Storm during the morning of 30th October and further into a Severe Cyclonic Storm by the morning of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/2030	19.5/62.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
29.10.19/2330	19.6/62.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
30.10.19/0530	19.6/62.3	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1130	19.5/61.9	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1730	19.4/61.6	130-140 gusting to 155	Very Severe Cyclonic Storm
31.10.19/0530	19.1/61.1	110-120 gusting to 130	Severe Cyclonic Storm
31.10.19/1730	18.6/60.4	90-100 gusting to 110	Severe Cyclonic Storm
01.11.19/0530	17.7/59.3	70-80 gusting to 90	Cyclonic Storm
01.11.19/1730	16.7/58.2	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	15.7/57.0	50-60 gusting to 70	Deep Depression
02.11.19/1730	14.7/55.9	40-50 gusting to 60	Depression
03.11.19/0530	13.7/54.8	25-35 gusting to 45	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 180-190 kmph gusting to 210 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 160-170 kmph gusting to 190 kmph by the morning of 30th October and 110-120 gusting to 130 kmph by the morning of 31st October and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the morning of 31st October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

The Well Marked Low Pressure Area over Lakshadweep-Maldives areas & adjoining Comorin area persists. It is likely to concentrate into a depression over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea during next 24 hours. It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during subsequent 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala, Lakshadweep and south Tamilnadu during next 3 days. Heavy to very heavy falls at isolated places also likely over Lakshadweep during next 24 hours; over south Tamilnadu during next 48 hours and over south Kerala during next 72 hours. Extremely heavy falls are likely over Lakshadweep Islands on 30th and 31st October.
- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30th and 31st October.

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.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and Maldives area, 35-45 Kmph gusting to 55 Kmph along & off Kerala coast and Lakshadweep area 30-40 Kmph gusting to 50 Kmph over south Tamilnadu coast, Gulf of Mannar and adjoining southwest Bay of Bengal during next 24 hours.
- Squally wind, speed reaching 45-55 kmph gusting to 65 kmph, likely to prevail over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea and along & off Kerala coast on 30th October.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph, likely to prevail over southeast Arabian Sea and adjoining Lakshadweep-Maldives areas and Squally wind speed reaching 45-55 Kmph gusting to 65 kmph along & off Kerala and south Karnataka coasts on 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area & adjoining Equatorial Indian Ocean and Maldives area during next 12 hours and over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas and along & off Kerala, south Karnataka coasts on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into south Tamilnadu coast during next 24 hours and over Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea and along & off Kerala, south Karnataka coasts during next 72 hours.

The next bulletin will be issued at 0230 hrs IST 30th October, 2019.

(V.R. Durai)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

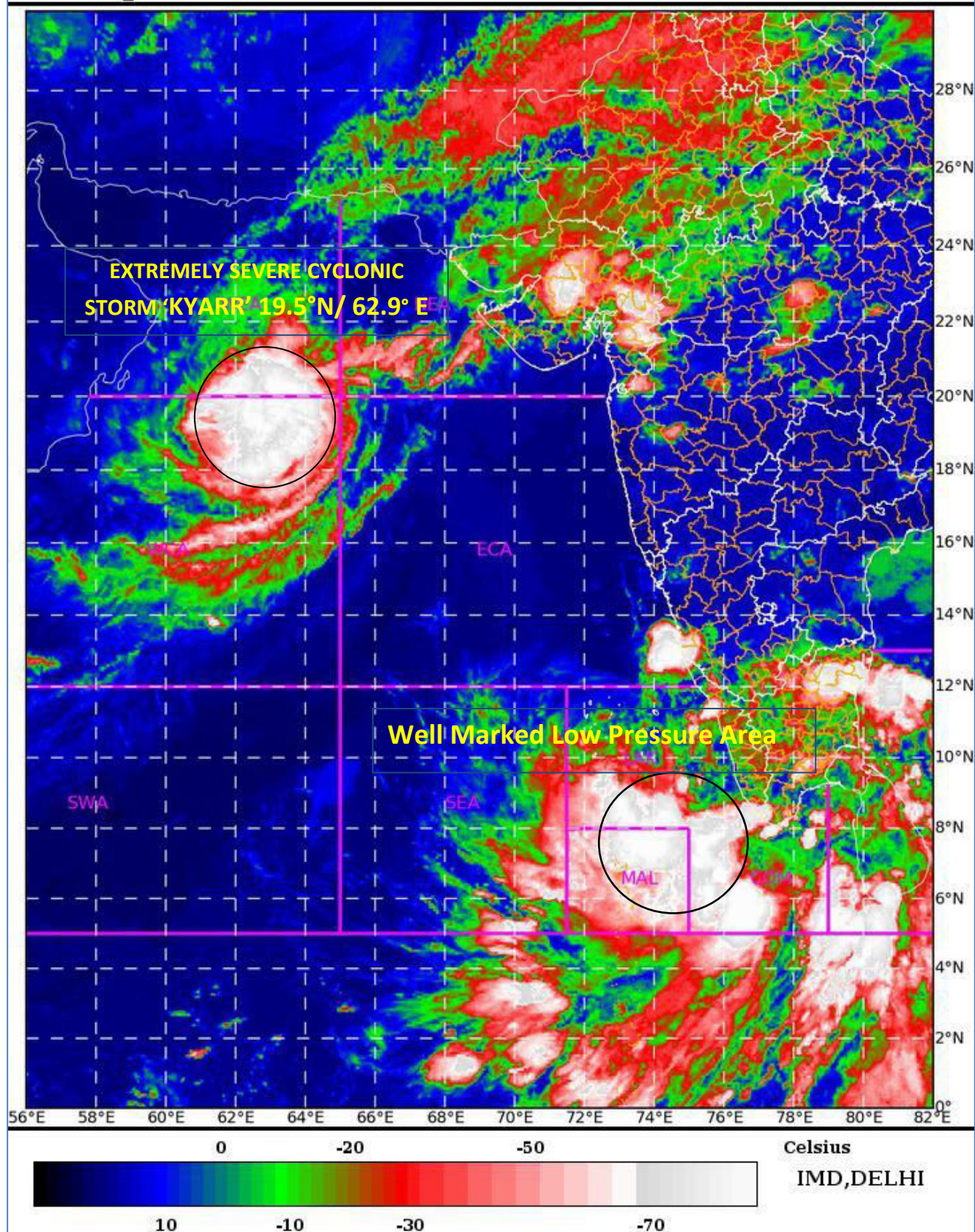
SAT : INSAT-3D IMG

29-10-2019/(1530 to 1556) GMT

IMG_TIR1_TEMP 10.8 um

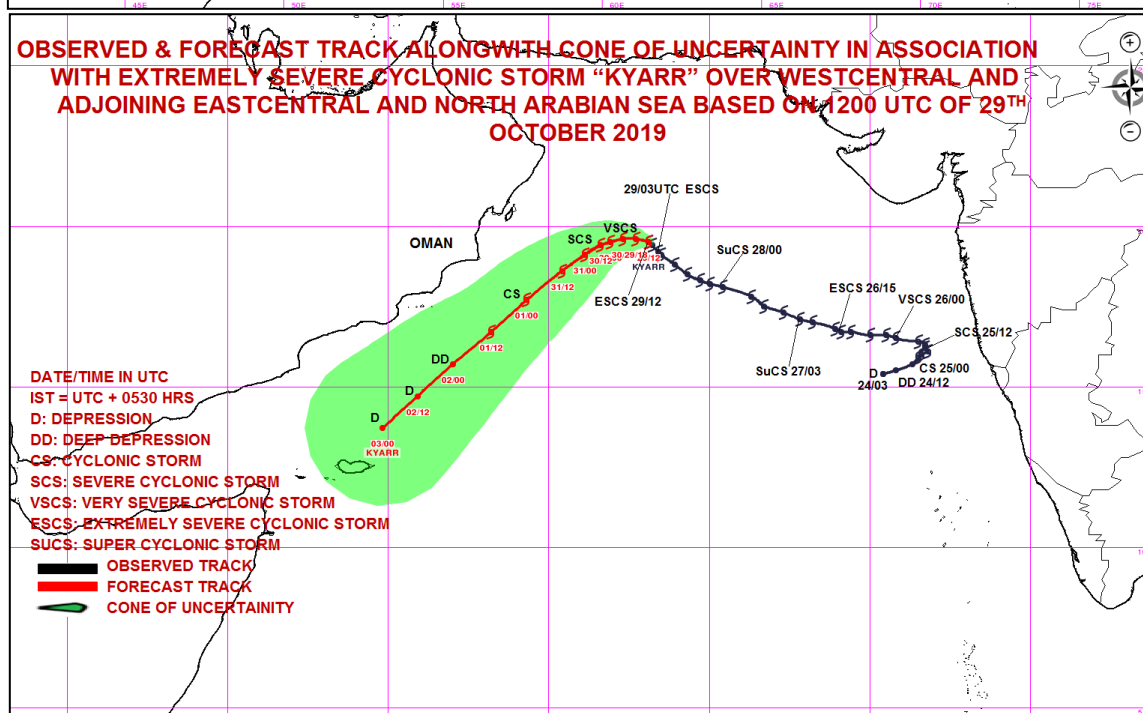
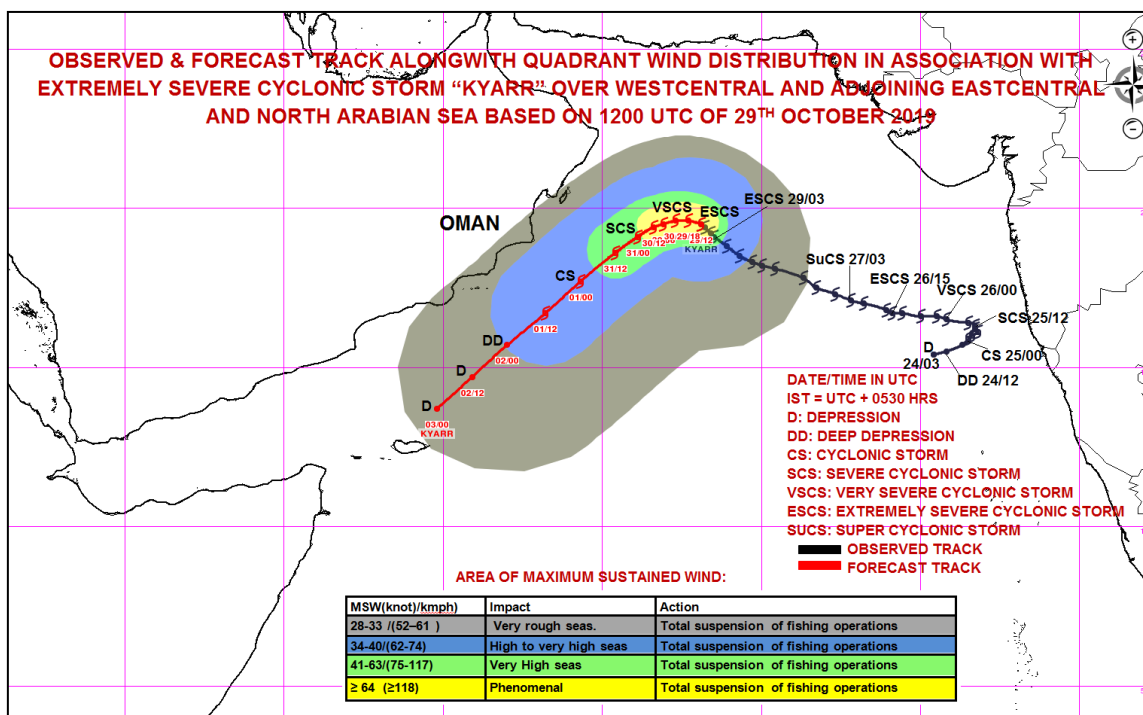
29-10-2019/(2100 to 2126) IST

ARABIAN_SEA



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 (ARB/03/2019)

TIME OF ISSUE: 0200 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

(a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Extremely Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining eastcentral & north Arabian Sea moved slowly west-northwestwards with a speed of 05 Kmph during past 06 hrs and lay centred at 2330 hrs IST of 29th October, 2019 near latitude 19.6°N and longitude 62.8°E, about 1050 km west-northwest of Mumbai (Maharashtra), 980 km east-northeast of Salalah (Oman) and 420 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards till 30th October morning, re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into a Very Severe Cyclonic Storm during the morning of 30th October and further into a Severe Cyclonic Storm by the morning of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.10.19/2330	19.6/62.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
30.10.19/0530	19.6/62.3	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1130	19.5/61.9	140-150 gusting to 165	Very Severe Cyclonic Storm
30.10.19/1730	19.4/61.6	130-140 gusting to 155	Very Severe Cyclonic Storm
30.10.19/2330	19.2/61.3	110-120 gusting to 130	Severe Cyclonic Storm
31.10.19/1130	18.9/60.8	100-110 gusting to 120	Severe Cyclonic Storm
31.11.19/2330	18.1/59.8	80-90 gusting to 100	Cyclonic Storm
01.11.19/1130	17.2/58.8	70-80 gusting to 90	Cyclonic Storm
01.11.19/2330	16.2/57.6	60-70 gusting to 80	Cyclonic Storm
02.11.19/1130	15.2/56.5	50-60 gusting to 70	Deep Depression
02.11.19/2330	14.2/55.4	40-50 gusting to 60	Depression
03.11.19/1130	13.2/54.3	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 170-180 kmph gusting to 200 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 160-170 kmph gusting to 190 kmph by the morning of 30th October and 105-115 gusting to 125 kmph by the morning of 31st October and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the evening of 30th October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

The Well Marked Low Pressure Area over Lakshadweep-Maldives areas & adjoining Comorin area persists. It is likely to concentrate into a depression over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea during next 24 hours. It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during subsequent 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala, Lakshadweep and south Tamilnadu during next 3 days. Heavy to very heavy falls at isolated places also likely over Lakshadweep during next 24 hours; over south Tamilnadu during next 48 hours and over south Kerala during next 72 hours. Extremely heavy falls are likely over Lakshadweep Islands on 30th and 31st October.
- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30th and 31st October.

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.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and Maldives area, 35-45 Kmph gusting to 55 Kmph along & off Kerala coast and Lakshadweep area 30-40 Kmph gusting to 50 Kmph over south Tamilnadu coast, Gulf of Mannar and adjoining southwest Bay of Bengal during next 24 hours.
- Squally wind, speed reaching 45-55 kmph gusting to 65 kmph, likely to prevail over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea and along & off Kerala coast on 30th October.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph, likely to prevail over southeast Arabian Sea and adjoining Lakshadweep-Maldives areas and Squally wind speed reaching 45-55 Kmph gusting to 65 kmph along & off Kerala and south Karnataka coasts on 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over Comorin area & adjoining Equatorial Indian Ocean and Maldives area during next 12 hours and over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas and along & off Kerala, south Karnataka coasts on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into south Tamilnadu coast during next 24 hours and over Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea and along & off Kerala, south Karnataka coasts during next 72 hours.

The next bulletin will be issued at 0530 hrs IST 30th October, 2019.

(V R DURAI)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

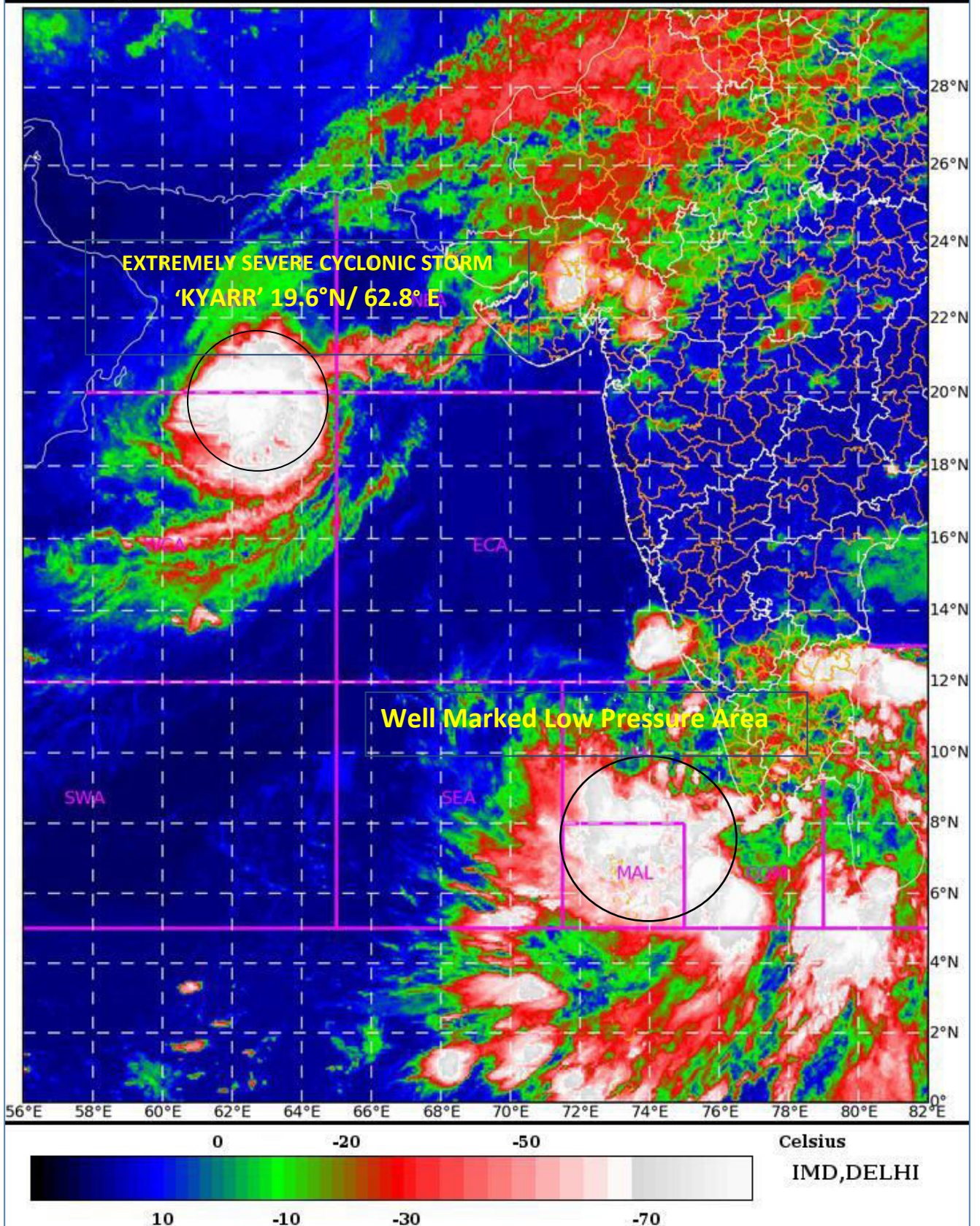
SAT : INSAT-3D IMG

29-10-2019/(1630 to 1656) GMT

IMG_TIR1_TEMP 10.8 um

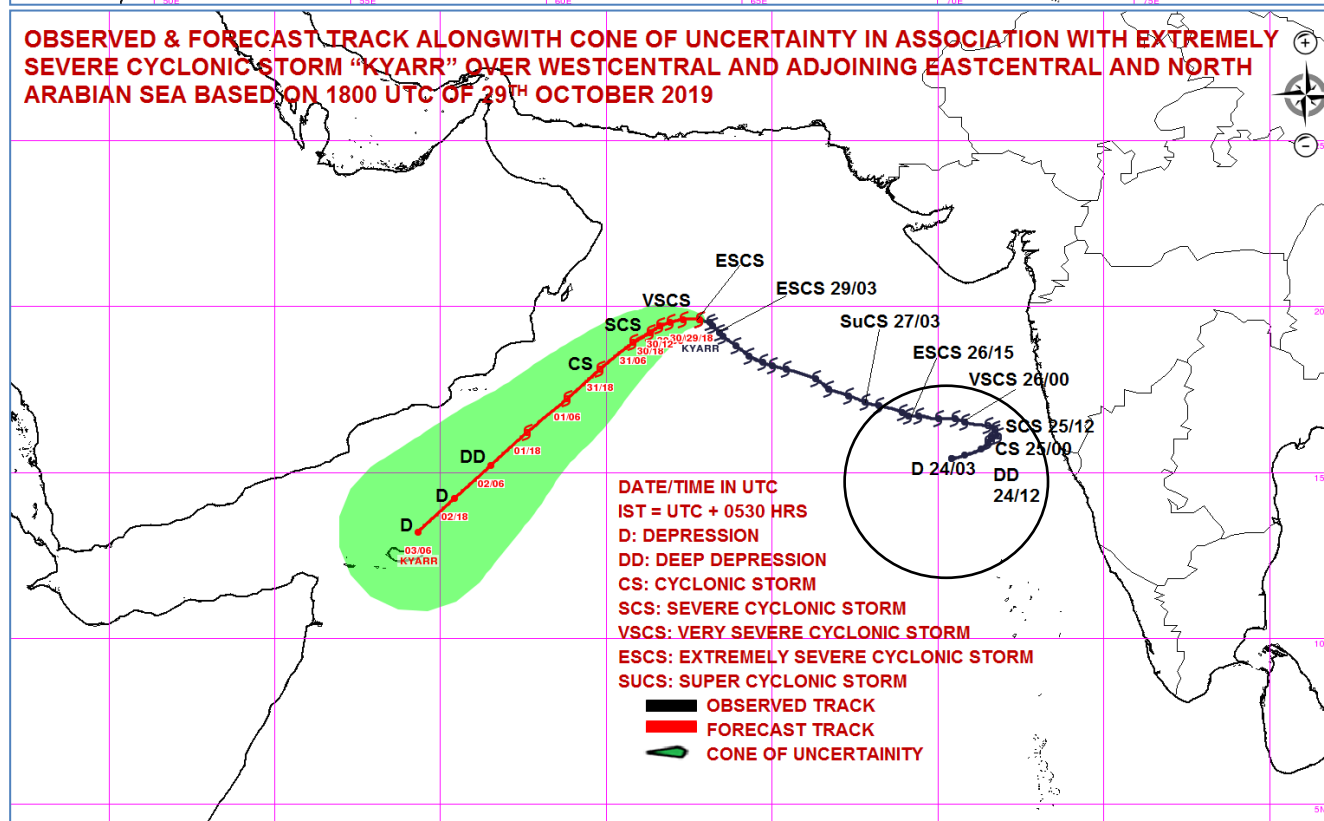
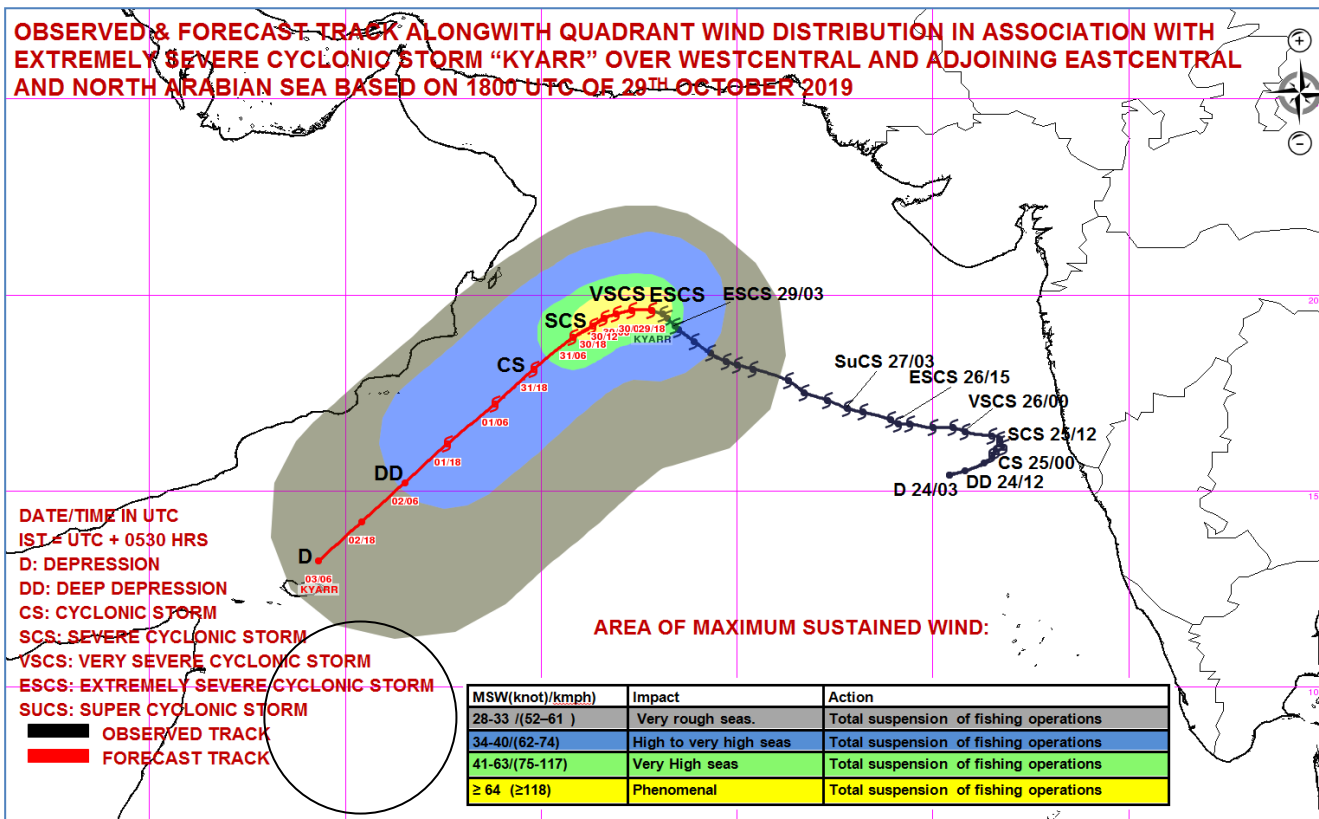
29-10-2019/(2200 to 2226) IST

ARABIAN_SEA



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. : 44 (ARB/03/2019)

TIME OF ISSUE: 0530 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over Westcentral and adjoining Eastcentral & North Arabian Sea.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

(a) Extremely Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining eastcentral & north Arabian Sea

The **Extremely Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining eastcentral & north Arabian Sea moved slowly west-northwestwards with a speed of 05 Kmph during past 06 hrs and lay centred at 0230 hrs IST of 30th October, 2019 near latitude 19.6°N and longitude 62.6°E, about 1070 km west-northwest of Mumbai (Maharashtra), 960 km east-northeast of Salalah (Oman) and 400 km east-southeast of Masirah (Oman). It is very likely to move west-northwestwards during next 06 hours re-curve west-southwestwards thereafter and move towards Gulf of Aden off south Oman-Yemen coasts during subsequent 3 days. It is very likely to weaken into a Very Severe Cyclonic Storm during next 06 hours and further into a Severe Cyclonic Storm by the morning of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/0230	19.6/62.6	165-175 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/0530	19.6/62.3	160-170 gusting to 190	Extremely Severe Cyclonic Storm
30.10.19/1130	19.5/61.9	140-150 gusting to 165	Very Severe Cyclonic Storm
30.10.19/1730	19.4/61.6	130-140 gusting to 155	Very Severe Cyclonic Storm
30.10.19/2330	19.2/61.3	110-120 gusting to 130	Severe Cyclonic Storm
31.10.19/1130	18.9/60.8	100-110 gusting to 120	Severe Cyclonic Storm
31.11.19/2330	18.1/59.8	80-90 gusting to 100	Cyclonic Storm
01.11.19/1130	17.2/58.8	70-80 gusting to 90	Cyclonic Storm
01.11.19/2330	16.2/57.6	60-70 gusting to 80	Cyclonic Storm
02.11.19/1130	15.2/56.5	50-60 gusting to 70	Deep Depression
02.11.19/2330	14.2/55.4	40-50 gusting to 60	Depression
03.11.19/1130	13.2/54.3	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 165-175 kmph gusting to 190 kmph, is prevailing around the system centre over westcentral and adjoining eastcentral & north Arabian Sea. It is very likely to reduce gradually becoming 160-170 kmph gusting to 190 kmph during next 06 hours and 105-115 gusting to 125 kmph by the morning of 31st October and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the evening of 30th October and will improve gradually thereafter becoming very rough to high by 01st November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

(b) Well Marked Low pressure area over Lakshadweep-Maldives areas & adjoining Comorin area.

The Well Marked Low Pressure Area over Lakshadweep-Maldives areas & adjoining Comorin area persists. It is likely to concentrate into a depression over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea during next 12 hours. It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during subsequent 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over south Kerala, Lakshadweep and south Tamilnadu during next 2 days. Heavy to very heavy falls at isolated places also likely over south Tamilnadu during next 24 hours and over south Kerala during next 48 hours. Extremely heavy falls are likely over Lakshadweep Islands during next 48 hours.
- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30th and 31st October.

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.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin area & adjoining Equatorial Indian Ocean and Maldives area, 35-45 Kmph gusting to 55 Kmph along & off Kerala coast and Lakshadweep area 30-40 Kmph gusting to 50 Kmph over south Tamilnadu coast, Gulf of Mannar and adjoining southwest Bay of Bengal during next 24 hours.
- Squally wind, speed reaching 45-55 kmph gusting to 65 kmph, likely to prevail over Lakshadweep-Maldives areas and adjoining southeast Arabian Sea and along & off Kerala coast on 30th October.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph, likely to prevail over southeast Arabian Sea and adjoining Lakshadweep-Maldives areas and Squally wind speed reaching 45-55 Kmph gusting to 65 kmph along & off Kerala and south Karnataka coasts on 31st October, 2019.

(iii) Sea condition

- Sea condition will be rough to very rough over southeast Arabian Sea & adjoining Lakshadweep-Maldives areas and along & off Kerala, south Karnataka coasts on 30th and 31st October, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into Comorin-Maldives-Lakshadweep areas and adjoining southeast Arabian Sea and along & off Kerala, south Karnataka coasts during next 48 hours.

The next bulletin will be issued at 0830 hrs IST 30th October, 2019.

(V R DURAI)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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

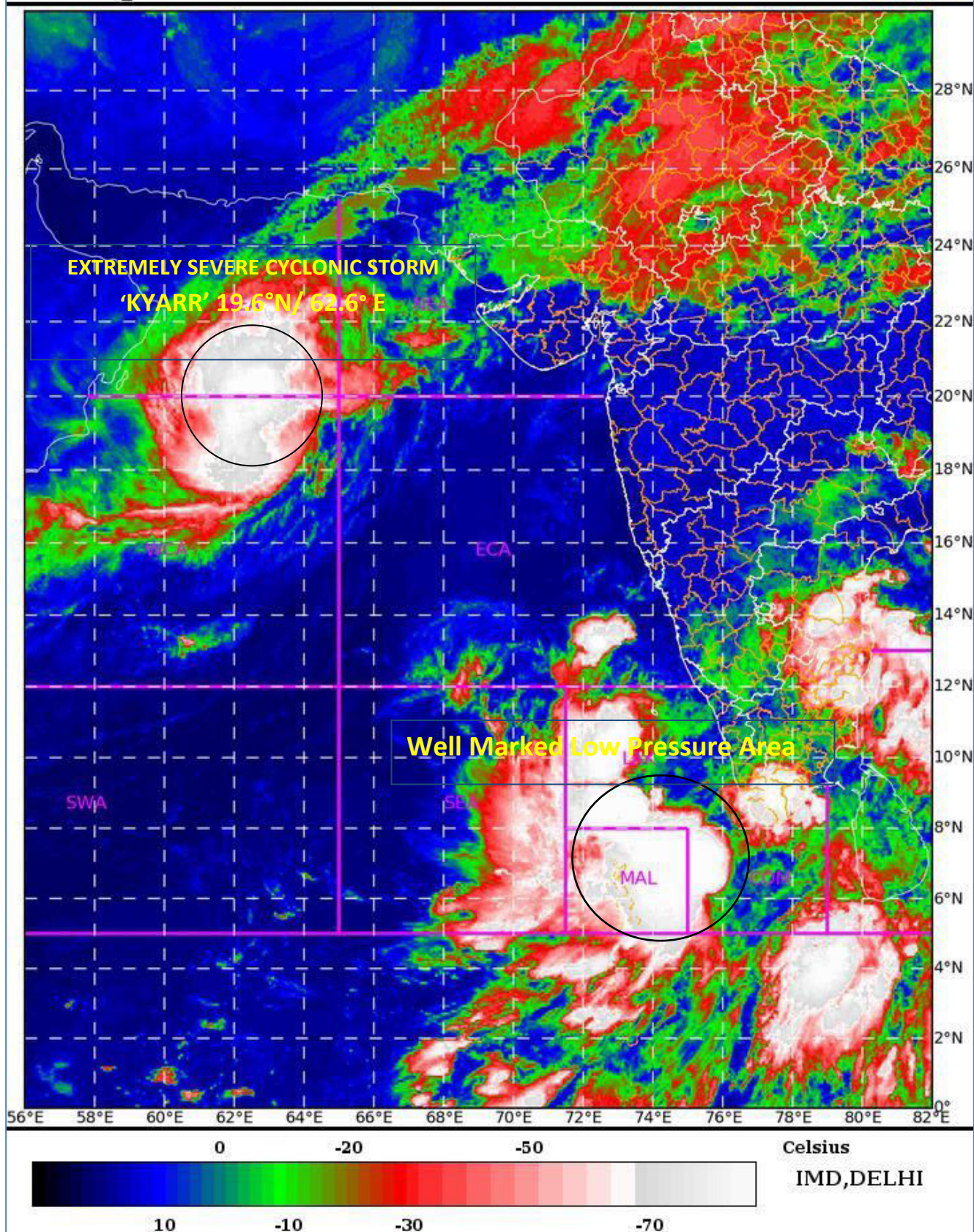
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IMG_TIR1_TEMP 10.8 um

30-10-2019/(0430 to 0456) IST

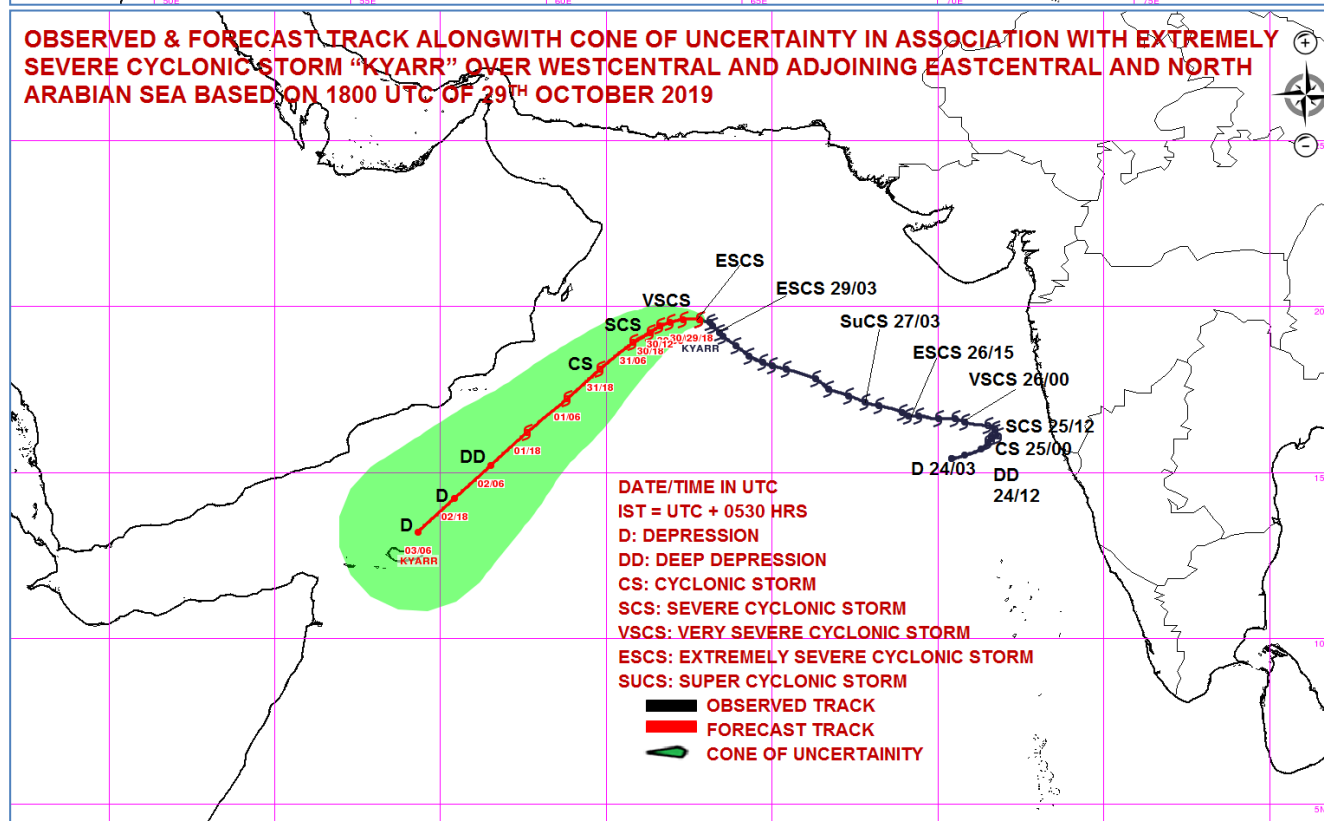
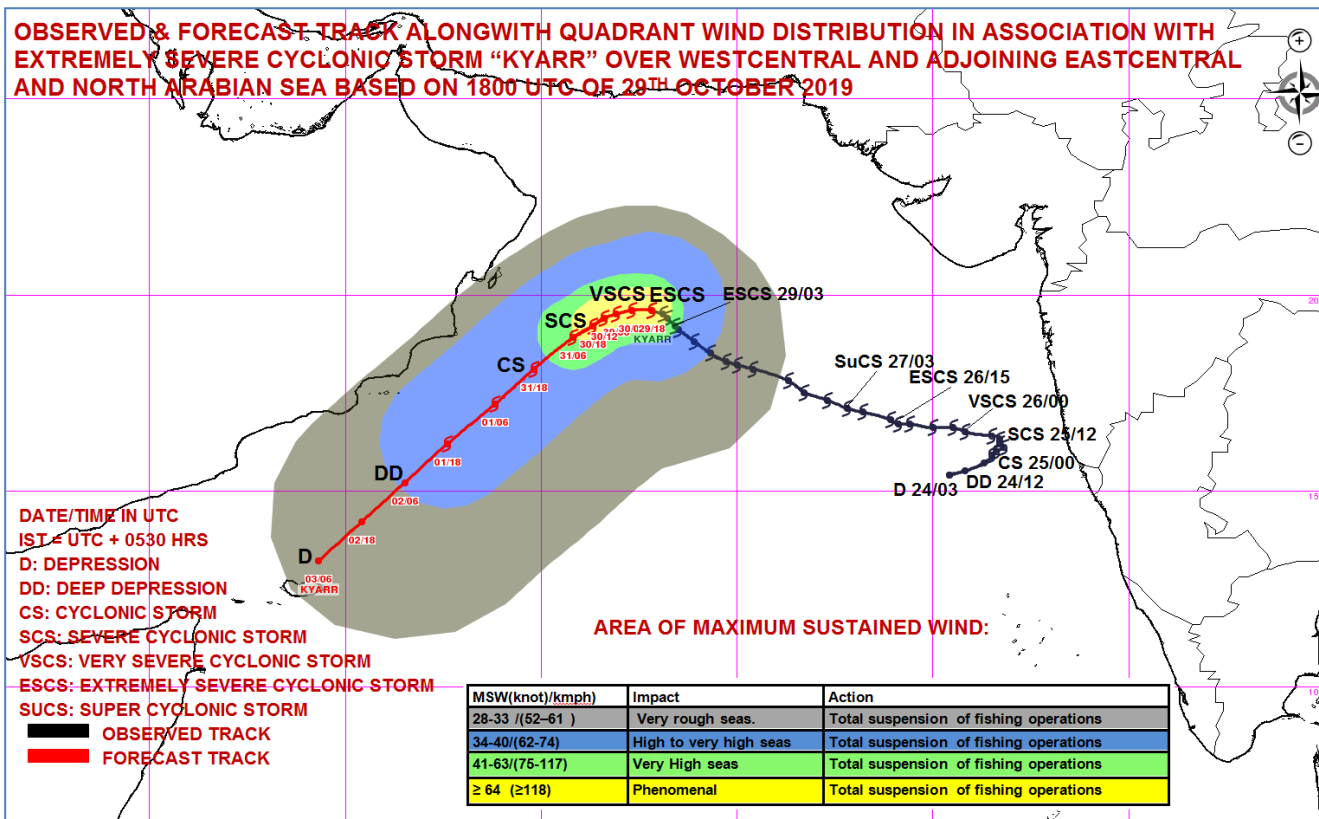


ARABIAN_SEA



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. : 45 (ARB/03/2019)

TIME OF ISSUE: 0845 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining north Arabian Sea.

(B) Depression over Maldives- Comorin areas

(A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral and adjoining north Arabian Sea.

The Extremely Severe Cyclonic Storm 'Kyarr' over westcentral and adjoining eastcentral & adjoining north Arabian Sea moved westwards with a speed of 08 Kmph during past 06 hrs, weakened into a **Very Severe Cyclonic Storm** over westcentral and north Arabian Sea and lay centred at 0530 hrs IST of 30th October, 2019 near latitude 19.6°N and longitude 62.3°E, about 1100 km west-northwest of Mumbai (Maharashtra), 930 km east-northeast of Salalah (Oman) and 370 km east-southeast of Masirah (Oman). It is very likely to re-curve west-southwestwards during next 06 hours and move towards Socotra islands during next 4 days. It is very likely to weaken into a Severe Cyclonic Storm by early hours of 31st October and into a Cyclonic Storm by evening of 31st October, 2019.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/0530	19.6/62.3	155-165 gusting to 180	Very Severe Cyclonic Storm
30.10.19/1130	19.5/61.9	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1730	19.4/61.6	130-140 gusting to 155	Very Severe Cyclonic Storm
30.10.19/2330	19.2/61.3	110-120 gusting to 130	Severe Cyclonic Storm
31.10.19/0530	19.0/61.0	100-110 gusting to 120	Severe Cyclonic Storm
31.11.19/1730	18.5/60.3	80-90 gusting to 100	Cyclonic Storm
01.11.19/0530	17.7/59.3	70-80 gusting to 90	Cyclonic Storm
01.11.19/1730	16.7/58.2	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	15.7/57.0	50-60 gusting to 70	Deep Depression
02.11.19/1730	14.7/55.9	40-50 gusting to 60	Depression
03.11.19/0530	13.7/54.8	30-40 gusting to 50	Depression
03.11.19/1730	12.7/53.7	20-30 gusting to 40	Well Marked Low Pressure Area

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 155-165 kmph gusting to 175 kmph, is prevailing around the system centre over westcentral and adjoining north Arabian Sea. It is very likely to reduce gradually becoming 100-110 kmph gusting to 120 kmph by morning of 31st October and 70-80 kmph gusting to 90 kmph by the morning of 1st November and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral and adjoining north Arabian Sea around the system centre till the evening of 30th October and will improve gradually thereafter becoming high to very high during 31st October and 1st November, 2019. Sea condition will be high to very high over eastcentral Arabian Sea during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into eastcentral Arabian Sea & adjoining north Arabian Sea during next 24 hours and into westcentral Arabian Sea till 2nd November 2019.

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.

(B) Depression over Maldives- Comorin areas

The Well Marked Low Pressure Area over Lakshadweep-Maldives areas & adjoining Comorin area has concentrated into a **Depression** over Maldives- Comorin areas and lay centered at 0530 hrs IST of 30th October, 2019 near latitude 6.5°N and longitude 76.2°E about 390 km east-northeast of Male (Maldives), 390 km east-southeast of Minicoy (Lakshadweep). It is likely to move northwestwards across Lakshadweep Islands and intensify into a Deep Depression during next 24 hours.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep and south Tamilnadu during next 2 days. Heavy to very heavy falls at isolated place likely over Kerala and Lakshadweep during next 48 hours. Extremely heavy falls are also likely over Lakshadweep Islands on 31st October, 2019.
- Light to moderate rainfall at many places with heavy falls at isolated places likely over Coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin-Maldives area and adjoining Lakshadweep area during next 24 hours; wind speed reaching 35-45 Kmph gusting to 55 Kmph likely along & off Kerala coasts during next 24 hours.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph, very likely to prevail over Lakshadweep area and wind speed reaching 40-50 Kmph gusting to 60 Kmph along & off Kerala-Karnataka coasts on 31st October.

(iii) Sea condition

Sea condition will be rough to very rough over Comorin-Maldives area and adjoining Lakshadweep area and along & off Kerala coasts during next 48 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into Comorin-Maldives area and adjoining Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.

The next bulletin will be issued at 1130 hrs IST 30th October, 2019.

(V R DURAI)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

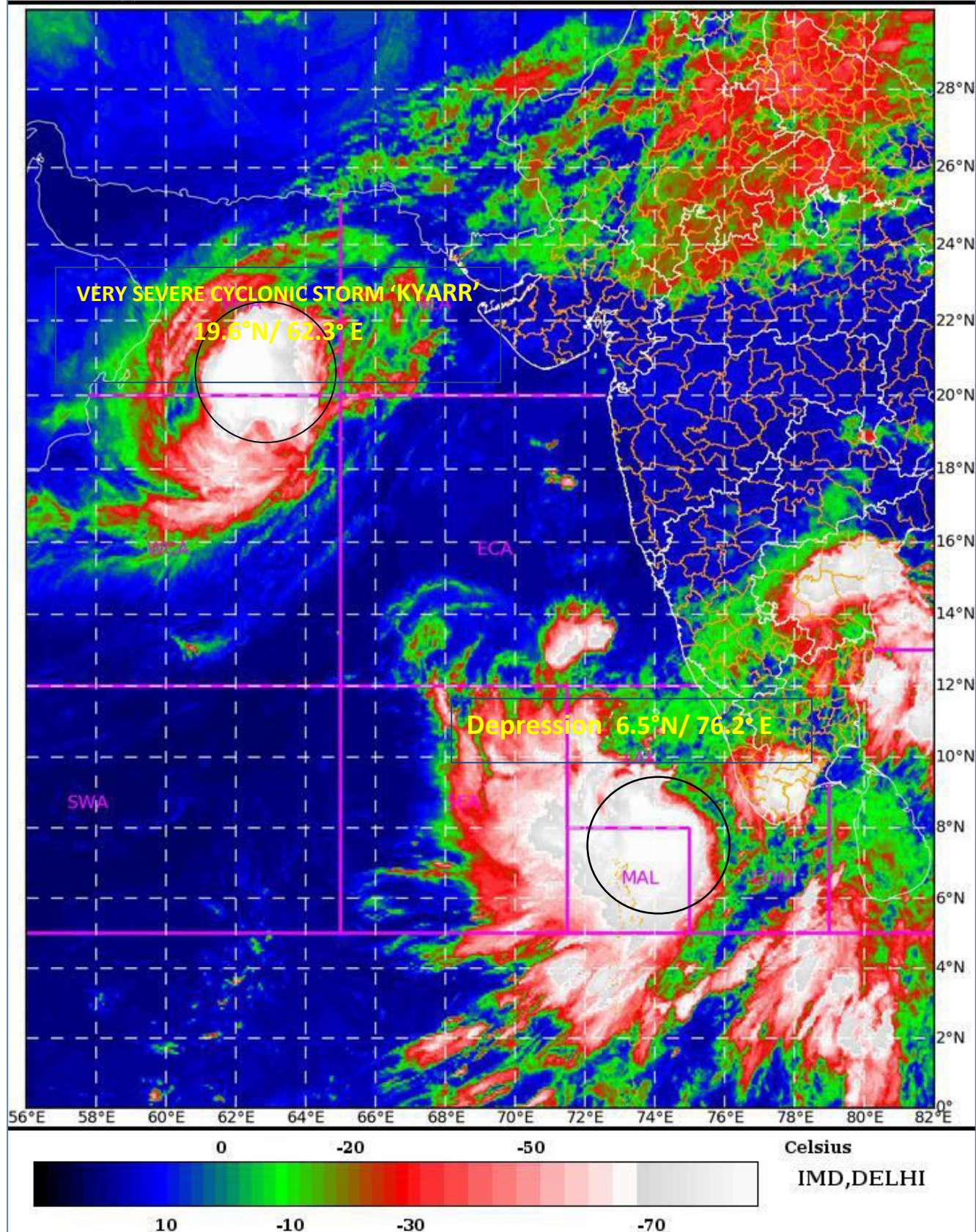
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30-10-2019/(0200 to 0226) GMT

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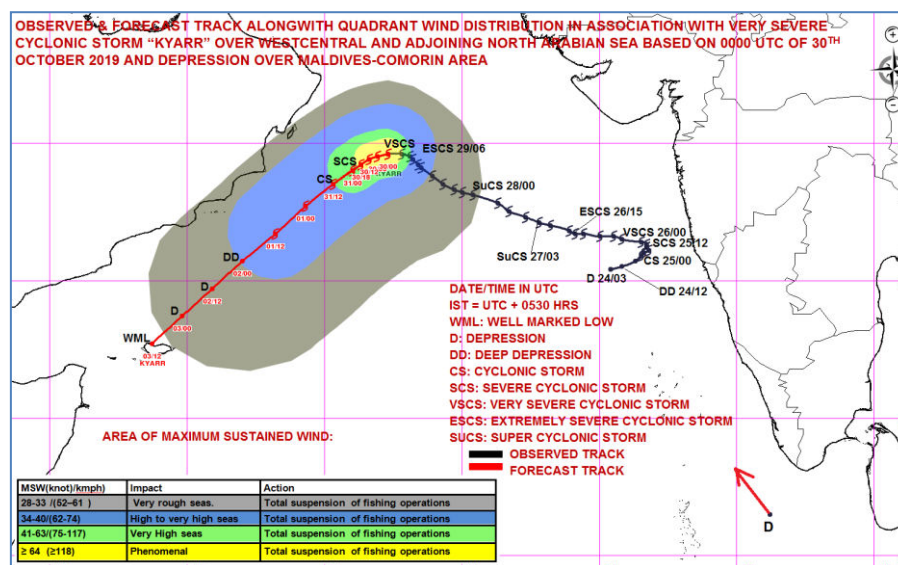
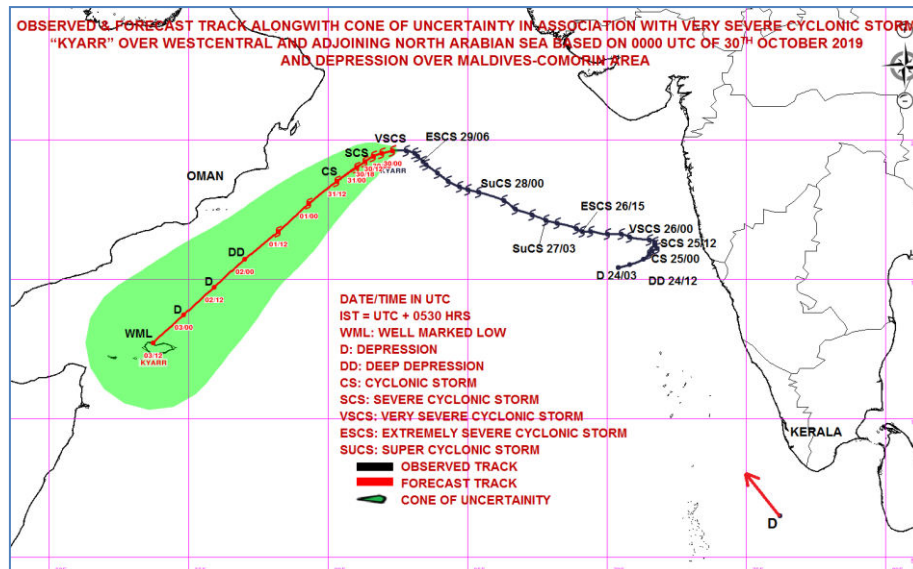
30-10-2019/(0730 to 0756) IST

ARABIAN_SEA



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. : 46 (ARB/03/2019) and BULLETIN NO. : 01 (ARB/04/2019)

TIME OF ISSUE: 1230 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

(B) Depression over Maldives- Comorin and adjoining Lakshadweep area

BULLETIN NO. : 46 (ARB/03/2019)

(A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

The **Very Severe Cyclonic Storm 'Kyarr'** moved further westwards with a speed of 08 Kmph during past 06 hrs, lay centred at 0830 hrs IST of today, the 30th October, 2019 over westcentral & adjoining northwest Arabian Sea near latitude 19.6°N and longitude 62.1°E, about 1130 km west-northwest of Mumbai (Maharashtra), 910 km east-northeast of Salalah (Oman) and 350 km east-southeast of Masirah (Oman). It is very likely to move west-southwestwards across westcentral Arabian Sea during next 4 days. It is very likely to weaken into a Severe Cyclonic Storm by early hours of 31st October and into a Cyclonic Storm by evening of 31st October, 2019.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/0830	19.6/62.1	145-155 gusting to 170	Very Severe Cyclonic Storm
30.10.19/1130	19.5/61.9	135-145 gusting to 160	Very Severe Cyclonic Storm
30.10.19/1730	19.4/61.6	120-130 gusting to 155	Very Severe Cyclonic Storm
30.10.19/2330	19.2/61.3	100-110 gusting to 125	Severe Cyclonic Storm
31.10.19/0530	19.0/61.0	90-100 gusting to 110	Severe Cyclonic Storm
31.11.19/1730	18.5/60.3	75-85 gusting to 95	Cyclonic Storm
01.11.19/0530	17.7/59.3	65-75 gusting to 85	Cyclonic Storm
01.11.19/1730	16.7/58.6	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	15.7/57.0	50-60 gusting to 70	Deep Depression
02.11.19/1730	14.7/55.9	40-50 gusting to 60	Depression
03.11.19/0530	13.7/54.8	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 145-155 kmph gusting to 170 kmph, is prevailing around the system centre over westcentral & adjoining northwest Arabian Sea. It is very likely to reduce gradually becoming 90-100 kmph gusting to 110 kmph by morning of 31st October over westcentral Arabian Sea and 65-75 kmph gusting to 85 kmph by the morning of 1st November over westcentral Arabian Sea and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral & adjoining northwest Arabian Sea around the system centre till the evening of 30th October and become very high to high thereafter till 1st November, 2019 evening over westcentral Arabian Sea and very rough to rough on 2nd & 3rd November, 2019.
- Sea condition will be very high to high over adjoining eastcentral & northwest Arabian Sea during next 24 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 3rd November 2019 and into adjoining north & eastcentral Arabian Sea during next 24 hours.

BULLETIN NO. : 01 (ARB/04/2019)

(B) Depression over Maldives- Comorin and adjoining Lakshadweep area

The **Depression** over Maldives- Comorin areas moved northwestwards and lay centered at 0830 hrs IST of today, the 30th October, 2019 over Maldives- Comorin and adjoining Lakshadweep area near latitude 8.0°N and longitude 75.0°E, about 450 km north-northeast of Male (Maldives), 200 km east-southeast of Minicoy (Lakshadweep), 380 km southeast of Kavaratti (Lakshadweep) and 220 km west-southwest of Thiruvananthapuram (Kerala). It is very likely to move northwestwards across Lakshadweep Islands during next 36 hours and then emerge into eastcentral Arabian Sea. It is very likely to intensify into a Deep Depression during next 24 hours and into a Cyclonic Storm during the subsequent 36 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/0830	8.0/75.0	40-50 gusting to 60	Depression
30.10.19/1730	9.1/74.1	40-50 gusting to 60	Depression
31.10.19/0530	10.8/72.9	50-60 gusting to 70	Deep Depression
31.11.19/1730	12.4/71.4	50-60 gusting to 70	Deep Depression
01.11.19/0530	13.7/70.0	50-60 gusting to 70	Deep Depression
01.11.19/1730	14.9/68.2	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	15.9/66.7	70-80 gusting to 90	Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep, coastal Karnataka and south Tamilnadu during next 2 days. **Extremely heavy falls** at isolated places are likely over Lakshadweep Islands and heavy to very heavy falls at isolated place over Kerala during next 48 hours. Heavy to very heavy falls at isolated place are also likely over Tamil Nadu on 30th October and over coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph, very likely to prevail over Comorin-Maldives area during next 24 hours. Squally wind speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail over Lakshadweep area during next 24 hours and 50-60 Kmph gusting to 70 Kmph during the subsequent 24 hours.
- Squally wind speed reaching 35-45 kmph gusting to 55 kmph likely along & off Kerala-Karnataka coasts during next 48 hours.
- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely to prevail over southeast & adjoining eastcentral Arabian Sea on 31st October and 60-80 kmph gusting to 90 kmph on 1st & 2nd November, 2019.

(iii) Sea condition

- Sea conditions will be rough to very rough over Comorin-Maldives area and along & off Kerala- Karnataka coasts during next 48 hours.
- Sea conditions will be very rough to high over Lakshadweep area during next 48 hours.
- Sea conditions will be very rough to high over southeast & adjoining eastcentral Arabian Sea during 31st October to 2nd November, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into Comorin-Maldives & Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.
- The fishermen are advised not to venture into southeast & eastcentral Arabian Sea during 31st October to 2nd November, 2019.

The next bulletin will be issued at 1430 hrs IST 30th October, 2019.

(Sunitha Devi S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

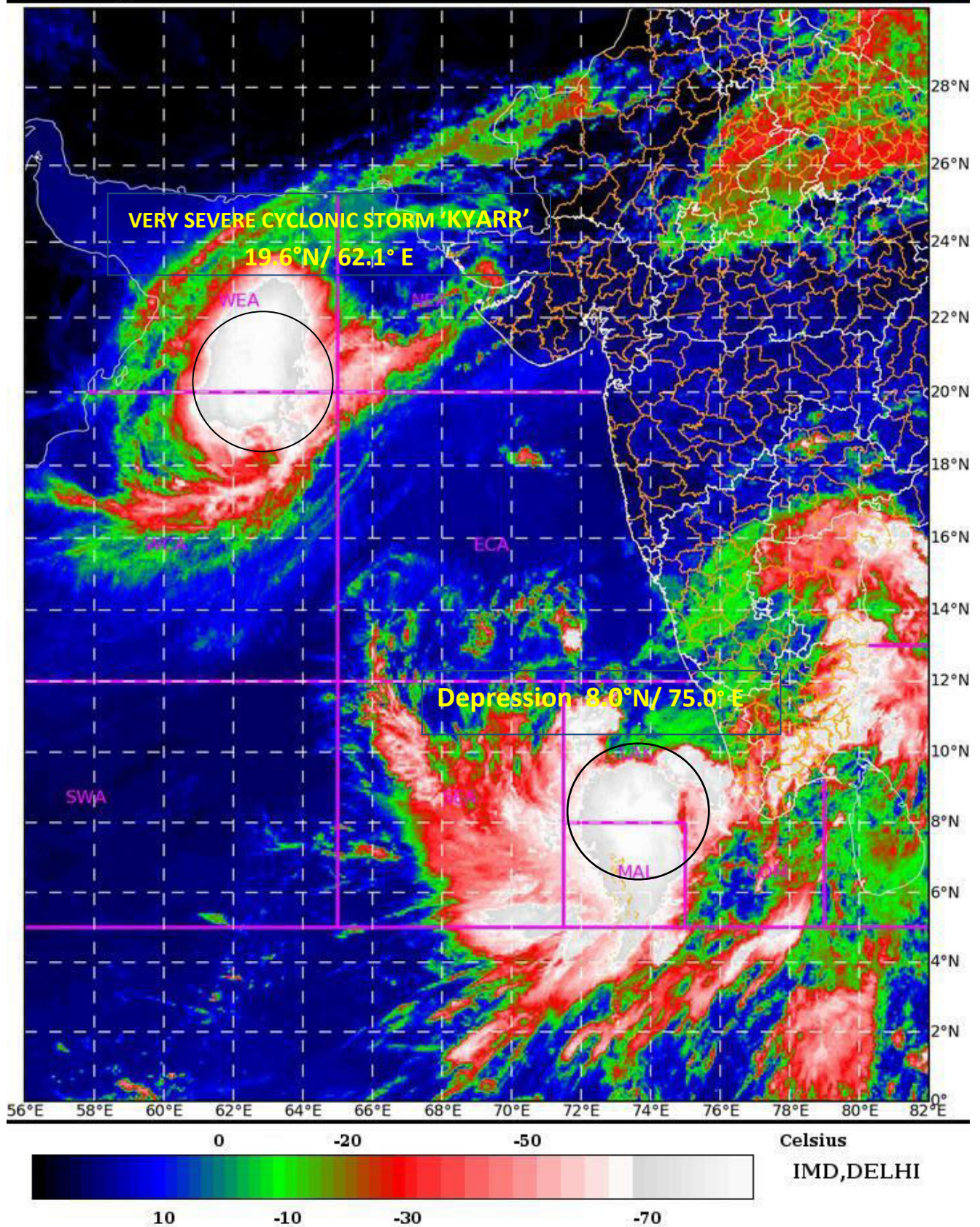
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30-10-2019/(1200 to 1227) IST

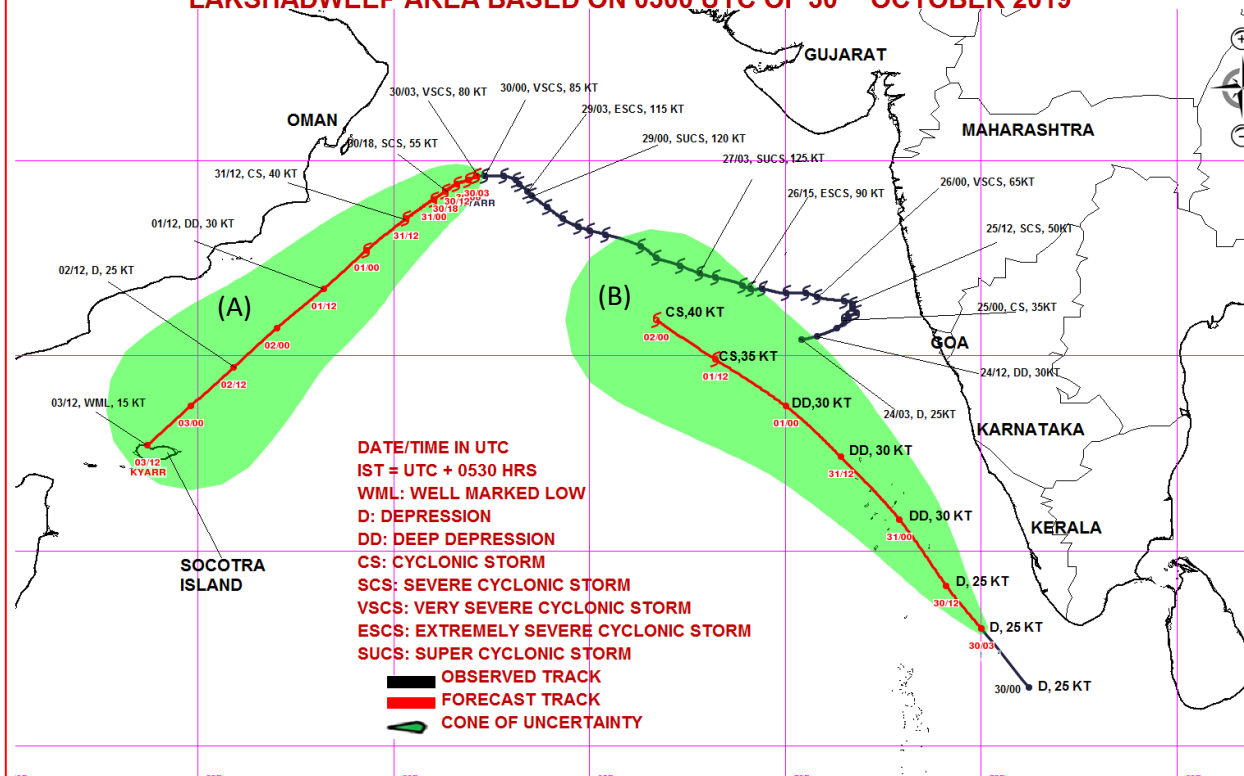
ARABIAN SEA



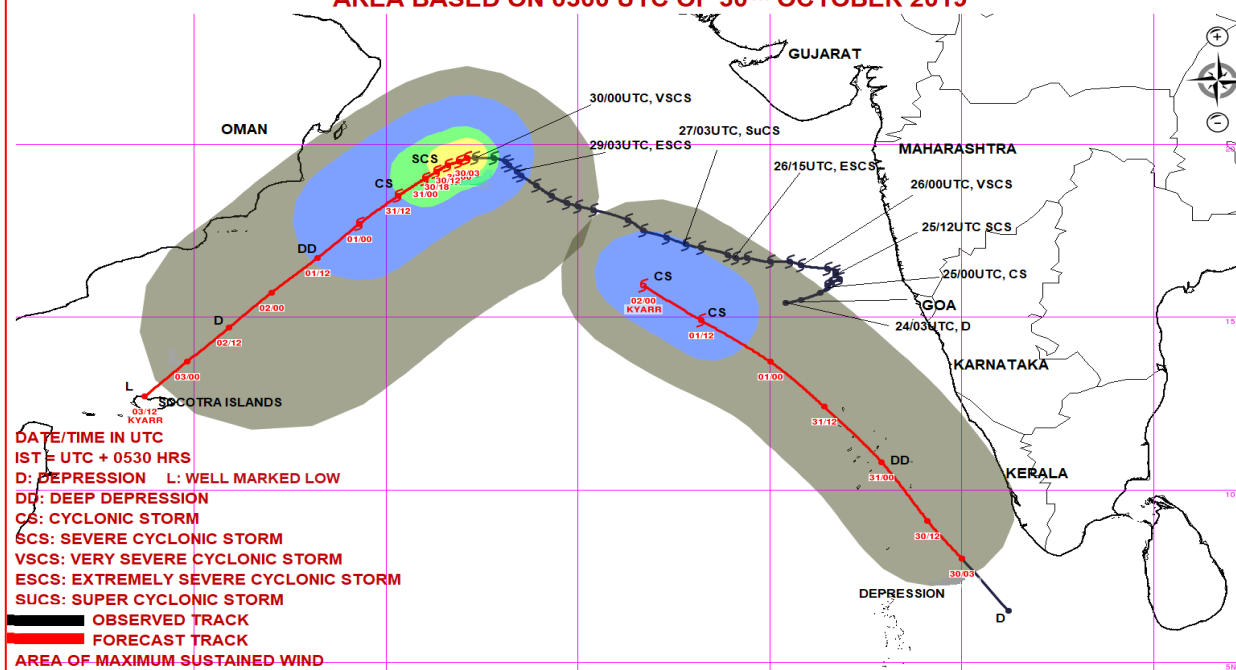
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

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

OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) VERY SEVERE CYCLONIC STORM “KYARR” OVER WESTCENTRAL AND ADJOINING NORTHWEST ARABIAN SEA AND (B) DEPRESSION OVER MALDIVES-COMORIN & ADJOINING LAKSHADWEEP AREA BASED ON 0300 UTC OF 30TH OCTOBER 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) VERY SEVERE CYCLONIC STORM “KYARR” OVER WESTCENTRAL AND ADJOINING NW ARABIAN SEA AND (B) DEPRESSION OVER MALDIVES-COMORIN & ADJOINING LAKSHADWEEP AREA BASED ON 0300 UTC OF 30TH OCTOBER 2019



MSW(knot)/kmph)	Impact	Action
28-33 (52-61)	Very rough seas.	Total suspension of fishing operations
34-40(62-74)	High to very high seas	Total suspension of fishing operations
41-63/(75-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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 (ARB/03/2019) and BULLETIN NO. : 02 (ARB/04/2019)

TIME OF ISSUE: 1500 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (B) Depression over Maldives- Comorin and adjoining Lakshadweep area: PRE-CYCLONE WATCH FOR LAKSHADWEEP ISLANDS

(A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

BULLETIN NO. : 02 (ARB/04/2019)

(B) Depression over Maldives- Comorin and adjoining Lakshadweep area: PRE- CYCLONE WATCH FOR LAKSHADWEEP ISLANDS

The **Depression** over Maldives- Comorin areas moved northwestwards with a speed of 35 kmph during past 6 hours and lay centered at 1130 hrs IST of today, the 30th October, 2019 over Maldives-Comorin and adjoining Lakshadweep area near latitude 8.0°N and longitude 75.0°E, about 450 km north-northeast of Male (Maldives), 200 km east-southeast of Minicoy (Lakshadweep), 380 km southeast of Kavaratti (Lakshadweep) and 220 km west-southwest of Thiruvananthapuram (Kerala). It is very likely to continue to move northwestwards across Lakshadweep Islands during next 36 hours and then emerge into eastcentral Arabian Sea. It is very likely to intensify into a Deep Depression during next 12 hours and into a Cyclonic Storm during the subsequent 12 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/1130	8.0/75.0	45-55 gusting to 65	Depression
30.10.19/2330	10.0/73.5	50-60 gusting to 70	Deep Depression
31.10.19/1130	11.6/72.1	80-90 gusting to 100	Cyclonic Storm
31.11.19/2330	13.0/70.7	80-90 gusting to 100	Cyclonic Storm
01.11.19/1130	14.3/69.1	90-100 gusting to 110	Severe Cyclonic Storm
01.11.19/2330	15.4/67.5	100-110 gusting to 125	Severe Cyclonic Storm
02.11.19/1130	16.5/65.9	100-110 gusting to 125	Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep, coastal Karnataka and south Tamilnadu during next 2 days. **Extremely heavy falls** at isolated places are likely over Lakshadweep Islands and heavy to very heavy falls at isolated place over Kerala during next 48 hours. Heavy to very heavy falls at isolated place are also likely over Tamil Nadu on 30th October and over coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind speed reaching 45-55 kmph gusting to 60 kmph, very likely to prevail over Comorin-Maldives area during next 24 hours. Squally wind speed reaching 45-55 kmph gusting to 65 kmph very likely to prevail over Lakshadweep area during next 12 hours and become gale wind speed reaching 70-80 Kmph gusting to 90 Kmph during the subsequent 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala-Karnataka coasts during next 48 hours.
- Squally wind speed reaching 70-80 kmph gusting to 90 kmph very likely to prevail over southeast & adjoining eastcentral Arabian Sea on 31st October and becoming 80-100 kmph gusting to 110 kmph during early hours of 1st November, 2019 onwards.

(iii) Sea condition

- Sea conditions will be rough to very rough over Comorin-Maldives area and along & off Kerala- Karnataka coasts during next 48 hours.
- Sea conditions will be very rough to high over Lakshadweep area during next 48 hours.
- Sea conditions will be high to very high over southeast & adjoining eastcentral Arabian Sea during 31st October to 2nd November, 2019.

(iv) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives & Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.
- The fishermen are advised not to venture into southeast & eastcentral Arabian Sea during 31st October to 2nd November, 2019.

(v) Damage Expected:

- Damage to thatched huts.
- Minor damage to power and communication lines due to breaking of branches.
- Major damage to Kutcha and minor damage to Pucca roads.
- Some damage to paddy crops, banana, papaya trees and orchards.
- Sea water inundation in low lying areas after erosion of Kutcha embankments.

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.

BULLETIN NO. : 47 (ARB/03/2019)**(A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.**

The **Very Severe Cyclonic Storm 'Kyarr'** moved west-southwestwards with a speed of 08 Kmph during past 06 hrs, lay centred at 1130 hrs IST of today, the 30th October, 2019 over westcentral & adjoining northwest Arabian Sea near latitude 19.4°N and longitude 61.8°E, about 1160 km west-northwest of Mumbai (Maharashtra), 870 km east-northeast of Salalah (Oman) and 330 km east-southeast of Masirah (Oman). It is very likely to continue to move west-southwestwards across westcentral Arabian Sea during next 4 days. It is very likely to weaken into a Severe Cyclonic Storm by early hours of 31st October and into a Cyclonic Storm by forenoon of 31st October, 2019.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/1130	19.4/61.8	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1730	19.2/61.6	120-130 gusting to 155	Very Severe Cyclonic Storm
30.10.19/2330	19.0/61.3	100-110 gusting to 125	Severe Cyclonic Storm
31.10.19/0530	18.8/61.0	90-100 gusting to 110	Severe Cyclonic Storm
31.11.19/1130	18.5/60.6	70-80 gusting to 90	Cyclonic Storm
31.11.19/2330	17.9/59.8	65-75 gusting to 85	Cyclonic Storm
01.11.19/1130	17.0/58.7	55-65 gusting to 75	Deep Depression
01.11.19/2330	16.0/57.6	50-60 gusting to 70	Deep Depression
02.11.19/1130	15.0/56.5	40-50 gusting to 60	Depression
02.11.19/2330	14.0/55.4	30-40 gusting to 50	Depression
03.11.19/1130	13.0/54.3	20-30 gusting to 40	Well Marked Low

Warnings:**(i) Rainfall: NIL****(ii) Wind warning**

- Gale wind, speed reaching 125-135 kmph gusting to 150 kmph, is prevailing around the system centre over westcentral & adjoining northwest Arabian Sea. It is very likely to reduce gradually becoming 90-100 kmph gusting to 110 kmph by morning of 31st October over westcentral Arabian Sea and 65-75 kmph gusting to 85 kmph by the night of 31st October over westcentral Arabian Sea and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral & adjoining northwest Arabian Sea around the system centre till the evening of 30th October and become very high to high thereafter till the night of 31st October, 2019 over westcentral Arabian Sea and very rough to rough on 1st and 2nd November, 2019.
- Sea condition will be very high to high over adjoining eastcentral Arabian Sea during next 12 hours.

(iv) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 3rd November 2019 and into adjoining north & eastcentral Arabian Sea during next 24 hours.

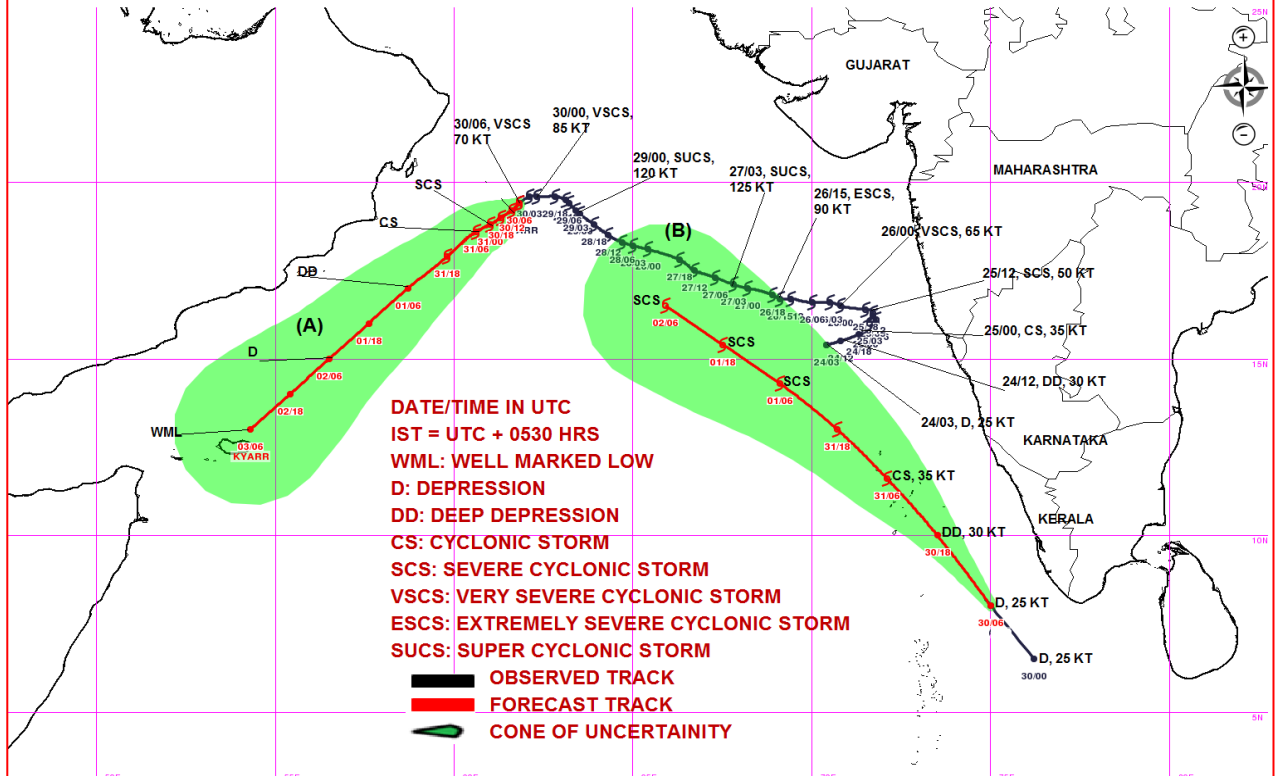
The next bulletin will be issued at 1730 hrs IST 30th October, 2019.

(Sunitha Devi S)
Scientist-E, RSMC, New Delhi

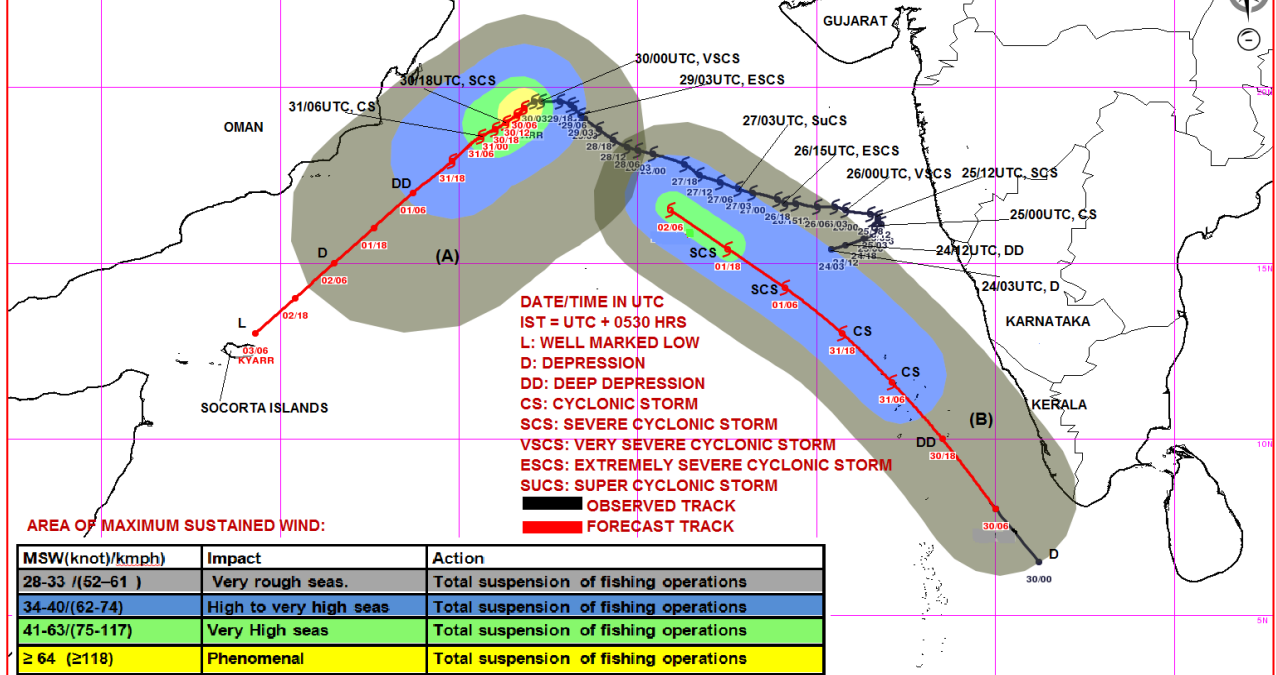
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) VERY SEVERE CYCLONIC STORM "KYARR" OVER WESTCENTRAL AND ADJOINING NORTH ARABIAN SEA AND (B) DEPRESSION OVER MALDIVES-COMORIN & ADJOINING LAKSHADWEEP AREA BASED ON 0600 UTC OF 30TH OCTOBER 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) VERY SEVERE CYCLONIC STORM "KYARR" OVER WESTCENTRAL AND ADJOINING NORTH ARABIAN SEA AND (B) DEPRESSION OVER MALDIVES-COMORIN & ADJOINING LAKSHADWEEP AREA BASED ON 0600 UTC OF 30TH OCTOBER 2019



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 (ARB/03/2019) and BULLETIN NO. : 03 (ARB/04/2019)

TIME OF ISSUE: 1750 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (B) Depression over Maldives- Comorin and adjoining Lakshadweep area intensified into Deep Depression over Lakshadweep and adjoining southeast Arabian Sea and Maldives area: CYCLONE ALERT FOR LAKSHADWEEP ISLANDS (YELLOW MESSAGE)

(A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

BULLETIN NO. : 03 (ARB/04/2019)

(B) Depression over Maldives- Comorin and adjoining Lakshadweep area intensified into Deep Depression over Lakshadweep and adjoining southeast Arabian Sea and Maldives area: CYCLONE ALERT FOR LAKSHADWEEP ISLANDS (YELLOW MESSAGE)

The **Depression** over Maldives- Comorin and adjoining Lakshadweep areas moved northwestwards with a speed of 13 kmph during past 6 hours and intensified into a **Deep Depression** over Lakshadweep and adjoining southeast Arabian Sea and Maldives area and lay centered at 1430 hrs IST of today, the 30th October, 2019 over near latitude 8.5°N and longitude 74.5°E, about 490 km north-northeast of Male (Maldives), 150 km east-northeast of Minicoy (Lakshadweep), 300 km southeast of Kavaratti (Lakshadweep) and 270 km to the west of Thiruvananthapuram (Kerala). It is very likely to continue to move northwestwards across Lakshadweep Islands during next 36 hours and then emerge into eastcentral Arabian Sea. It is very likely to intensify into a Cyclonic Storm during next 12 hours.

Forecast track and intensity are given in the following table:

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.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/1430	8.5/74.5	50-60 gusting to 70	Deep Depression
30.10.19/2330	10.0/73.5	65-75 gusting to 85	Cyclonic Storm
31.10.19/1130	11.6/72.1	80-90 gusting to 100	Cyclonic Storm
31.11.19/2330	13.0/70.7	90-100 gusting to 100	Cyclonic Storm
01.11.19/1130	14.3/69.1	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/2330	15.4/67.5	110-120 gusting to 135	Severe Cyclonic Storm
02.11.19/1130	16.5/65.9	120-130 gusting to 145	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep, coastal Karnataka and south Tamilnadu during next 2 days. **Extremely heavy falls** at isolated places are likely over Lakshadweep Islands and heavy to very heavy falls at isolated place over Kerala during next 48 hours. Heavy to very heavy falls at isolated place are also likely over Tamil Nadu on 30th October and over coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph, very likely to prevail over Comorin-Maldives area during next 24 hours.
- Squally wind speed reaching 50-60 kmph gusting to 70 kmph prevails over Lakshadweep area. It is very likely to increase becoming gale wind speed reaching 65-75 kmph gusting to 85 kmph by tonight, 80-90 gusting to 100 kmph by tomorrow forenoon over the same area and increase to 90-100 Kmph gusting to 110 Kmph by tomorrow, the 31st October night over northern parts of Lakshadweep area.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala-Karnataka coasts during next 48 hours.
- Gale wind speed reaching 70-80 kmph gusting to 90 kmph very likely to prevail over southeast & adjoining eastcentral Arabian Sea on 31st October and increase to become 110-120 kmph gusting to 135 kmph thereafter.

(iii) Sea condition

- Sea conditions will be rough to very rough over Comorin-Maldives area and along & off Kerala- Karnataka coasts during next 48 hours.
- Sea conditions will be very rough to high over Lakshadweep area during next 48 hours.
- Sea conditions will be high to very high over southeast & adjoining eastcentral Arabian Sea during 31st October to 2nd November, 2019.

(iv) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives & Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.
- The fishermen are advised not to venture into southeast & eastcentral Arabian Sea during 31st October to 2nd November, 2019.

(v) Damage Expected:

- Damage to thatched huts.
- Uprooting of trees
- Damage to power and communication lines due to breaking of branches and uprooting of trees.
- Major damage to Kutcha and minor damage to Pucca roads.
- Some damage to paddy crops, banana, papaya trees and orchards.

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 water inundation in low lying areas after erosion of Kutcha embankments.

BULLETIN NO. : 48 (ARB/03/2019)

(A) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

The **Very Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining northwest Arabian Sea moved west-southwestwards with a speed of 09 Kmph during past 06 hrs and lay centred at 1430 hrs IST of today, the 30th October, 2019 over westcentral & adjoining northwest Arabian Sea near latitude 19.3°N and longitude 61.7°E, about 1170 km west-northwest of Mumbai (Maharashtra), 860 km east-northeast of Salalah (Oman) and 330 km east-southeast of Masirah (Oman). It is very likely to continue to move west-southwestwards across westcentral Arabian Sea during next 4 days. It is very likely to weaken into a Severe Cyclonic Storm by early hours of 31st October and into a Cyclonic Storm by forenoon of 31st October, 2019.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/1430	19.3/61.7	125-135 gusting to 150	Very Severe Cyclonic Storm
30.10.19/1730	19.2/61.6	120-130 gusting to 155	Very Severe Cyclonic Storm
30.10.19/2330	19.0/61.3	100-110 gusting to 125	Severe Cyclonic Storm
31.10.19/0530	18.8/61.0	90-100 gusting to 110	Severe Cyclonic Storm
31.11.19/1130	18.5/60.6	70-80 gusting to 90	Cyclonic Storm
31.11.19/2330	17.9/59.8	65-75 gusting to 85	Cyclonic Storm
01.11.19/1130	17.0/58.7	55-65 gusting to 75	Deep Depression
01.11.19/2330	16.0/57.6	50-60 gusting to 70	Deep Depression
02.11.19/1130	15.0/56.5	40-50 gusting to 60	Depression
02.11.19/2330	14.0/55.4	30-40 gusting to 50	Depression
03.11.19/1130	13.0/54.3	20-30 gusting to 40	Well Marked Low

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind, speed reaching 125-135 kmph gusting to 150 kmph, is prevailing around the system centre over westcentral & adjoining northwest Arabian Sea. It is very likely to reduce gradually becoming 90-100 kmph gusting to 110 kmph by morning of 31st October over westcentral Arabian Sea and 65-75 kmph gusting to 85 kmph by the night of 31st October over westcentral Arabian Sea and further decrease thereafter.

(iii) Sea condition

- Sea condition will be phenomenal over westcentral & adjoining northwest Arabian Sea around the system centre till the evening of 30th October and become very high to high thereafter till the night of 31st October, 2019 over westcentral Arabian Sea and very rough to rough on 1st and 2nd November, 2019.
- Sea condition will be very high to high over adjoining eastcentral Arabian Sea during next 12 hours.

(iv) Fishermen Warning

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.

- The fishermen are advised not to venture into westcentral Arabian Sea till 3rd November 2019 and into adjoining north & eastcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 2030 hrs IST 30th October, 2019.

**(Sunitha Devi S)
Scientist-E, RSMC, New Delhi**

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

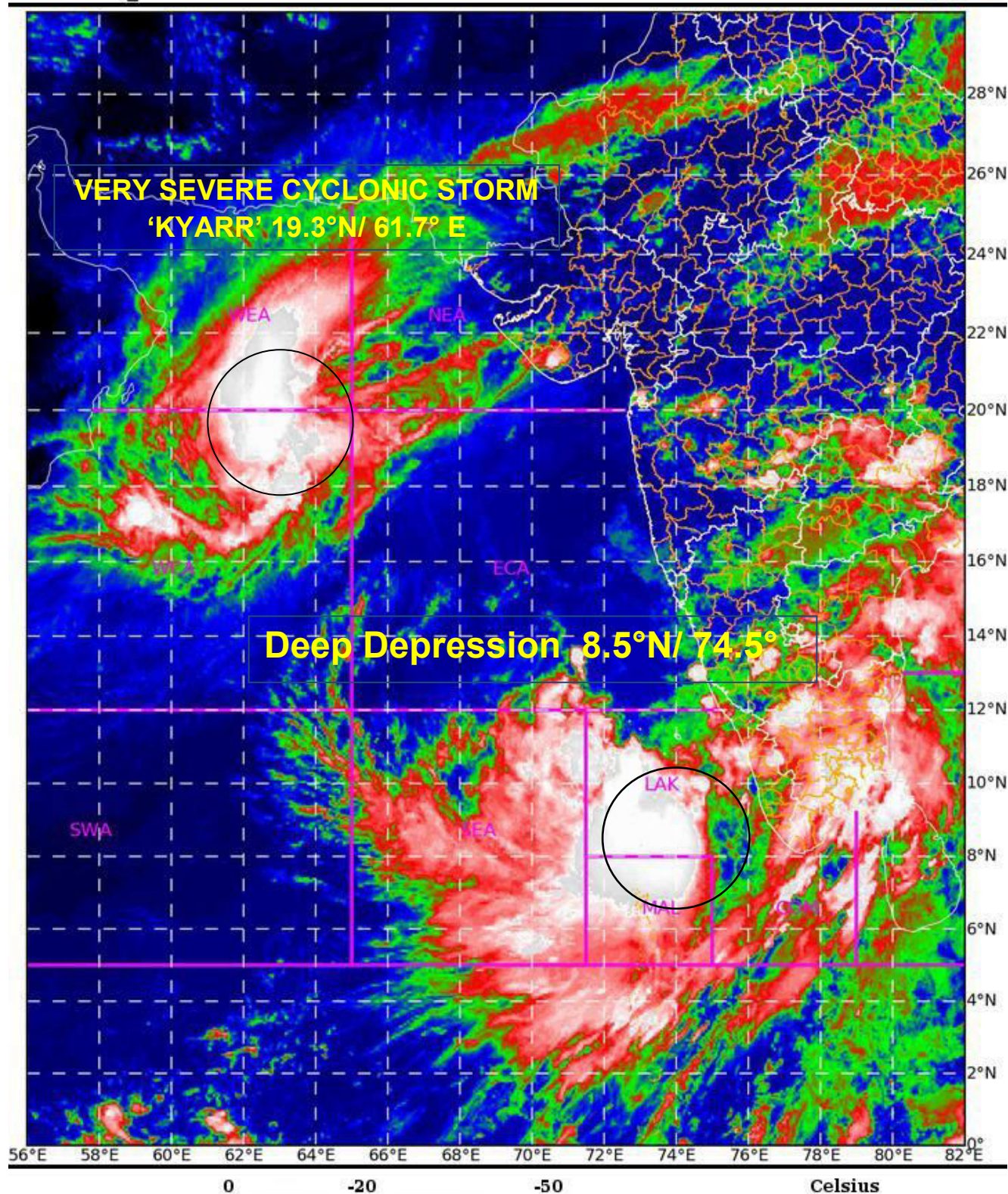
SAT : INSAT-3D IMG

30-10-2019/(1130 to 1156) GMT

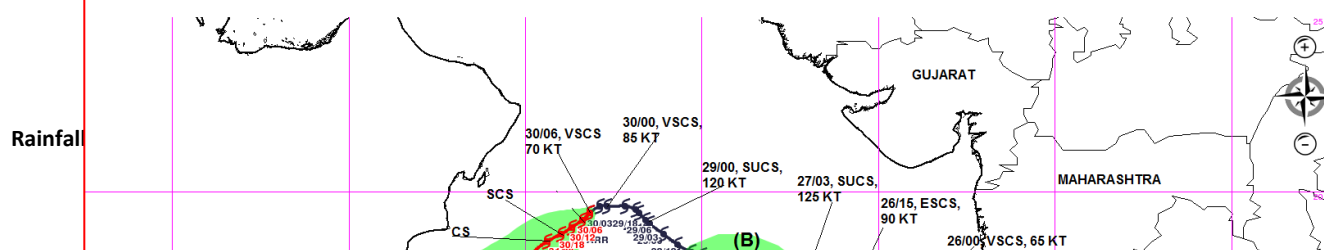
IMG_TIR1_TEMP 10.8 um

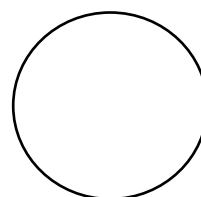
30-10-2019/(1700 to 1726) IST

ARABIAN_SEA



OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) VERY SEVERE CYCLONIC STORM "KYARR" OVER WESTCENTRAL AND ADJOINING NORTH ARABIAN SEA AND (B) DEEP DEPRESSION OVER LAKSHADWEEP & ADJOINING MALDIVES AREA & SOUTHEAST ARABIAN SEA BASED ON 0900 UTC OF 30TH OCTOBER 2019





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 (ARB/03/2019) and BULLETIN NO. : 04 (ARB/04/2019) (Modified)

TIME OF ISSUE: 2030 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Deep Depression intensified into Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea & Maldives area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

(B) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

BULLETIN NO. : 04 (ARB/04/2019)

(A) Deep Depression intensified into Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea & Maldives area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

Deep Depression over Lakshadweep and adjoining southeast Arabian Sea and Maldives area moved northwestwards with a speed of 25 kmph during past 6 hours and intensified into **Cyclonic Storm MAHA (Pronounced as M'maha)** and lay centered at 1730 hrs IST of today, the 30th October, 2019 near latitude 9.0°N and longitude 74.1°E over Lakshadweep and adjoining southeast Arabian Sea and Maldives area, about 540 km north-northeast of Male (Maldives), 130 km northeast of Minicoy (Lakshadweep), 240 km southeast of Kavaratti (Lakshadweep) and 320 km to the west-northwest of Thiruvananthapuram (Kerala). It is very likely to continue to move northwestwards across Lakshadweep Islands during next 24 hours and then emerge into eastcentral Arabian Sea. It is very likely to intensify into a Severe Cyclonic Storm during the forenoon of tomorrow over Lakshadweep area.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/1730	9.0/74.1	65-75 gusting to 85	Cyclonic Storm
30.10.19/2330	10.0/73.5	70-80 gusting to 90	Cyclonic Storm
31.10.19/0530	10.9/72.9	80-90 gusting to 100	Cyclonic Storm
31.10.19/1130	11.9/72.4	90-100 gusting to 115	Severe Cyclonic Storm
31.10.19/1730	12.9/71.8	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/0530	14.4/70.4	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/1730	15.4/69.0	115-125 gusting to 140	Severe Cyclonic Storm
02.11.19/0530	16.3/68.0	120-130 gusting to 150	Very Severe Cyclonic Storm
02.11.19/1730	16.9/67.1	130-140 gusting to 160	Very Severe Cyclonic Storm
03.11.19/0530	17.2/66.2	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/1730	17.3/65.2	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/0530	17.1/64.2	160-170 gusting to 190	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep, coastal Karnataka and south Tamilnadu during next 2 days. **Extremely heavy falls** at isolated places are likely over Lakshadweep Islands and heavy to very heavy falls at isolated place over Kerala during next 48 hours. Heavy to very heavy falls at isolated place are also likely over Tamil Nadu on 30th October and over coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely to prevail over Comorin-Maldives area during next 12 hours and decrease thereafter.
- Gale wind speed reaching 65-75 kmph gusting to 85 kmph prevails over Lakshadweep area around the system centre. It is very likely to increase becoming 80-90 kmph gusting to 100 kmph by 31st morning and 90-100 kmph gusting to 115 kmph in the afternoon over northern parts of Lakshadweep area and 60-70 kmph gusting to 80 kmph over southern parts of Lakshadweep area during the afternoon of 31st.
- Gale wind speed reaching 100-110 kmph gusting to 125 kmph likely to prevail over southeast and adjoining eastcentral Arabian Sea from 31st evening and increase to 160-170 Kmph gusting to 190 Kmph over eastcentral & adjoining westcentral Arabian Sea by morning of 4th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala-Karnataka coasts during next 48 hours.

(iii) Sea condition

- Sea conditions will be high to very high over Comorin-Maldives area and very rough to high along & off Kerala- Karnataka coasts during next 48 hours.
- Sea conditions will be very rough to high over Lakshadweep area on 30th and high to very high on 31st.
- Sea condition will be rough to very rough on 30th and very high to phenomenal over southeast & adjoining eastcentral Arabian Sea on 31st and become phenomenal over eastcentral & adjoining westcentral Arabian Sea by morning of 2nd November onwards.

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.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of Lakshadweep Islands during next 24 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives & Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.
- The fishermen are advised not to venture into southeast Arabian Sea till 31st October and over eastcentral Arabian Sea till 4th November, 2019.

(vi) Damage Expected:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 49 (ARB/03/2019)

(B) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

The **Very Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining northwest Arabian Sea moved southwestwards with a speed of 09 Kmph during past 06 hrs and lay centred at 1730 hrs IST of today, the 30th October, 2019 over westcentral & adjoining northwest Arabian Sea near latitude 19.0°N and longitude 61.5°E, about 1190 km west of Mumbai (Maharashtra), 830 km east-northeast of Salalah (Oman) and 330 km east-southeast of Masirah (Oman). It is very likely to move west-southwestwards across westcentral Arabian Sea during next 4 days. It is very likely to weaken into a Severe Cyclonic Storm by early hours of 31st October and into a Cyclonic Storm by forenoon of 31st October, 2019.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/1730	19.0/61.5	120-130 gusting to 155	Very Severe Cyclonic Storm
30.10.19/2330	18.8/61.0	110-120 gusting to 135	Severe Cyclonic Storm
31.10.19/0530	18.5/60.5	100-110 gusting to 125	Severe Cyclonic Storm
31.10.19/1130	18.1/60.2	90-100 gusting to 115	Severe Cyclonic Storm
31.10.19/1730	17.6/59.8	80-90 gusting to 100	Cyclonic Storm
01.11.19/0530	16.5/58.7	70-80 gusting to 90	Cyclonic Storm
01.11.19/1730	15.2/57.1	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	13.8/55.2	50-60 gusting to 70	Deep Depression
02.11.19/1730	12.8/53.0	40-50 gusting to 60	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind speed reaching 120-130 kmph gusting to 155 kmph is prevailing around the system centre over westcentral & adjoining northwest Arabian Sea. It is very likely to reduce gradually becoming 90-100 kmph gusting to 110 kmph by morning of 31st October over westcentral Arabian

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 and 70-80 kmph gusting to 90 kmph by the morning of 1st November over westcentral Arabian Sea and further decrease thereafter.

(iii) Sea condition

- Sea condition is phenomenal over westcentral & adjoining northwest Arabian Sea around the system centre. It will become very high to high by morning of 31st October over westcentral Arabian Sea and high to very rough on 1st and 2nd November, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 3rd November 2019 and into adjoining north & eastcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 2330 hrs IST 30th October, 2019.

(Naresh Kumar)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

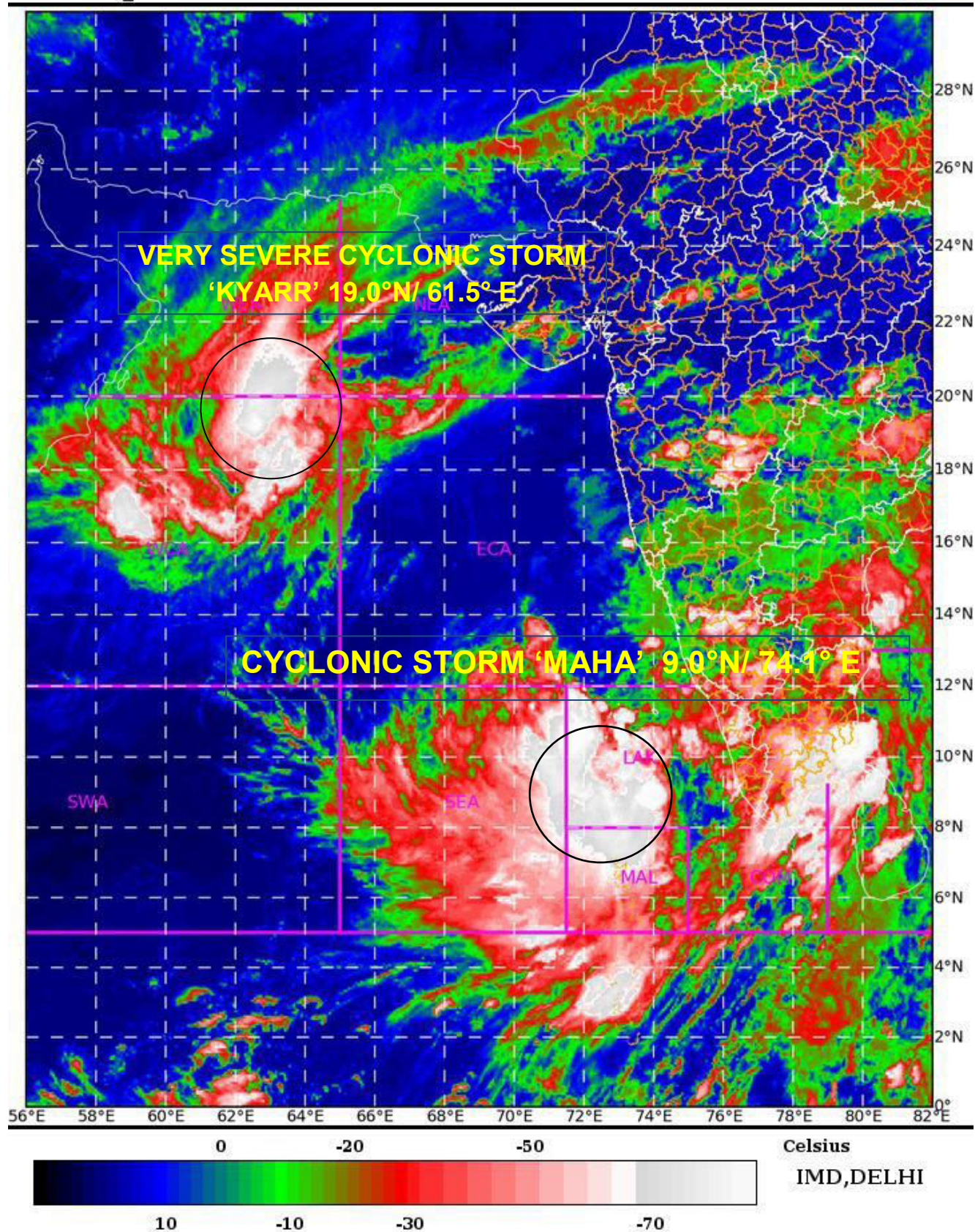
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30-10-2019/(1330 to 1356) GMT

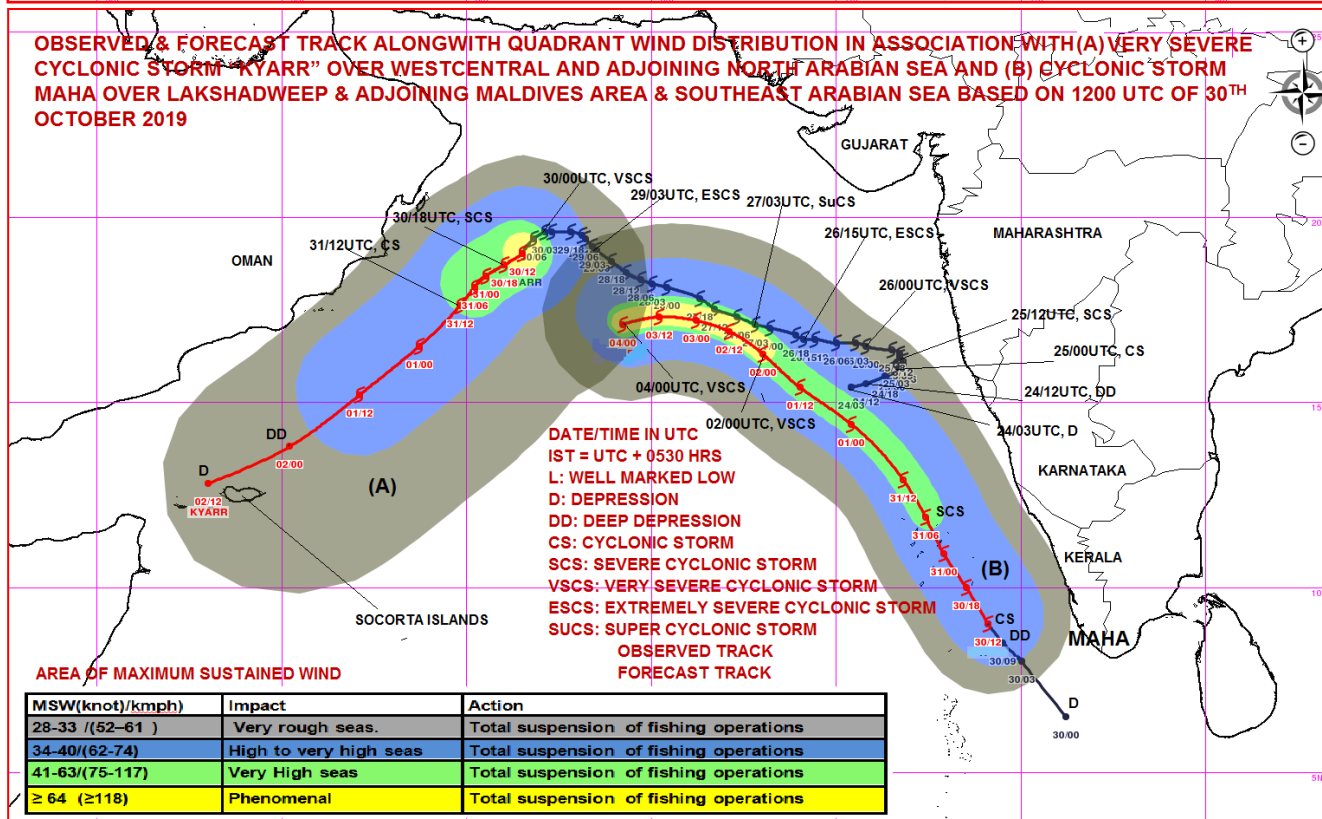
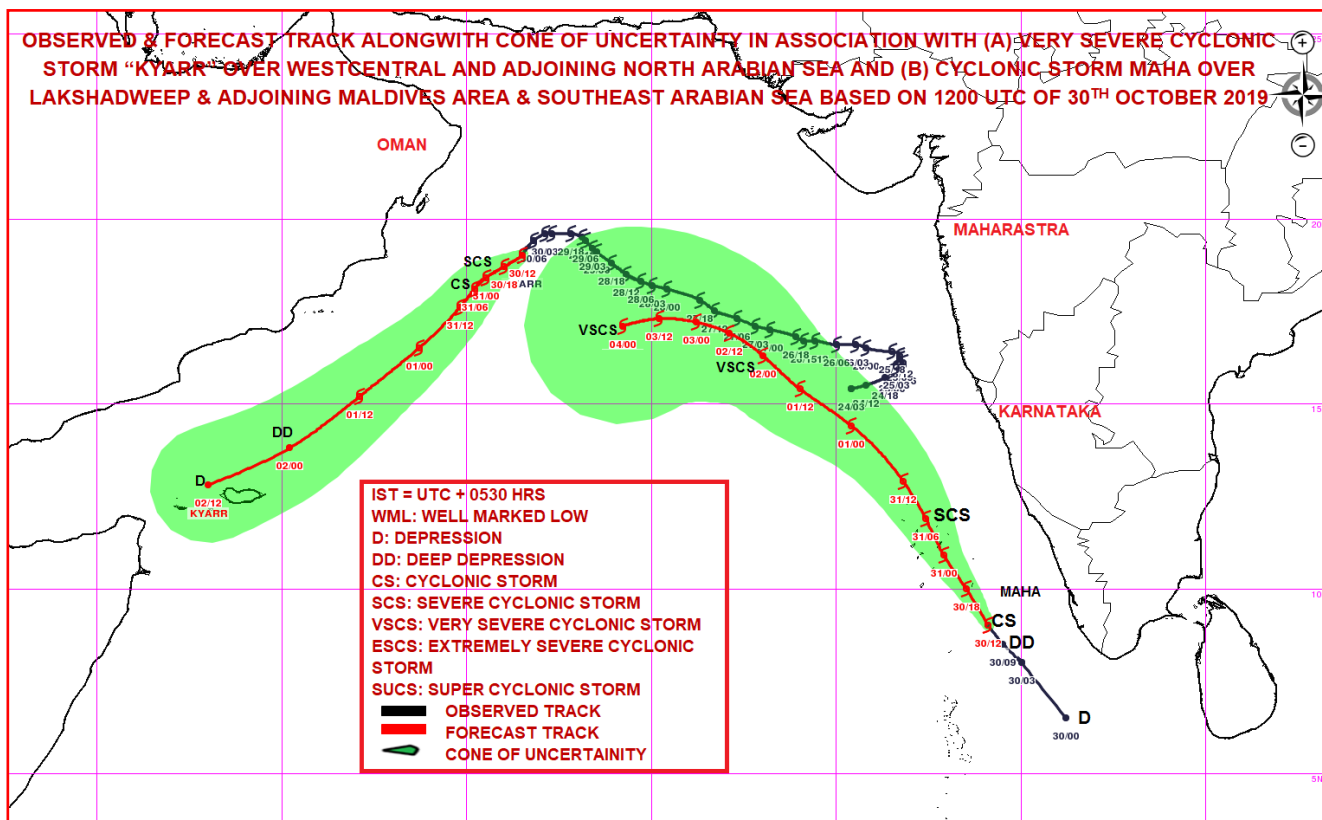
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30-10-2019/(1900 to 1926) IST

ARABIAN_SEA



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 (ARB/03/2019) and BULLETIN NO. : 05 (ARB/04/2019)

TIME OF ISSUE: 2200 HOURS IST

DATED: 30.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea & Maldives area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

(B) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) weakened into Severe Cyclonic Storm over westcentral & adjoining northwest Arabian Sea.

BULLETIN NO. : 05 (ARB/04/2019)

(A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea & Maldives area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

The Cyclonic storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea and Maldives area moved north-northwestwards with a speed of 24 kmph during past 06 hours and lay centered at 2030 hrs IST of today, the 30th October, 2019 near latitude 9.6°N and longitude 73.8°E over Lakshadweep and adjoining southeast Arabian Sea & Maldives area, about 600 km north-northeast of Male (Maldives), 170 km north-northeast of Minicoy (Lakshadweep), 160 km east-southeast of Kavaratti (Lakshadweep) and 370 km west-northwest of Thiruvananthapuram (Kerala). It is very likely to continue to move northwestwards across Lakshadweep Islands during next 24 hours and then emerge into eastcentral Arabian Sea. It is very likely to intensify into a Severe Cyclonic Storm during the forenoon of 31st October 2019 over Lakshadweep area.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/2030	9.6/73.8	65-75 gusting to 85	Cyclonic Storm
30.10.19/2330	10.0/73.5	70-80 gusting to 90	Cyclonic Storm
31.10.19/0530	10.9/72.9	80-90 gusting to 100	Cyclonic Storm
31.10.19/1130	11.9/72.4	90-100 gusting to 115	Severe Cyclonic Storm
31.10.19/1730	12.9/71.8	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/0530	14.4/70.4	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/1730	15.4/69.0	115-125 gusting to 140	Severe Cyclonic Storm
02.11.19/0530	16.3/68.0	120-130 gusting to 150	Very Severe Cyclonic Storm
02.11.19/1730	16.9/67.1	130-140 gusting to 160	Very Severe Cyclonic Storm
03.11.19/0530	17.2/66.2	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/1730	17.3/65.2	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/0530	17.1/64.2	160-170 gusting to 190	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep, coastal Karnataka and south Tamilnadu during next 2 days. **Extremely heavy falls** at isolated places are likely over Lakshadweep Islands and heavy to very heavy falls at isolated place over Kerala during next 48 hours. Heavy to very heavy falls at isolated place are also likely over Tamil Nadu during next 12 hours and over coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind speed reaching 65-75 kmph gusting to 85 kmph very likely to prevail over Comorin-Maldives area during next 12 hours and decrease thereafter.
- Gale wind speed reaching 65-75 kmph gusting to 85 kmph prevails over Lakshadweep area around the system centre. It is very likely to increase becoming 80-90 kmph gusting to 100 kmph by 31st morning and 90-100 kmph gusting to 115 kmph in the afternoon over northern parts of Lakshadweep area and 60-70 kmph gusting to 80 kmph over southern parts of Lakshadweep area during the afternoon of 31st October 2019.
- Gale wind speed reaching 100-110 kmph gusting to 125 kmph likely to prevail over southeast and adjoining eastcentral Arabian Sea from evening of 31st October and increase to 160-170 Kmph gusting to 190 Kmph over eastcentral & adjoining westcentral Arabian Sea by morning of 4th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala-Karnataka coasts during next 48 hours.

(iii) Sea condition

- Sea conditions will be high to very high over Comorin-Maldives area and very rough to high along & off Kerala- Karnataka coasts during next 48 hours.
- Sea conditions will be very rough to high over Lakshadweep area during next 12 hours and high to very high on 31st October.
- Sea condition will be rough to very rough during next 12 hours and very high to phenomenal over southeast & adjoining eastcentral Arabian Sea on 31st October and will become phenomenal over eastcentral & adjoining westcentral Arabian Sea by morning of 2nd November onwards.

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.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of Lakshadweep Islands during next 24 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives & Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.
- The fishermen are advised not to venture into southeast Arabian Sea till 31st October and over eastcentral Arabian Sea till 4th November, 2019.

(vi) Damage Expected:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 50 (ARB/03/2019)

(B) Very Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) weakened into a Severe Cyclonic Storm over westcentral & adjoining northwest Arabian Sea

The **Very Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining northwest Arabian Sea moved southwestwards with a speed of 11 Km/h during past 06 hrs, weakened into a **Severe Cyclonic Storm** and lay centred at 2030 hrs IST of today, the 30th October, 2019 over westcentral & adjoining northwest Arabian Sea near latitude 18.9°N and longitude 61.2°E, about 1220 km west of Mumbai (Maharashtra), 780 km east-northeast of Salalah (Oman) and 310 km east-southeast of Masirah (Oman). It is very likely to move west-southwestwards across westcentral Arabian Sea during next 4 days. It is very likely to weaken into a Cyclonic Storm by forenoon of 31st October, 2019.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/2030	18.9/61.2	110-120 gusting to 135	Severe Cyclonic Storm
30.10.19/2330	18.8/61.0	105-115 gusting to 130	Severe Cyclonic Storm
31.10.19/0530	18.5/60.5	100-110 gusting to 125	Severe Cyclonic Storm
31.10.19/1130	18.1/60.2	90-100 gusting to 115	Severe Cyclonic Storm
31.10.19/1730	17.6/59.8	80-90 gusting to 100	Cyclonic Storm
01.11.19/0530	16.5/58.7	70-80 gusting to 90	Cyclonic Storm
01.11.19/1730	15.2/57.1	60-70 gusting to 80	Cyclonic Storm
02.11.19/0530	13.8/55.2	50-60 gusting to 70	Deep Depression
02.11.19/1730	12.8/53.0	40-50 gusting to 60	Depression

Warnings:

(i) Rainfall: NIL

(ii) Wind warning

- Gale wind speed reaching 110-120 km/h gusting to 135 km/h is prevailing around the system centre over westcentral & adjoining northwest Arabian Sea. It is very likely to reduce gradually becoming 90-100 km/h gusting to 110 km/h by morning of 31st October over westcentral Arabian

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 and 70-80 kmph gusting to 90 kmph by the morning of 1st November over westcentral Arabian Sea and decrease thereafter.

(iii) Sea condition

- Sea condition is phenomenal over westcentral & adjoining northwest Arabian Sea around the system centre. It will become very high to high by morning of 31st October over westcentral Arabian Sea and high to very rough on 1st and 2nd November, 2019.

(iv) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 3rd November 2019 and into adjoining north & eastcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 0230 hrs IST of 31st October, 2019.

**(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi**

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

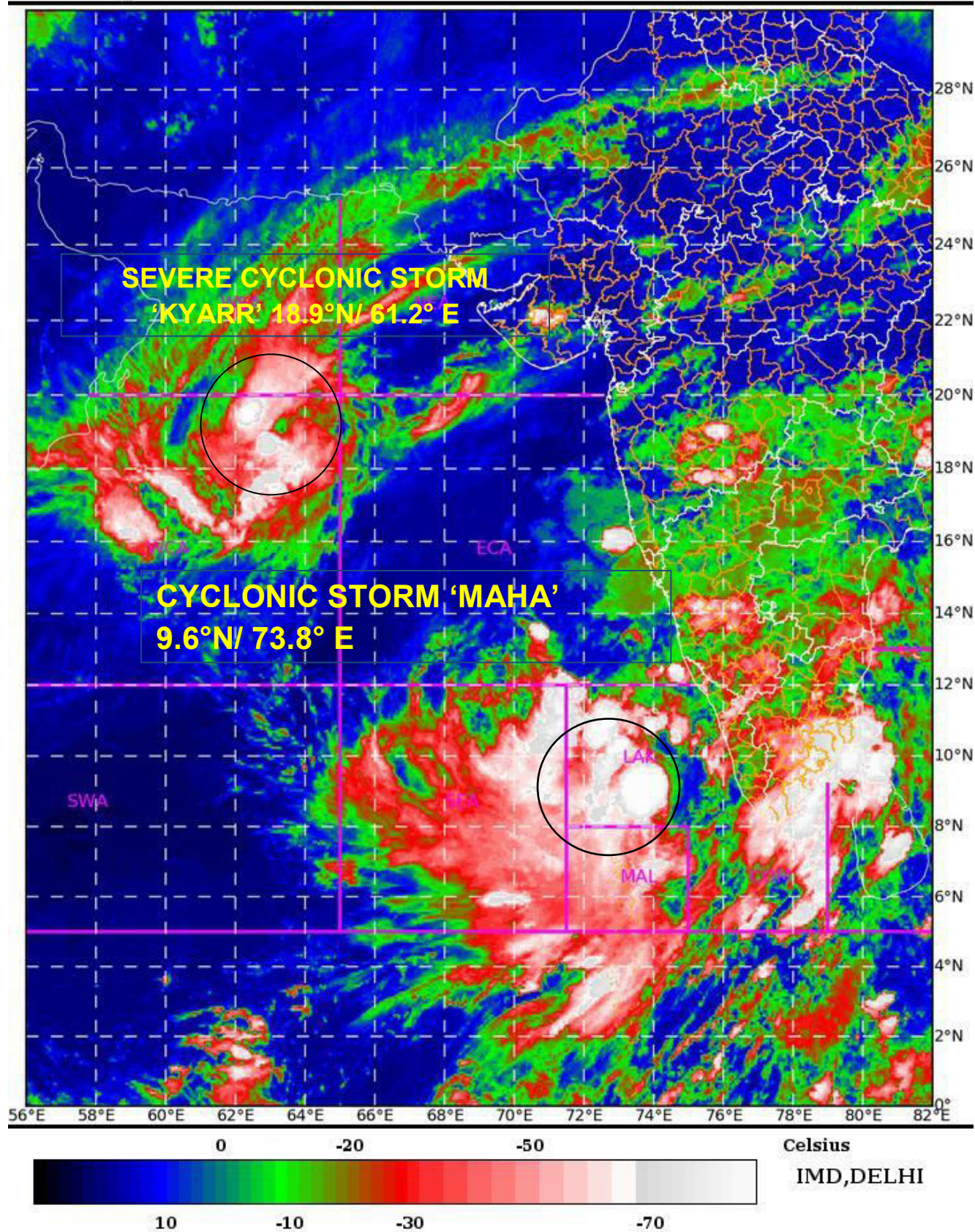
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30-10-2019/(1500 to 1526) GMT

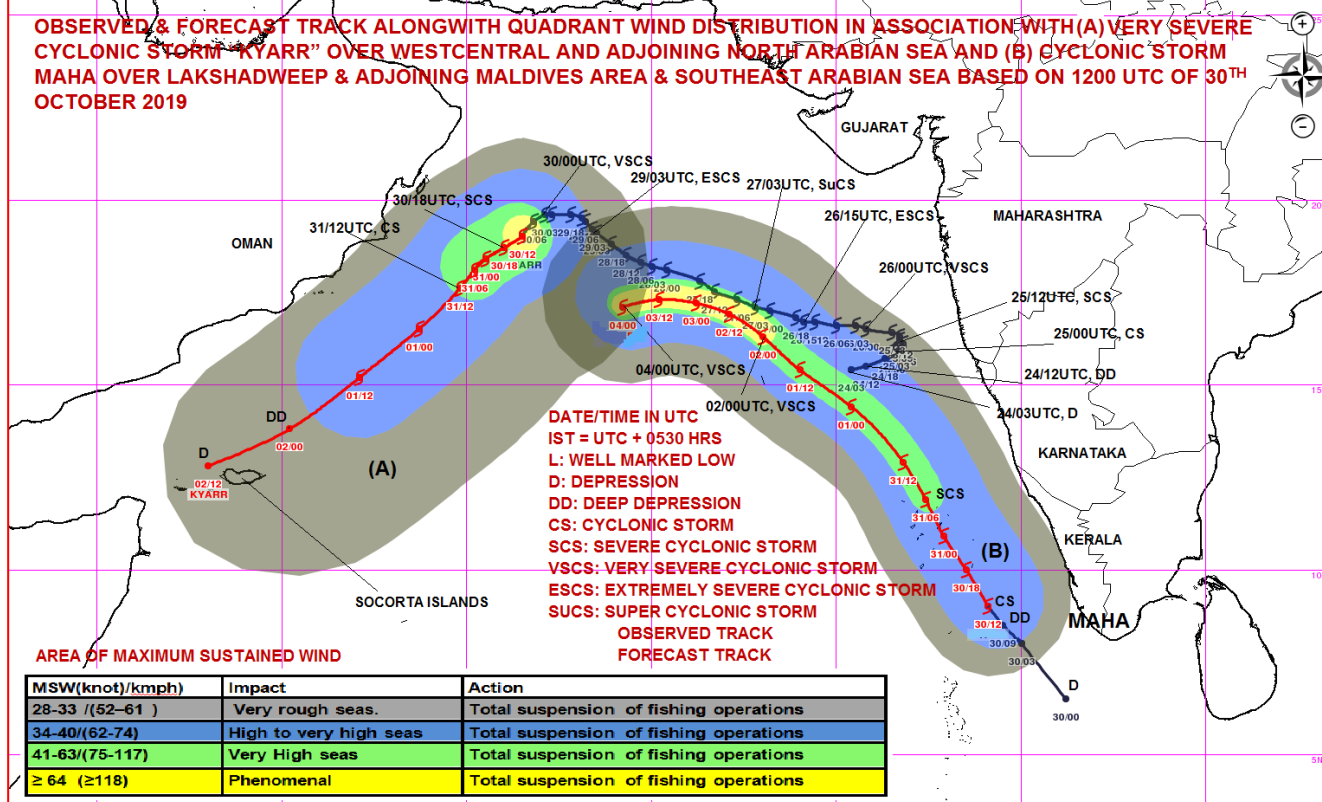
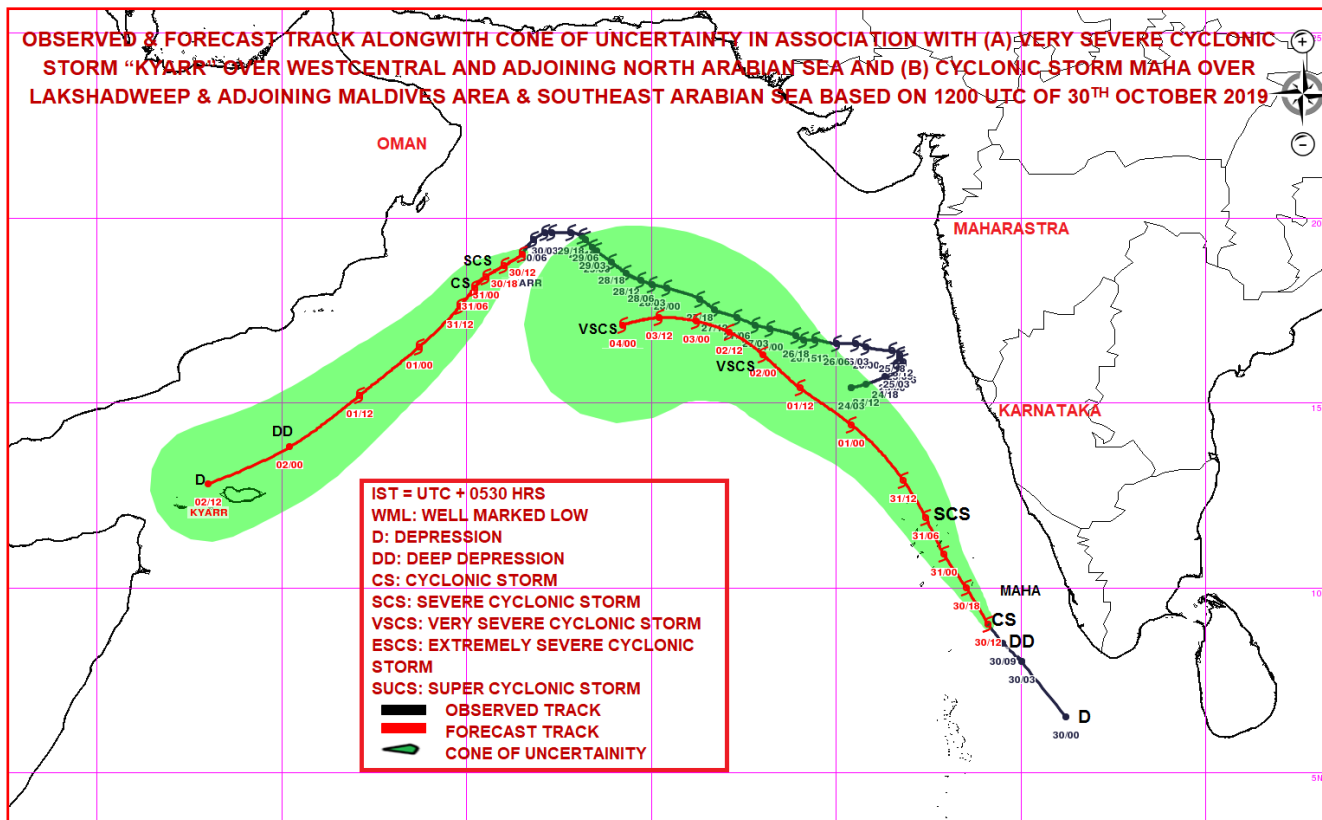
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30-10-2019/(2030 to 2056) IST

ARABIAN SEA



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 (ARB/03/2019) and BULLETIN NO. : 06 (ARB/04/2019)

TIME OF ISSUE: 0230 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea & Maldives area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

(B) Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea.

BULLETIN NO. : 06 (ARB/04/2019)

(A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea & Maldives area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

The Cyclonic storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea and Maldives area moved northwestwards with a speed of 26 kmph during past 06 hours and lay centered at 2330 hrs IST of yesterday, the 30th October, 2019 near latitude 10.2°N and longitude 73.3°E over Lakshadweep and adjoining southeast Arabian Sea & Maldives area, about 670 km nearly north of Male (Maldives), 210 km north-northeast of Minicoy (Lakshadweep), 80 km east-southeast of Kavaratti (Lakshadweep) and 440 km west-northwest of Thiruvananthapuram (Kerala). It is very likely to continue to move northwestwards across Lakshadweep Islands during next 12 hours and then emerge into eastcentral Arabian Sea. It is very likely to intensify into a Severe Cyclonic Storm during the forenoon of 31st October 2019 over Lakshadweep area.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/2330	10.2/73.3	70-80 gusting to 90	Cyclonic Storm
31.10.19/0530	11.0/72.9	75-85 gusting to 95	Cyclonic Storm
31.10.19/1130	11.9/72.4	85-95 gusting to 105	Severe Cyclonic Storm
31.10.19/1730	12.9/71.8	95-105 gusting to 115	Severe Cyclonic Storm
31.10.19/2330	13.6/71.1	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/1130	14.9/69.7	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/2330	15.9/68.5	115-125 gusting to 140	Very Severe Cyclonic Storm
02.11.19/1130	16.6/67.6	120-130 gusting to 150	Very Severe Cyclonic Storm
02.11.19/2330	17.0/66.7	130-140 gusting to 160	Very Severe Cyclonic Storm
03.11.19/1130	17.2/65.7	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/2330	17.3/64.9	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/1130	17.4/64.1	160-170 gusting to 190	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep, coastal Karnataka and south Tamilnadu during next 2 days. **Extremely heavy falls** at isolated places are likely over Lakshadweep Islands and heavy to very heavy falls at isolated place over Kerala during next 48 hours. Heavy to very heavy falls at isolated place are also likely over Tamil Nadu during next 12 hours and over coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind speed reaching 60-70 kmph gusting to 80 kmph very likely to prevail over Comorin-Maldives area during next 12 hours and decrease thereafter.
- Gale wind speed reaching 70-80 kmph gusting to 90 kmph prevails over Lakshadweep area around the system centre. It is very likely to increase becoming 80-90 kmph gusting to 100 kmph by 31st morning and 95-105 kmph gusting to 115 kmph in the afternoon over northern parts of Lakshadweep area and 60-70 kmph gusting to 80 kmph over southern parts of Lakshadweep area during the afternoon of 31st October 2019.
- Gale wind speed reaching 100-110 kmph gusting to 125 kmph likely to prevail over southeast and adjoining eastcentral Arabian Sea from evening of 31st October and increase to 160-170 Kmph gusting to 190 Kmph over eastcentral & adjoining westcentral Arabian Sea by morning of 4th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala-Karnataka coasts during next 48 hours.

(iii) Sea condition

- Sea conditions will be high to very high over Comorin-Maldives area and very rough to high along & off Kerala- Karnataka coasts during next 48 hours.
- Sea conditions will be very rough to high over Lakshadweep area during next 12 hours and high to very high on 31st October.
- Sea condition will be rough to very rough during next 12 hours and very high to phenomenal over southeast & adjoining eastcentral Arabian Sea on 31st October and will become phenomenal over eastcentral & adjoining westcentral Arabian Sea by morning of 2nd November onwards.

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.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of Lakshadweep Islands during next 24 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives & Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.
- The fishermen are advised not to venture into southeast Arabian Sea till 31st October and over eastcentral Arabian Sea till 4th November, 2019.

(vi) Damage Expected:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 51 (ARB/03/2019)

(B) Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral & adjoining northwest Arabian Sea

The **Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining northwest Arabian Sea moved southwestwards with a speed of 10 Kmph during past 06 hrs and lay centred at 2330 hrs IST of yesterday, the 30th October, 2019 over westcentral & adjoining northwest Arabian Sea near latitude 18.7°N and longitude 61.0°E, about 1250 km west-southwest of Mumbai (Maharashtra), 750 km east-northeast of Salalah (Oman) and 310 km east-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 4 days. It is very likely to weaken into a Cyclonic Storm by forenoon of 31st October, 2019.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.10.19/2330	18.7/61.0	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/0530	18.4/60.6	95-105 gusting to 115	Severe Cyclonic Storm
31.10.19/1130	18.1/60.3	85-95 gusting to 105	Severe Cyclonic Storm
31.10.19/1730	17.6/59.8	75-85 gusting to 95	Cyclonic Storm
31.10.19/2330	17.1/59.3	70-80 gusting to 90	Cyclonic Storm
01.11.19/1130	15.9/57.9	60-70 gusting to 80	Deep Depression
01.11.19/2330	14.5/56.1	40-50 gusting to 60	Depression
02.11.19/1130	13.3/54.0	30-40 gusting to 50	Depression

Warnings:

(i) Wind warning

- Gale wind speed reaching 100-110 kmph gusting to 120 kmph is prevailing around the system centre over westcentral & adjoining northwest Arabian Sea. It is very likely to reduce gradually becoming 95-105 kmph gusting to 115 kmph by morning of 31st October over westcentral Arabian

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 and 60-70 kmph gusting to 80 kmph by the morning of 1st November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is phenomenal over westcentral & adjoining northwest Arabian Sea around the system centre. It will become very high to high by morning of 31st October over westcentral Arabian Sea and high to very rough on 1st and 2nd November, 2019 over the same region.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 3rd November 2019 and into adjoining north & eastcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 0530 hrs IST of 31st October, 2019.

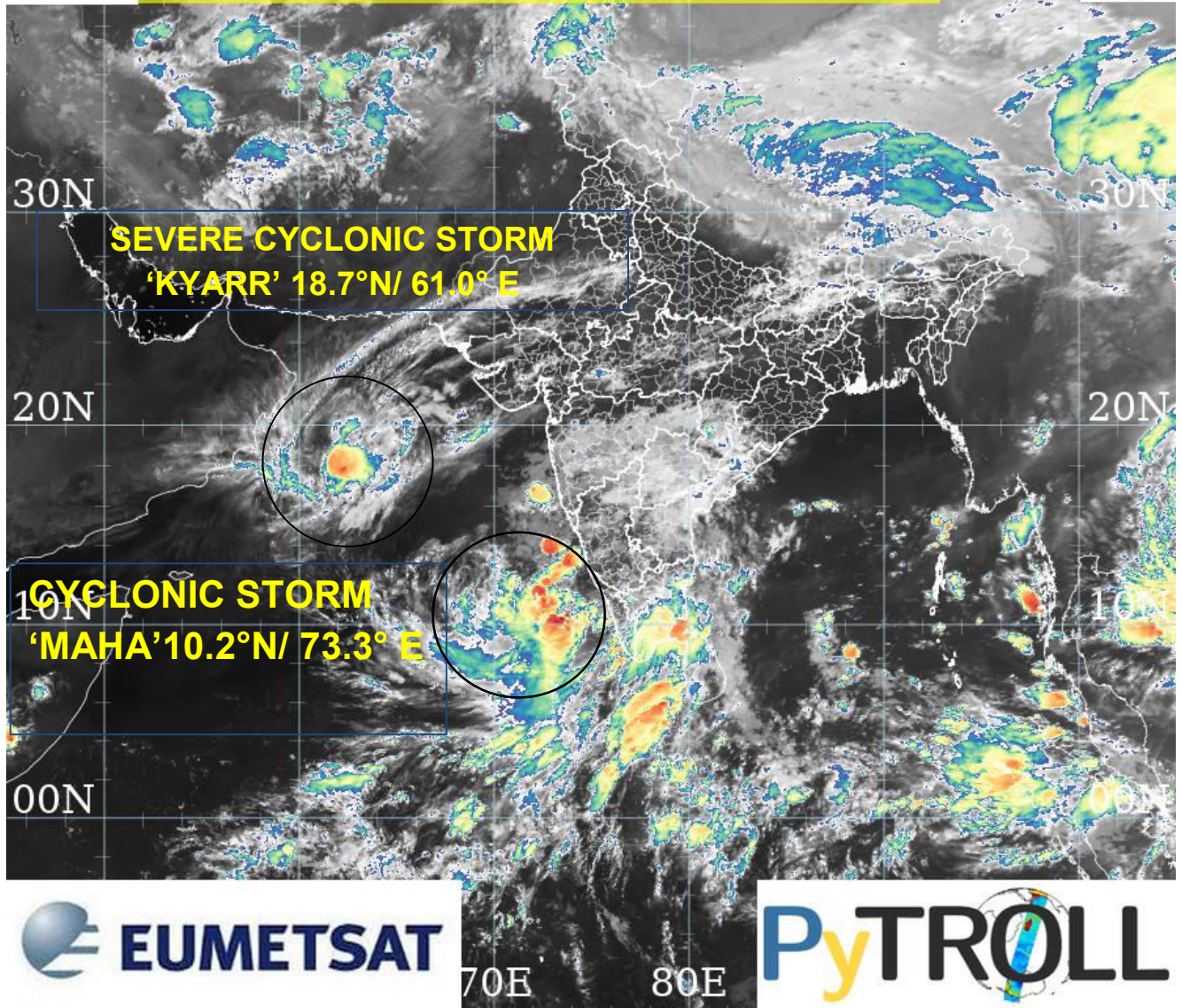
**(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi**

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

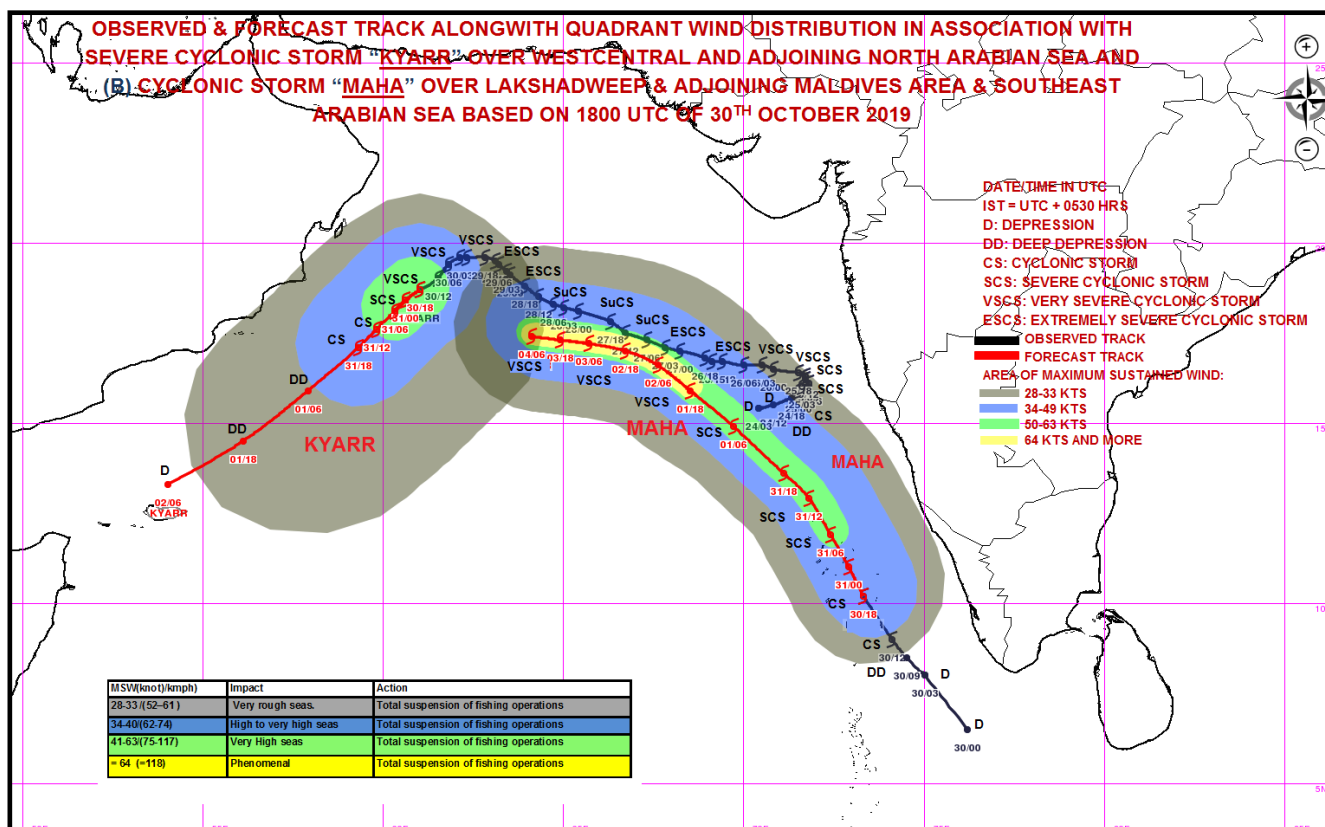
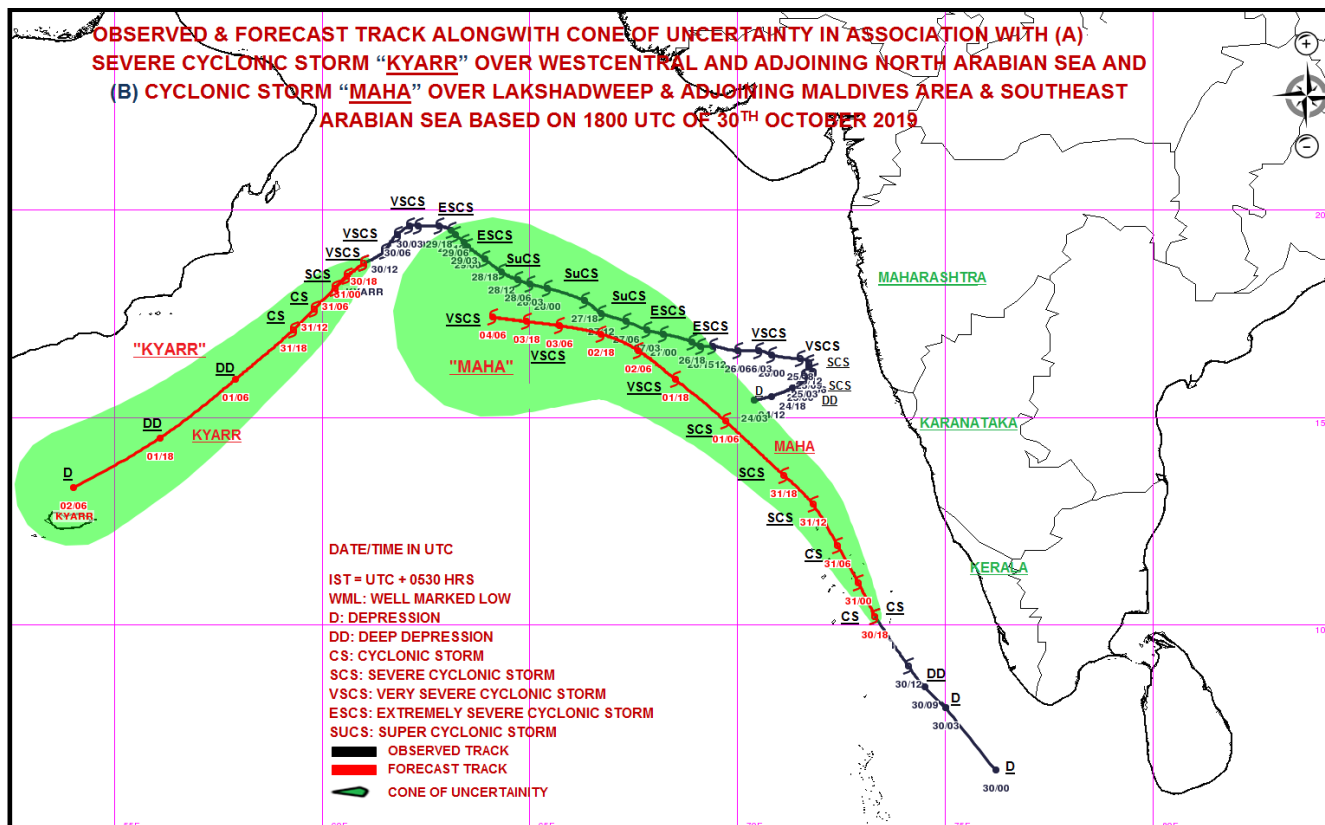
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



60E 70E 80E 90E 10
MSG-1: SEVIRI [colorized_ir_clouds]
20191030_1845UTC



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 (ARB/03/2019) and BULLETIN NO. : 07 (ARB/04/2019)

TIME OF ISSUE: 0600 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

(B) Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea.

BULLETIN NO. : 07 (ARB/04/2019)

(A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (ORANGE MESSAGE)

The Cyclonic storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea and Maldives area moved north-northwestwards with a speed of 22 kmph during past 06 hours and lay centered at 0230 hrs IST of 31st October, 2019 near latitude 10.6°N and longitude 73.1°E over Lakshadweep and adjoining southeast Arabian Sea about 710 km nearly north-northwest of Male (Maldives), 250 km nearly north of Minicoy (Lakshadweep), 50 km east of Kavaratti (Lakshadweep) and 480 km north-northwest of Thiruvananthapuram (Kerala). It is very likely to continue to move northwestwards across Lakshadweep Islands during next 12 hours and then emerge into eastcentral Arabian Sea. It is very likely to intensify into a Severe Cyclonic Storm during the forenoon of 31st October 2019 over Lakshadweep area.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/0230	10.6/73.1	75-85 gusting to 95	Cyclonic Storm
31.10.19/0530	11.0/72.9	80-90 gusting to 100	Cyclonic Storm
31.10.19/1130	11.9/72.4	85-95 gusting to 105	Severe Cyclonic Storm
31.10.19/1730	12.9/71.8	95-105 gusting to 115	Severe Cyclonic Storm
31.10.19/2330	13.6/71.1	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/1130	14.9/69.7	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/2330	15.9/68.5	115-125 gusting to 140	Very Severe Cyclonic Storm
02.11.19/1130	16.6/67.6	120-130 gusting to 150	Very Severe Cyclonic Storm
02.11.19/2330	17.0/66.7	130-140 gusting to 160	Very Severe Cyclonic Storm
03.11.19/1130	17.2/65.7	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/2330	17.3/64.9	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/1130	17.4/64.1	160-170 gusting to 190	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places very likely over Kerala, Lakshadweep, coastal Karnataka and south Tamilnadu during next 2 days. **Extremely heavy falls** at isolated places are likely over Lakshadweep Islands and heavy to very heavy falls at isolated place over Kerala during next 48 hours. Heavy to very heavy falls at isolated place are also likely over Tamil Nadu during next 06 hours and over coastal Karnataka on 31st October.

(ii) Wind warning

- Squally wind speed reaching 60-70 kmph gusting to 80 kmph very likely to prevail over Comorin-Maldives area during next 06 hours and decrease thereafter.
- Gale wind speed reaching 75-85 kmph gusting to 95 kmph prevails over Lakshadweep area around the system centre. It is very likely to increase becoming 80-90 kmph gusting to 100 kmph by 31st morning and 95-105 kmph gusting to 115 kmph in the afternoon over northern parts of Lakshadweep area and 60-70 kmph gusting to 80 kmph over southern parts of Lakshadweep area during the afternoon of 31st October 2019.
- Gale wind speed reaching 100-110 kmph gusting to 125 kmph likely to prevail over southeast and adjoining eastcentral Arabian Sea from evening of 31st October and increase to 160-170 Kmph gusting to 190 Kmph over eastcentral & adjoining westcentral Arabian Sea by morning of 4th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala- Karnataka coasts during next 48 hours.

(iii) Sea condition

- Sea conditions will be high to very high over Comorin-Maldives area and very rough to high along & off Kerala- Karnataka coasts during next 48 hours.
- Sea conditions over Lakshadweep area will be high to very high during 31st October and rough to very rough by 2nd November onwards.
- Sea condition over southeast & adjoining eastcentral Arabian Sea will be rough to very rough during next 06hours and very high to phenomenal during 31st October and will become phenomenal over eastcentral & adjoining westcentral Arabian Sea by morning of 2nd November onwards.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of Lakshadweep Islands during next 24 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives & Lakshadweep area and along & off Kerala-Karnataka coasts during next 48 hours.
- The fishermen are advised not to venture into southeast Arabian Sea till 31st October and over eastcentral Arabian Sea till 4th November, 2019.

(vi) Damage Expected:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.

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.

- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 52 (ARB/03/2019)

(B) Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea

The **Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining northwest Arabian Sea moved southwestwards with a speed of 11 Kmph during past 06 hrs and lay centred at 0230 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 18.5°N and longitude 60.7°E, about 1280 km west-southwest of Mumbai (Maharashtra), 720 km east-northeast of Salalah (Oman) and 300 km southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 4 days. It is very likely to weaken into a Cyclonic Storm by forenoon of 31st October, 2019.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/0230	18.5/60.7	95-105 gusting to 115	Severe Cyclonic Storm
31.10.19/0530	18.4/60.6	90-100 gusting to 110	Severe Cyclonic Storm
31.10.19/1130	18.1/60.3	85-95 gusting to 105	Severe Cyclonic Storm
31.10.19/1730	17.6/59.8	75-85 gusting to 95	Cyclonic Storm
31.10.19/2330	17.1/59.3	70-80 gusting to 90	Cyclonic Storm
01.11.19/1130	15.9/57.9	60-70 gusting to 80	Deep Depression
01.11.19/2330	14.5/56.1	40-50 gusting to 60	Depression
02.11.19/1130	13.3/54.0	30-40 gusting to 50	Depression

Warnings:

(i) Wind warning

- Gale wind speed reaching 95-105 kmph gusting to 115 kmph is prevailing around the system centre over westcentral & adjoining northwest Arabian Sea. It is very likely to reduce gradually becoming 90-100 kmph gusting to 110 kmph in the morning of 31st October over westcentral Arabian Sea and 60-70 kmph gusting to 80 kmph by the morning of 1st November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is phenomenal over westcentral & adjoining northwest Arabian Sea around the system centre. It will become very high to high during 31st October over westcentral Arabian Sea and high to very rough on 1st and 2nd November, 2019 over the same region.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 3rd November 2019 and into adjoining north & eastcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 0830 hrs IST of 31st October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

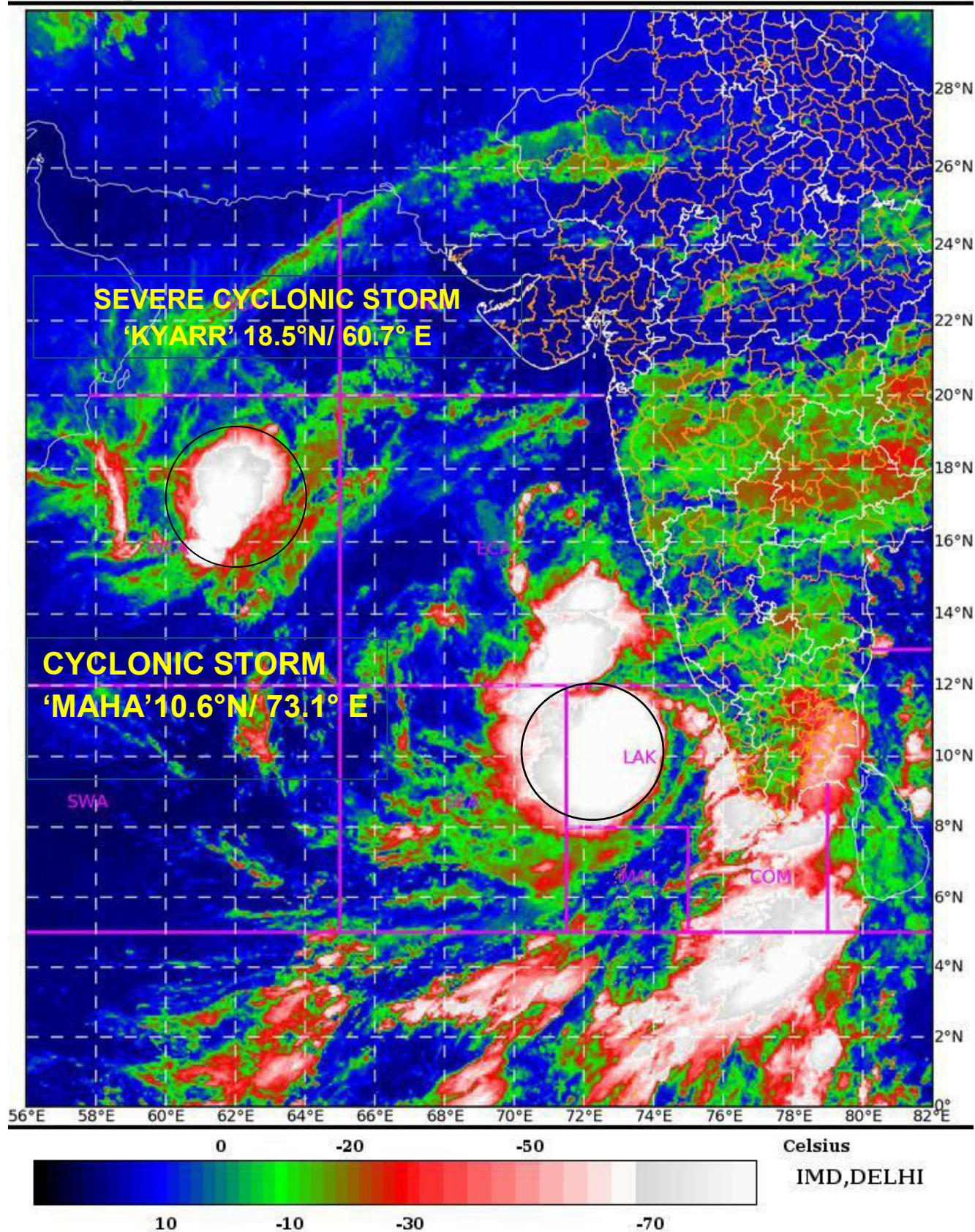
SAT : INSAT-3D IMG

30-10-2019/(2230 to 2256) GMT

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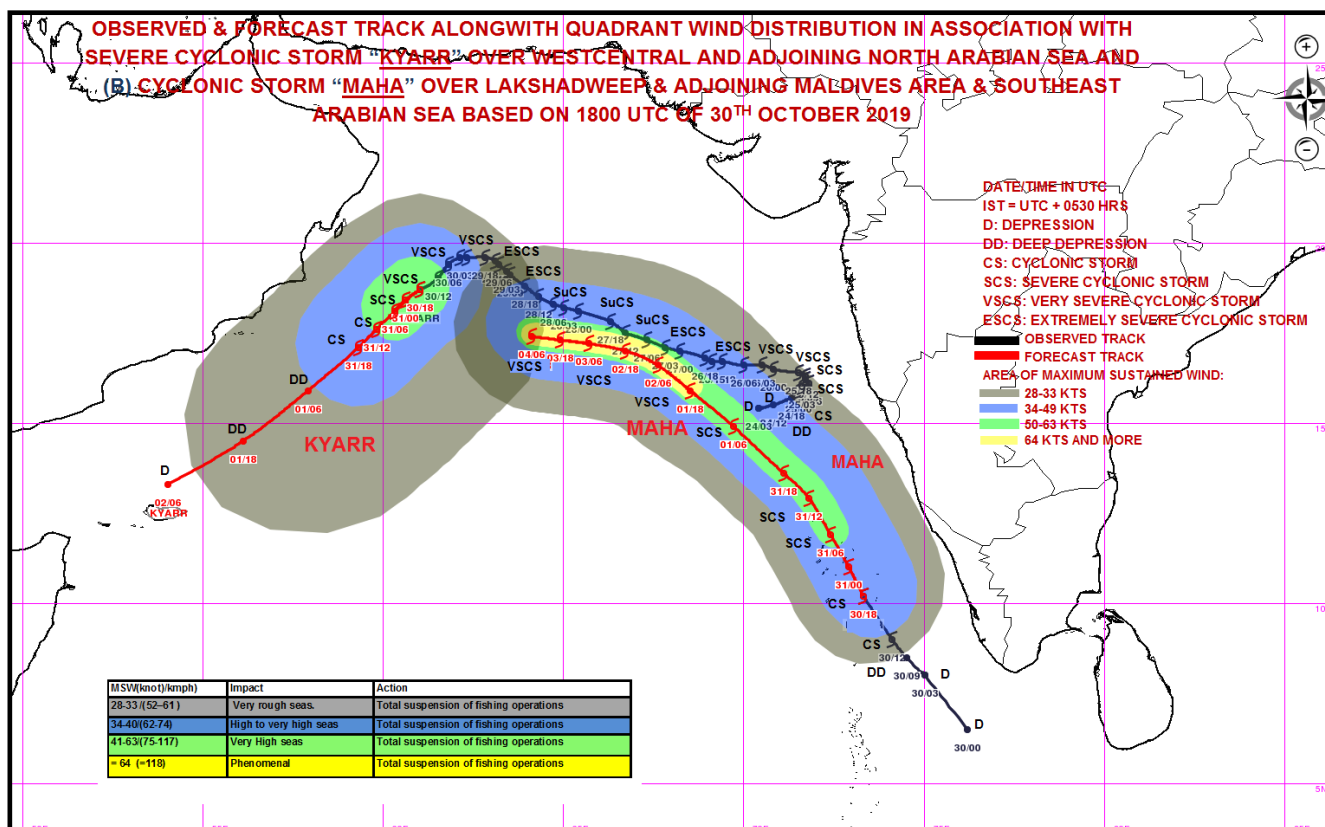
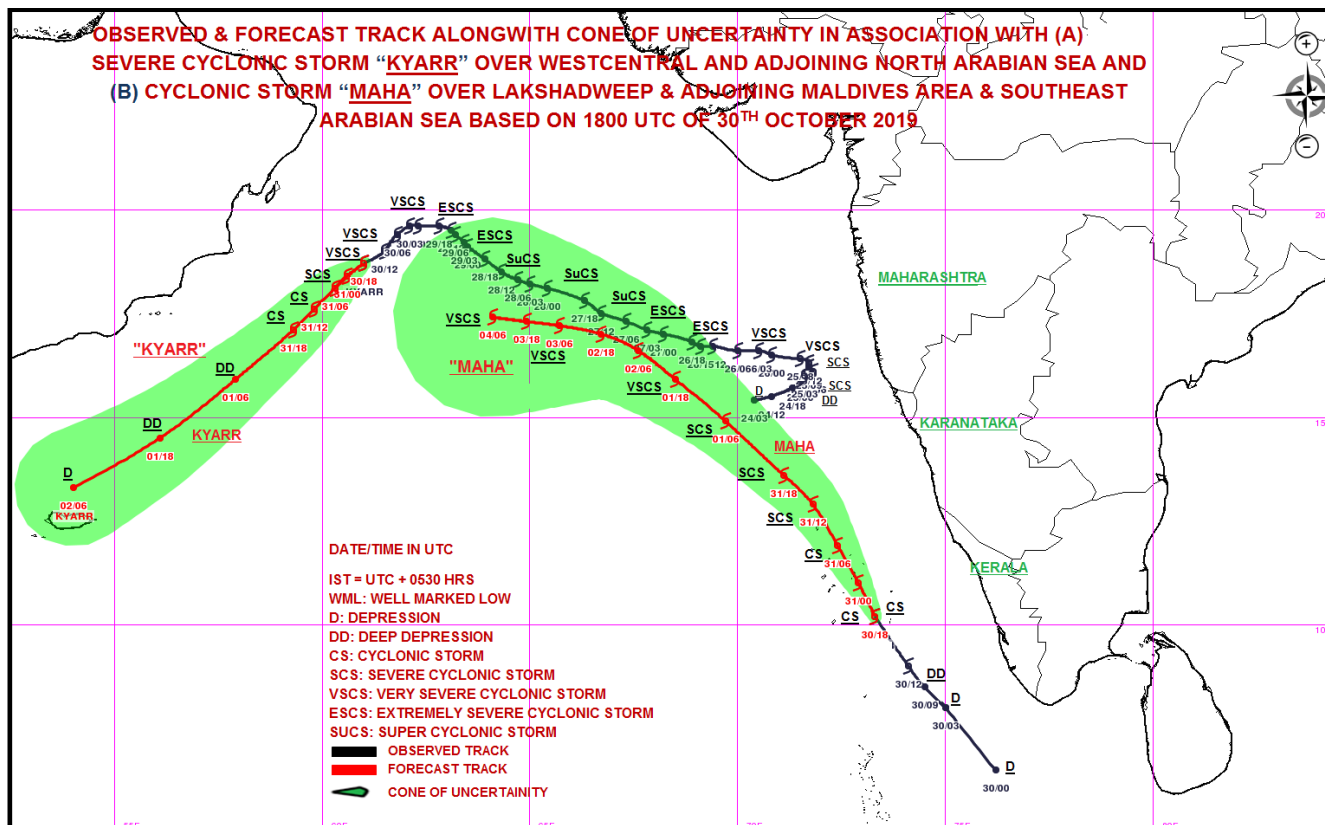
31-10-2019/(0400 to 0426) IST

ARABIAN SEA



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 (ARB/04/2019) and BULLETIN NO. : 53 (ARB/03/2019)

TIME OF ISSUE: 0900 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea.

BULLETIN NO. : 08 (ARB/04/2019)

(A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Cyclonic storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea moved north-northwestwards with a speed of 15 kmph during past 06 hours and lay centered at 0530 hrs IST of 31st October, 2019 near latitude 11.0°N and longitude 73.0°E over Lakshadweep and adjoining southeast Arabian Sea about 30 km east-southeast of Aminidivi (Lakshadweep), 60 km north-northeast of Kavaratti (Lakshadweep), 300 km north of Minicoy (Lakshadweep) and 300 km west-southwest of Kozhikode (Kerala). It is very likely to continue to move north-northwestwards across Lakshadweep Islands during next 12 hours. Then, it is very likely to move northwestwards, emerge into eastcentral Arabian Sea during subsequent 12 hours and thereafter move west-northwestwards. It is very likely to intensify into a Severe Cyclonic Storm during next 06 hours over Lakshadweep area and into a very severe cyclonic storm over east central Arabian Sea 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/0530	11.0/73.0	80-90 gusting to 100	Cyclonic Storm
31.10.19/1130	11.8/72.6	90-100 gusting to 110	Severe Cyclonic Storm
31.10.19/1730	12.6/72.2	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/2330	13.5/71.6	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/0530	14.3/71.1	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/1730	15.4/69.6	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/0530	16.2/68.4	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/1730	16.8/67.1	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/0530	17.2/65.9	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/1730	17.3/64.8	140-150 gusting to 170	Very Severe Cyclonic Storm
04.11.19/0530	17.3/63.2	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/1730	17.4/61.8	150-160 gusting to 180	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Lakshadweep Islands during next 24 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 80-90 kmph gusting to 100 kmph is prevailing over Lakshadweep area around the system centre. It is very likely to increase becoming 100-110 kmph gusting to 120 kmph over north Lakshadweep Islands and adjoining southeast & east-central Arabian Sea and 65-75 kmph gusting to 85 kmph over south Lakshadweep Islands and adjoining sea areas during next 12 hours. It is very likely decrease gradually over these areas thereafter.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by 2nd November morning and 150-160 kmph gusting to 180 kmph by 04th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala- Karnataka coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail over Comorin-Maldives area during next 06 hours and decrease thereafter.

(iii) Sea condition

- Sea conditions will be rough to very rough over Comorin-Maldives area during next 06 hours and along & off Kerala- Karnataka coasts during next 24 hours.
- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 24 hours and rough to very rough for subsequent 24 hours.
- Sea condition over eastcentral Arabian Sea will be very rough to high during next 06 hours and very high to phenomenal during subsequent 3 days.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of Lakshadweep Islands during next 12 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives during next 12 hours & Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 24 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

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.

(vi) Damage Expected over Lakshadweep Islands during next 12 hours:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 53 (ARB/03/2019)

(B) Severe Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea

The **Severe Cyclonic Storm 'Kyarr'** over westcentral and adjoining northwest Arabian Sea moved southwestwards with a speed of 13 Kmph during past 06 hrs and lay centred at 0530 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 18.4°N and longitude 60.3°E, about 1320 km west-southwest of Mumbai (Maharashtra), 680 km east-northeast of Salalah (Oman) and 290 km southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 3 days. It is very likely to weaken into a Cyclonic Storm by forenoon of 31st October, 2019.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/0530	18.4/60.3	85-95 gusting to 105	Severe Cyclonic Storm
31.10.19/1130	18.1/60.1	80-90 gusting to 100	Severe Cyclonic Storm
31.10.19/1730	17.6/59.8	70-80 gusting to 90	Cyclonic Storm
31.10.19/2330	17.1/59.3	60-70 gusting to 80	Cyclonic Storm
01.11.19/0530	15.9/57.9	50-60 gusting to 70	Deep Depression
01.11.19/1730	14.5/56.1	40-50 gusting to 60	Depression
02.11.19/0530	13.3/54.0	30-40 gusting to 50	Depression
02.11.19/1730	13.3/54.0	20-30 gusting to 40	Low

Warnings:

(i) Wind warning

- Gale wind speed reaching 85-95 kmph gusting to 105 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 50-60 kmph gusting to 70 kmph in the morning of 1st November over westcentral Arabian Sea and 30-40 kmph gusting to 50 kmph by the morning of 2nd November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is very high over westcentral Arabian Sea around the system centre. It will become very rough from 1st November morning and rough from 2nd November morning over the same region.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 2nd November forenoon.

The next bulletin will be issued at 1130 hrs IST of 31st October, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

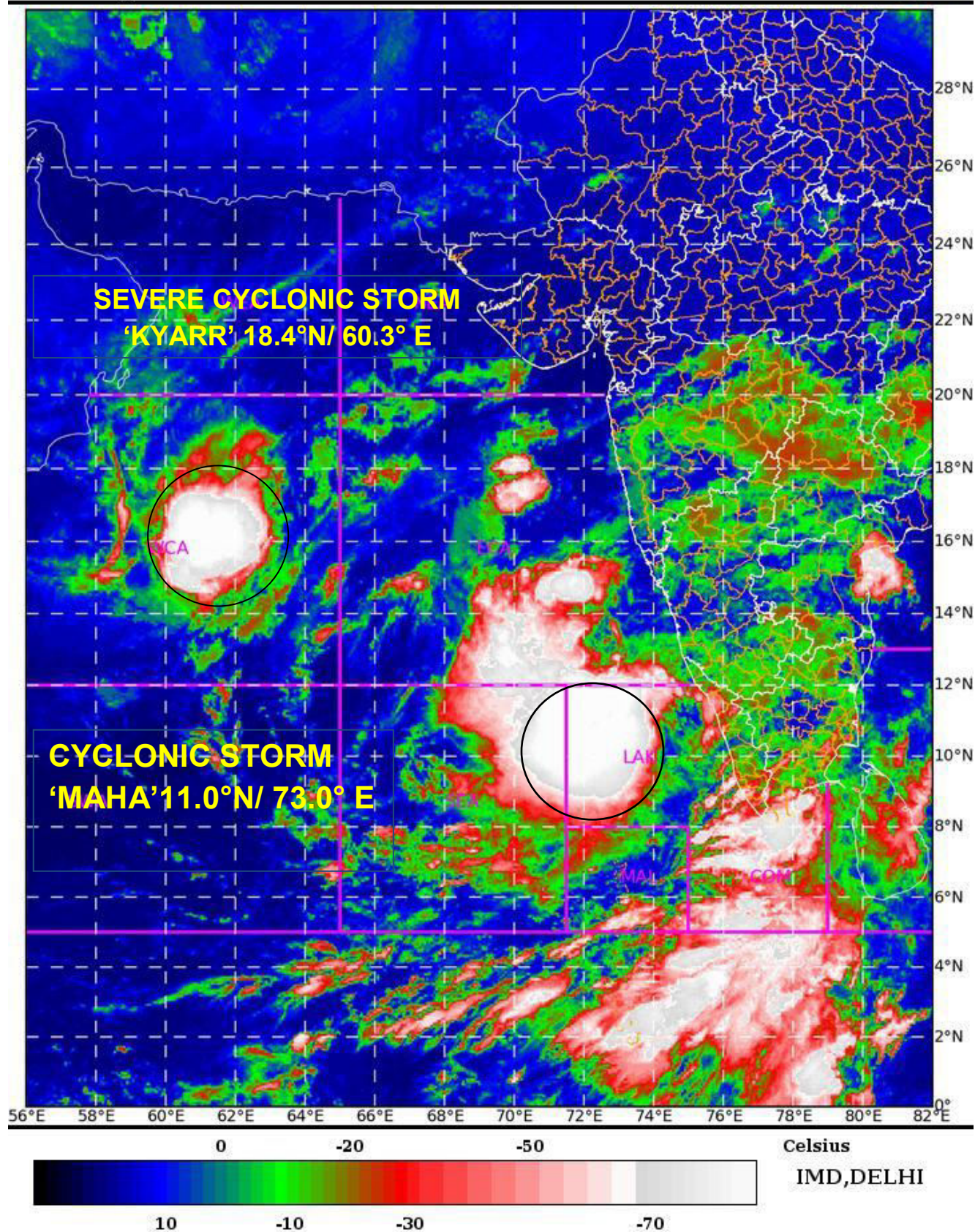
SAT : INSAT-3D IMG

31-10-2019/(0200 to 0226) GMT

IMG_TIR1_TEMP 10.8 um

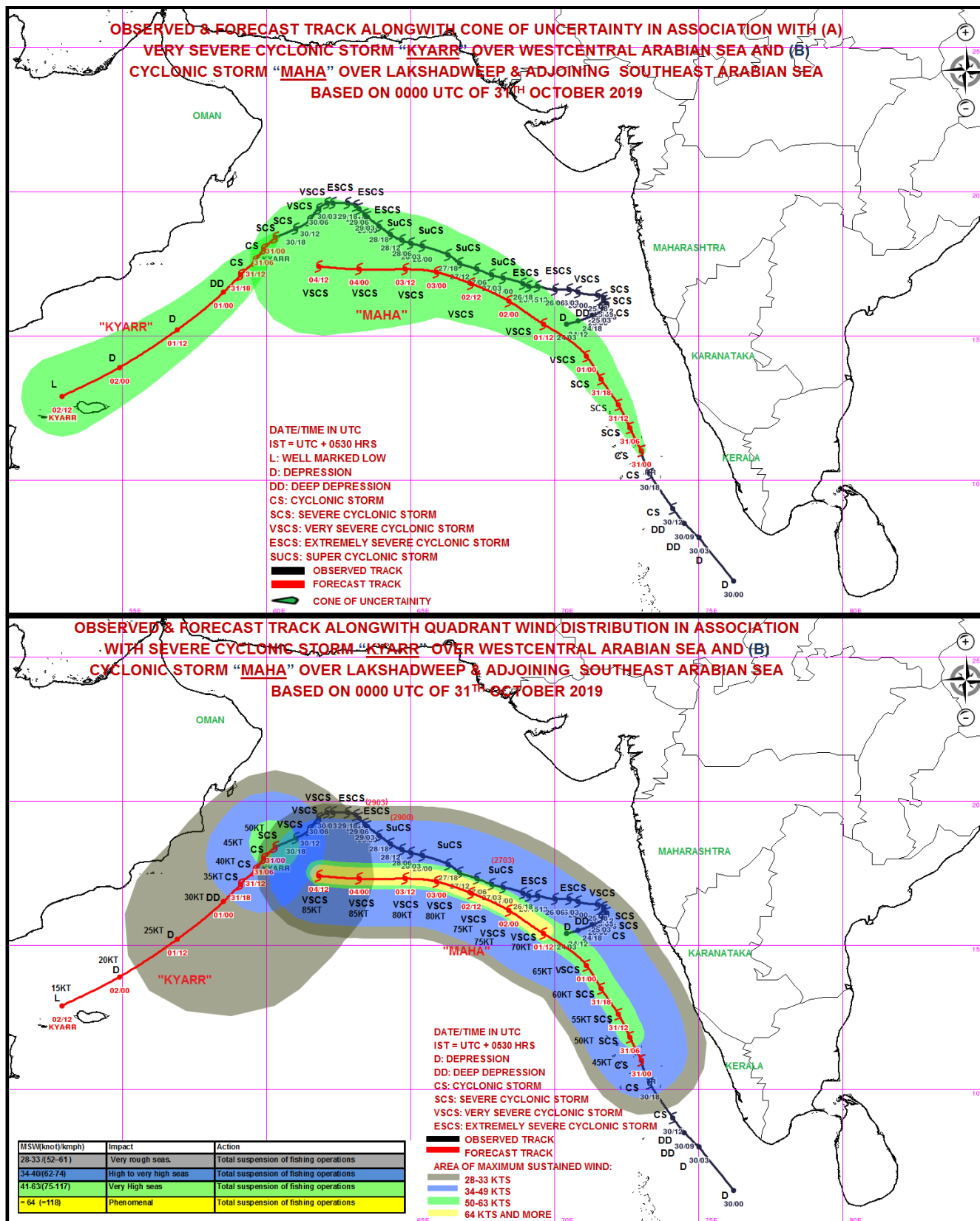
31-10-2019/(0730 to 0756) IST

ARABIAN SEA



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. : 09 (ARB/04/2019) and BULLETIN NO. : 54 (ARB/03/2019)

TIME OF ISSUE: 1115 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea.

BULLETIN NO. : 09 (ARB/04/2019)

(A) Cyclonic Storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Cyclonic storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea moved north-northwestwards with a speed of 17 kmph during past 06 hours and lay centered at 0830 hrs IST of 31st October, 2019 near latitude 11.5°N and longitude 72.8°E over Lakshadweep and adjoining southeast Arabian Sea about 40 km north-northeast of Aminidivi (Lakshadweep), 110 km north-northeast of Kavaratti (Lakshadweep), 350 km north-northwest of Minicoy (Lakshadweep) and 325 km west-northwest of Kozhikode (Kerala). It is very likely to continue to move north-northwestwards across Lakshadweep Islands during next 12 hours. Then, it is very likely to move northwestwards, emerge into eastcentral Arabian Sea during subsequent 12 hours and thereafter move west-northwestwards. It is very likely to intensify into a Severe Cyclonic Storm during next 06 hours over Lakshadweep area and into a very severe cyclonic storm over eastcentral Arabian Sea 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/0830	11.5/72.8	80-90 gusting to 100	Cyclonic Storm
31.10.19/1130	11.8/72.6	90-100 gusting to 110	Severe Cyclonic Storm
31.10.19/1730	12.6/72.2	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/2330	13.5/71.6	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/0530	14.3/71.1	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/1730	15.4/69.6	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/0530	16.2/68.4	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/1730	16.8/67.1	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/0530	17.2/65.9	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/1730	17.3/64.8	140-150 gusting to 170	Very Severe Cyclonic Storm
04.11.19/0530	17.3/63.2	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/1730	17.4/61.8	150-160 gusting to 180	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Lakshadweep Islands during next 24 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 80-90 kmph gusting to 100 kmph is prevailing over Lakshadweep area around the system centre. It is very likely to increase becoming 100-110 kmph gusting to 120 kmph over north Lakshadweep Islands and adjoining southeast & east-central Arabian Sea and 65-75 kmph gusting to 85 kmph over south Lakshadweep Islands and adjoining sea areas during next 12 hours. It is very likely decrease gradually over these areas thereafter.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by 2nd November morning and 150-160 kmph gusting to 180 kmph by 04th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala- Karnataka coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail over Comorin-Maldives area during next 06 hours and decrease thereafter.

(iii) Sea condition

- Sea conditions will be rough to very rough over Comorin-Maldives area during next 06 hours and along & off Kerala- Karnataka coasts during next 24 hours.
- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 24 hours and rough to very rough for subsequent 24 hours.
- Sea condition over eastcentral Arabian Sea will be very rough to high during next 06 hours and very high to phenomenal during subsequent 3 days.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of Lakshadweep Islands during next 12 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives during next 12 hours & Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 24 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

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.

(vi) Damage Expected over Lakshadweep Islands during next 12 hours:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 54 (ARB/03/2019)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea

The **Severe Cyclonic Storm 'Kyarr'** over westcentral Arabian Sea moved southwestwards with a speed of 13 Kmph during past 06 hrs, weakened into a **Cyclonic Storm** and lay centred at 0830 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 18.0°N and longitude 60.2°E, about 1330 km west-southwest of Mumbai (Maharashtra), 670 km east-northeast of Salalah (Oman) and 320 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 3 days. It is very likely to weaken into a Deep Depression during next 18 hours and further into a Depression during subsequent 06 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/0830	18.0/60.2	80-90 gusting to 100	Cyclonic Storm
31.10.19/1130	17.7/59.9	75-85 gusting to 95	Cyclonic Storm
31.10.19/1730	17.4/59.6	65-75 gusting to 85	Cyclonic Storm
31.10.19/2330	17.0/59.1	55-65 gusting to 75	Deep Depression
01.11.19/0530	16.5/58.5	45-55 gusting to 65	Depression
01.11.19/1730	15.2/56.9	35-45 gusting to 55	Depression
02.11.19/0530	13.9/54.9	25-35 gusting to 45	Well Marked Low

Warnings:

(i) Wind warning

- Gale wind speed reaching 80-90 kmph gusting to 100 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 45-55 kmph gusting to 65 kmph in the morning of 01st November over westcentral Arabian Sea and 25-35 kmph gusting to 45 kmph by the morning of 2nd November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is very high over westcentral Arabian Sea around the system centre. It will become very rough from 1st November morning and rough from 2nd November morning over the same region.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 2nd November forenoon.

The next bulletin will be issued at 1430 hrs IST of 31st October, 2019.

**(Sunitha Devi S)
Scientist-E, RSMC, New Delhi**

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

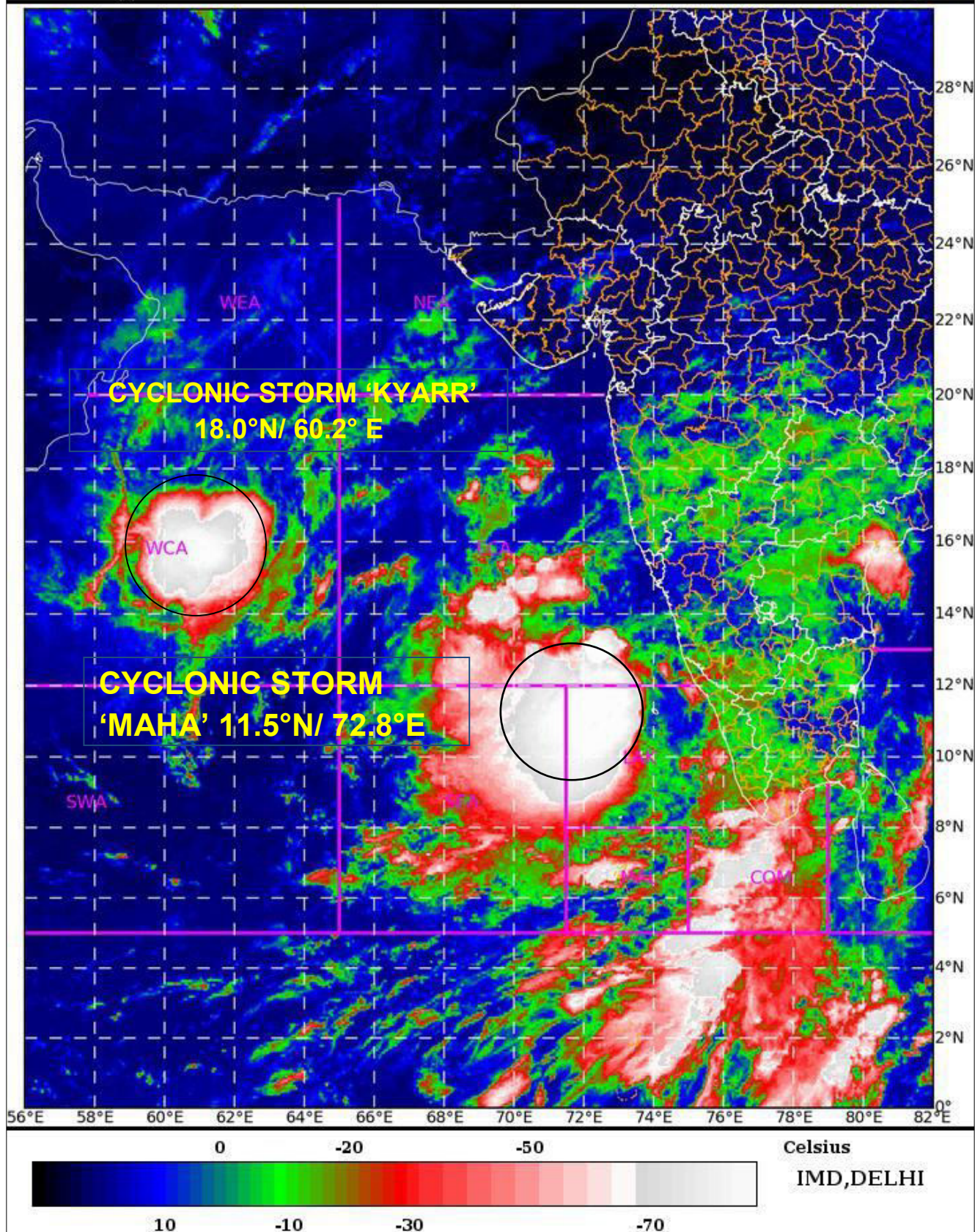
SAT : INSAT-3D IMG

31-10-2019/(0430 to 0456) GMT

IMG_TIR1_TEMP 10.8 um

31-10-2019/(1000 to 1026) IST

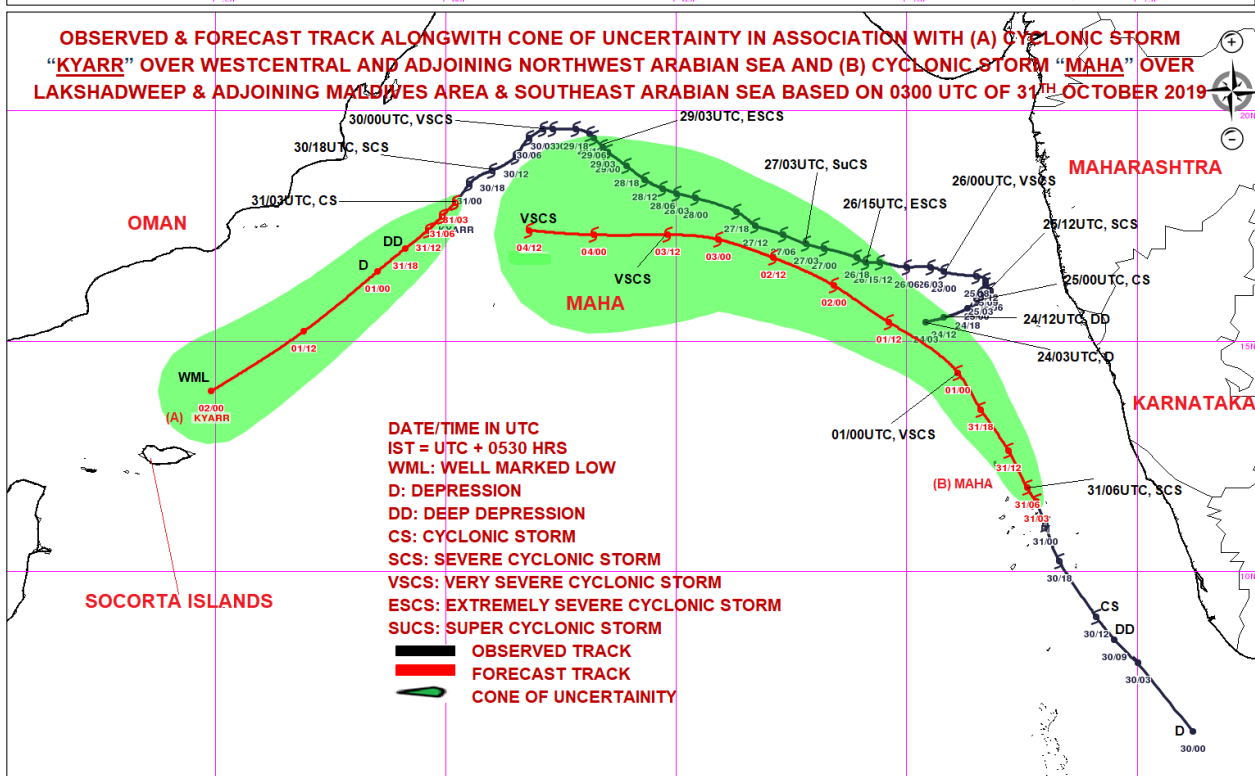
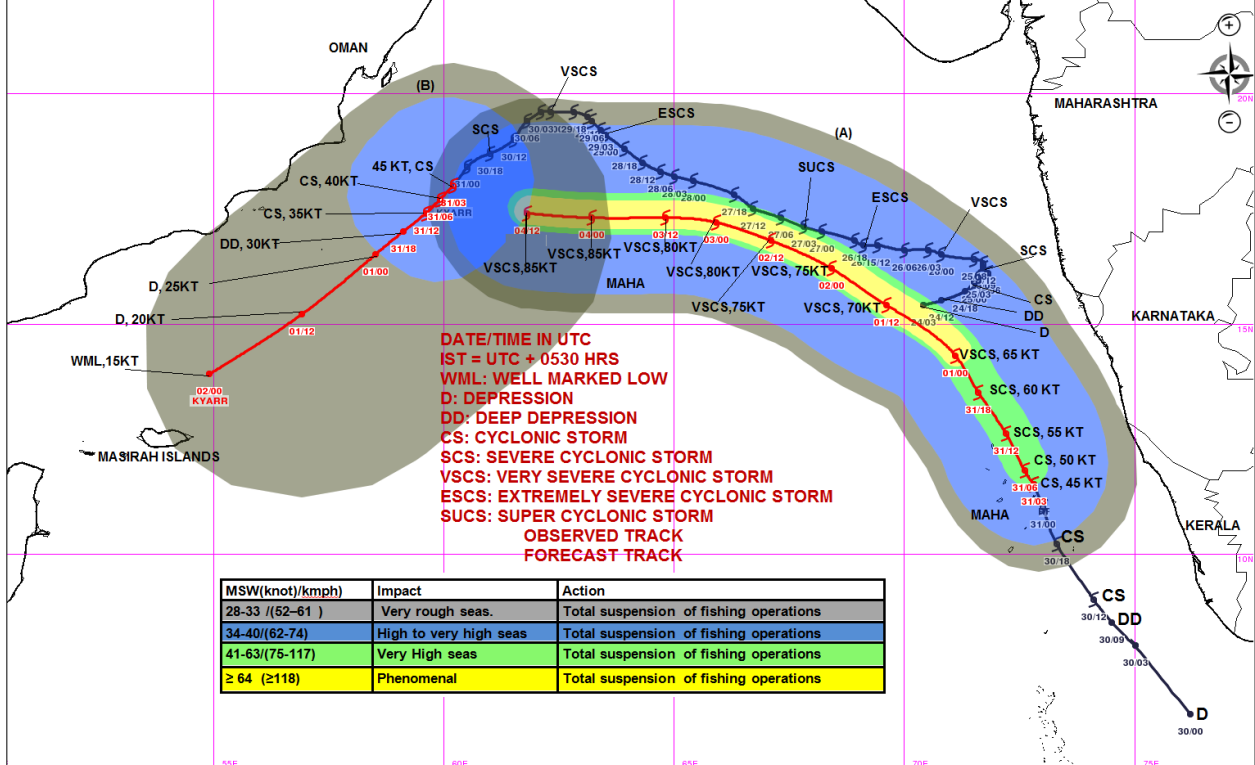
ARABIAN_SEA



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.

OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) CYCLONIC STORM “MAHA” OVER LAKSHADWEEP & ADJOINING SOUTHEAST ARABIAN SEA AND (B) VERY SEVERE CYCLONIC STORM “KYARR” OVER WESTCENTRAL ARABIAN SEA AND BASED ON 0300 UTC OF 31ST OCTOBER 2019



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 (ARB/04/2019) and BULLETIN NO. : 55 (ARB/03/2019)

TIME OF ISSUE: 1430 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea.

BULLETIN NO. : 10 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Cyclonic storm MAHA (Pronounced as M'maha) over Lakshadweep and adjoining southeast Arabian Sea moved further north-northwestwards with a speed of 17 kmph during past 06 hours, intensified into a **Severe Cyclonic Storm** and lay centered at 1130 hrs IST of 31st October, 2019 near latitude 11.9°N and longitude 72.8°E over eastcentral Arabian Sea and adjoining Lakshadweep area about 90 km north-northeast of Aminidivi (Lakshadweep), 150 km north-northeast of Kavaratti (Lakshadweep), 25 km east-northeast of Chetlat (Lakshadweep) and 330 km west-northwest of Kozhikode (Kerala). It is very likely to continue to move north-northwestwards across north Lakshadweep Islands during next 06 hours. Then, it is very likely to move northwestwards during subsequent 12 hours and thereafter move west-northwestwards. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during 24 hours.

Aminidivi reported maximum wind speed of 83 kmph at 1130 hrs IST of today.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/1130	11.9/72.8	90-100 gusting to 110	Severe Cyclonic Storm
31.10.19/1730	12.8/72.2	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/2330	13.6/71.7	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/0530	14.3/71.2	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/1130	14.7/70.6	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/2330	15.8/69.2	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/1130	16.4/68.1	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/2330	16.9/67.0	135-145 gusting to 165	Very Severe Cyclonic Storm
03.11.19/1130	17.2/65.8	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/2330	17.2/64.4	145-155 gusting to 175	Very Severe Cyclonic Storm
04.11.19/1130	17.4/63.0	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/2330	17.6/61.7	150-160 gusting to 180	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Lakshadweep Islands during next 24 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea and adjoining Lakshadweep area around the system centre. It is very likely to increase becoming 100-110 kmph gusting to 120 kmph over eastcentral Arabian Sea from from the midnight of today. Gale wind, speed reaching 80-90 kmph gusting to 100 kmph, likely to prevail over northern parts of Lakshadweep area and adjoining southeast Arabian Sea during the subsequent 24 hours and decrease gradually thereafter.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by midnight of 01st November and 150-160 kmph gusting to 180 kmph by 04th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Kerala- Karnataka coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph very likely to prevail over Comorin-Maldives area during next 06 hours and decrease thereafter.

(iii) Sea condition

- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 24 hours and rough to very rough for subsequent 24 hours.
- Sea conditions will be rough to very rough over eastcentral & adjoining southeast Arabian Sea along & off Karnataka-Kerala coasts during next 24 hours.
- Sea condition over eastcentral Arabian Sea around the system centre will be high to very high during next 24 hours and phenomenal during subsequent 3 days.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of Lakshadweep Islands during next 12 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives during next 12 hours & Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 24 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

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.

(vi) Damage Expected over Lakshadweep Islands during next 12 hours:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 55 (ARB/03/2019)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea

The **Cyclonic Storm 'Kyarr'** over westcentral Arabian Sea moved south-southwestwards with a speed of 13 Kmph during past 06 hrs and lay centred at 1130 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 17.7°N and longitude 60.1°E, about 1350 km west-southwest of Mumbai (Maharashtra), 640 km east-northeast of Salalah (Oman) and 350 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 36 hours. It is very likely to weaken into a Deep Depression during next 12 hours and further into a Depression during subsequent 06 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/1130	17.7/60.1	70-80 gusting to 90	Cyclonic Storm
31.10.19/1730	17.4/59.8	60-70 gusting to 80	Cyclonic Storm
31.10.19/2330	17.0/59.4	50-60 gusting to 70	Deep Depression
01.11.19/0530	16.4/58.8	40-50 gusting to 60	Depression
01.11.19/1130	15.8/58.2	30-40 gusting to 50	Depression
01.11.19/2330	14.5/56.5	20-30 gusting to 40	Well Marked Low

Warnings:

(i) Wind warning

- Gale wind speed reaching 70-80 kmph gusting to 90 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 40-50 kmph gusting to 60 kmph in the morning of 01st November over westcentral Arabian Sea and 20-30 kmph gusting to 40 kmph by the midnight of 02nd November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is very high over westcentral Arabian Sea around the system centre. It will become very rough on 01st November and rough during subsequent 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea till 2nd November forenoon.

The next bulletin will be issued at 1730 hrs IST of 31st October, 2019.

**(Sunitha Devi S)
Scientist-E, RSMC, New Delhi**

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

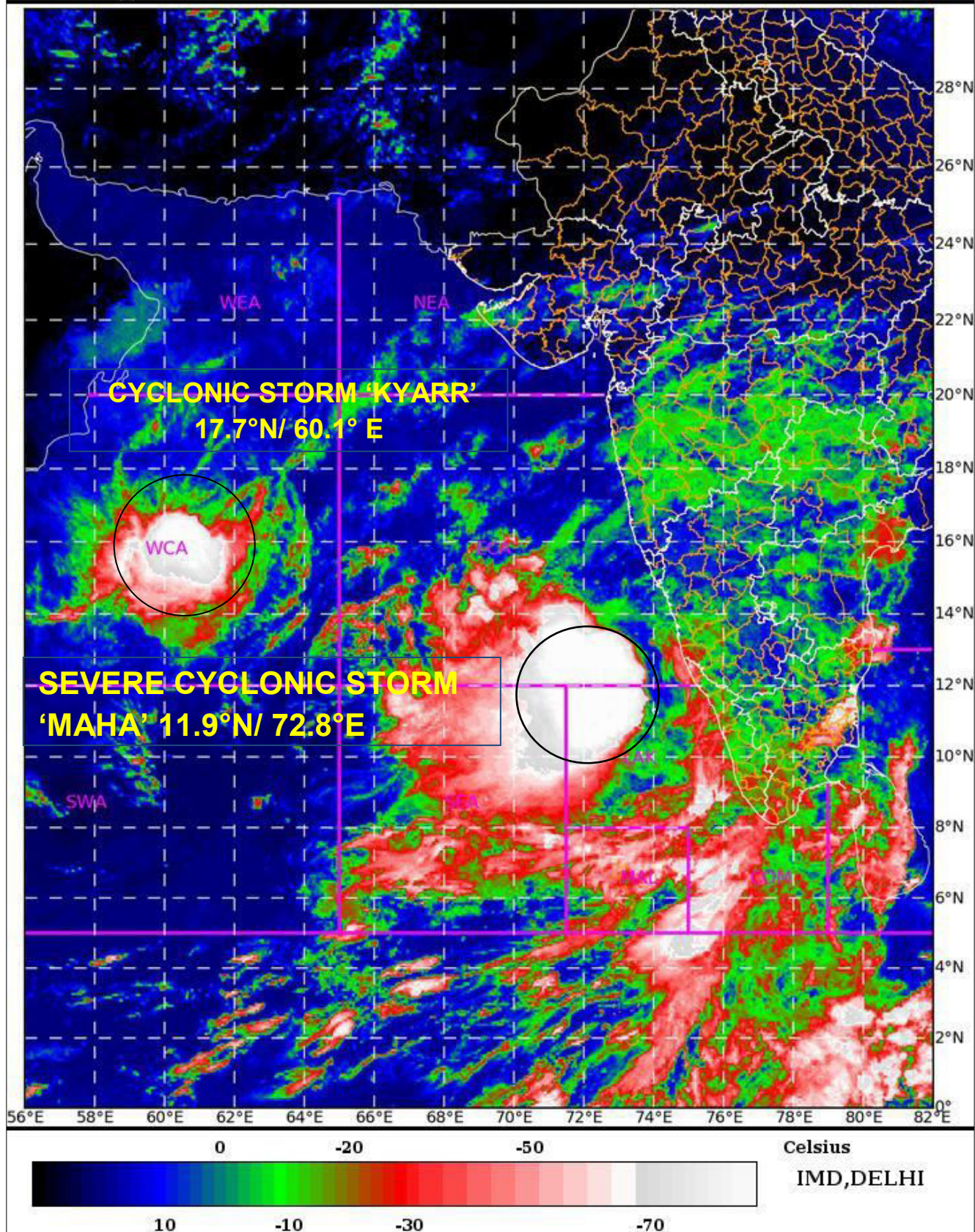
SAT : INSAT-3D IMG

31-10-2019/(0800 to 0827) GMT

IMG_TIR1_TEMP 10.8 um

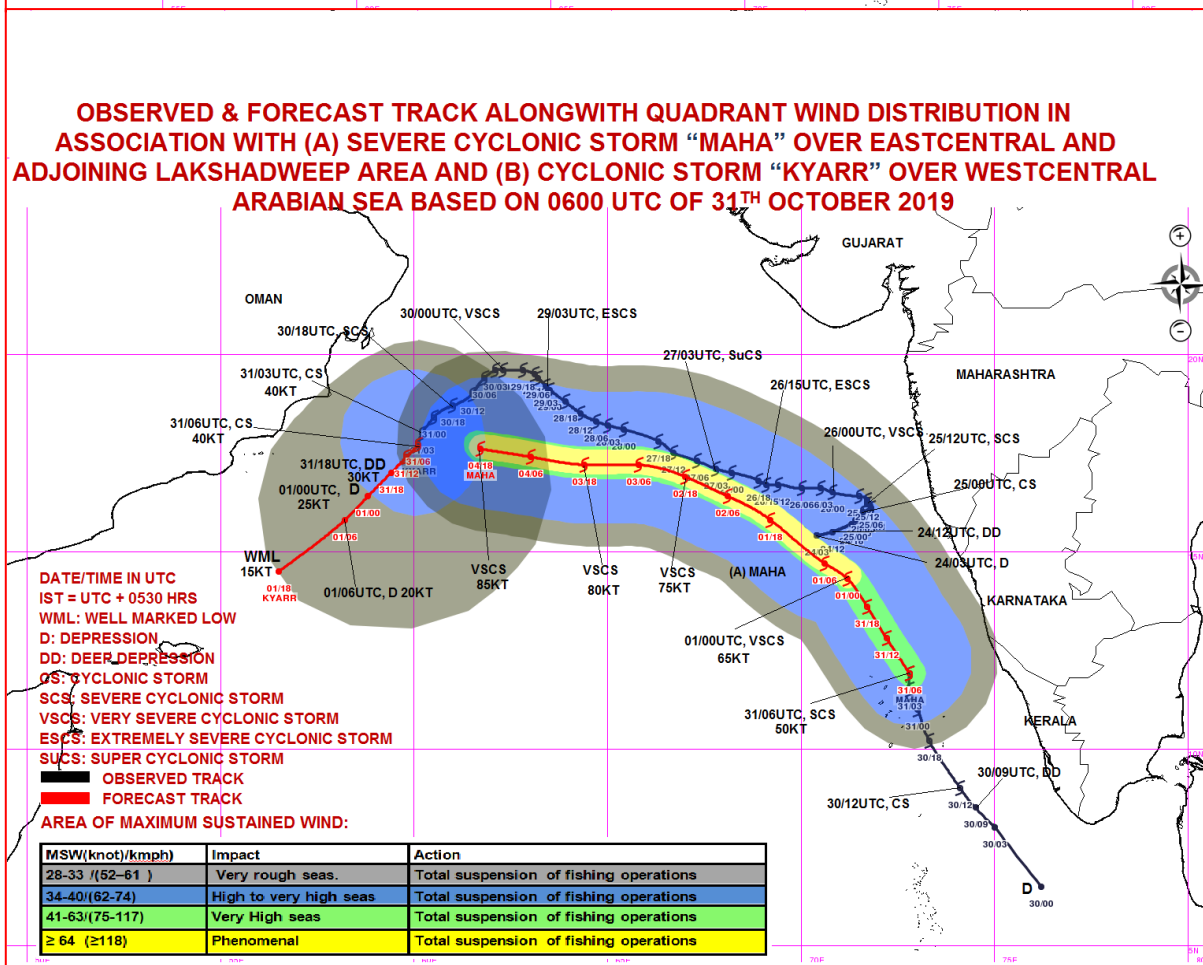
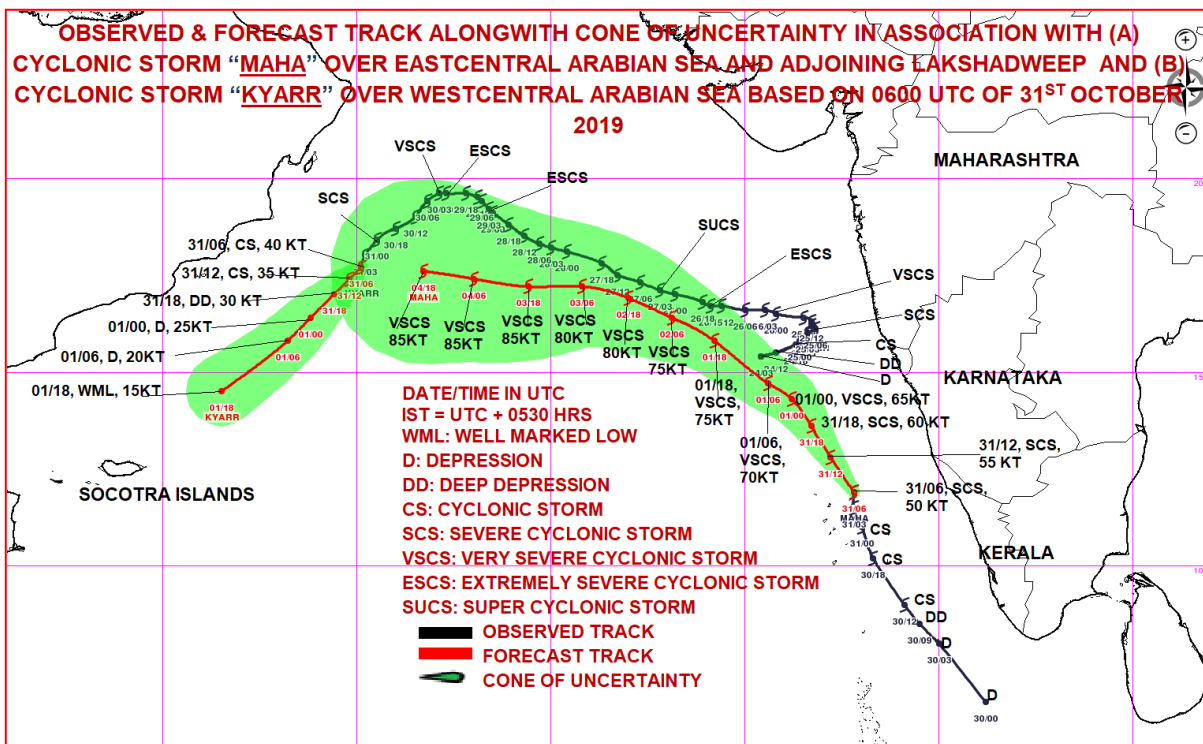
31-10-2019/(1330 to 1357) IST

ARABIAN_SEA



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 (ARB/04/2019) and BULLETIN NO. : 56 (ARB/03/2019)

TIME OF ISSUE: 1650 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea.

BULLETIN NO. : 11 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved northwards with a speed of 13 kmph during past 06 hours, and lay centered at 1430 hrs IST of 31st October, 2019 near latitude 12.3°N and longitude 72.8°E over eastcentral Arabian Sea and adjoining Lakshadweep area about 130 km north-northeast of Aminidivi (Lakshadweep), 200 km north-northeast of Kavaratti (Lakshadweep), 100 km northeast of Chetlat (Lakshadweep) and 340 km west-northwest of Kozhikode (Kerala). It is very likely to move north-northwestwards during next 06 hours. Then, it is very likely to move northwestwards during subsequent 06 hours and thereafter move west-northwestwards. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 24 hours.

Aminidivi reported maximum wind speed of 72 kmph at 1430 hrs IST of today.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/1430	12.3/72.8	95-105 gusting to 115	Severe Cyclonic Storm
31.10.19/1730	12.8/72.2	100-110 gusting to 120	Severe Cyclonic Storm
31.10.19/2330	13.6/71.7	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/0530	14.3/71.2	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/1130	14.7/70.6	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/2330	15.8/69.2	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/1130	16.4/68.1	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/2330	16.9/67.0	135-145 gusting to 165	Very Severe Cyclonic Storm
03.11.19/1130	17.2/65.8	140-150 gusting to 170	Very Severe Cyclonic Storm
03.11.19/2330	17.2/64.4	145-155 gusting to 175	Very Severe Cyclonic Storm
04.11.19/1130	17.4/63.0	150-160 gusting to 180	Very Severe Cyclonic Storm
04.11.19/2330	17.6/61.7	150-160 gusting to 180	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Lakshadweep Islands during next 12 hours and isolated heavy to very heavy falls over north Lakshadweep during subsequent 12 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 95-105 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea and adjoining Lakshadweep area around the system centre.
- It is very likely to decrease gradually over Lakshadweep area as the system moves northward, becoming 60-70 kmph gusting to 80 kmph by early hours of 1st November and 45-55kmph gusting to 65 kmph by 1st November morning.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by midnight of 01st November and 150-160 kmph gusting to 180 kmph by 04th November morning.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely along & off Kerala- Karnataka coasts and strong winds, speed reaching 30-40 kmph gusting to 50 kmph along & off Goa- south Maharashtra coasts during next 24 hours.

(iii) Sea condition

- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 12 hours and rough to very rough for subsequent 12 hours.
- Sea conditions will be rough to very rough over eastcentral & adjoining southeast Arabian Sea along & off Karnataka-Kerala coasts and rough along and off Goa – south Maharashtra coast during next 24 hours.
- Sea condition over eastcentral Arabian Sea around the system centre will be high to very high during next 24 hours and phenomenal during subsequent 3 days.

(iv) Storm Surge Warning

- Tidal wave by about 1 meter height above the astronomical tides is very likely to inundate low lying areas of north Lakshadweep Islands during next 06 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives during next 12 hours & Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 24 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

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.

(vi) Damage Expected over Lakshadweep Islands during next 06 hours:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 56 (ARB/03/2019)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea

The **Cyclonic Storm 'Kyarr'** over westcentral Arabian Sea moved south-southwestwards with a speed of 10 Kmph during past 06 hrs and lay centred at 1430 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 17.5°N and longitude 60.0°E, about 1360 km west-southwest of Mumbai (Maharashtra), 650 km east-northeast of Salalah (Oman) and 350 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 36 hours. It is very likely to weaken into a Deep Depression during next 12 hours and further into a Depression during subsequent 06 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/1430	17.5/60.0	65-75 gusting to 85	Cyclonic Storm
31.10.19/1730	17.3/59.8	60-70 gusting to 80	Cyclonic Storm
31.10.19/2330	17.0/59.4	50-60 gusting to 70	Deep Depression
01.11.19/0530	16.4/58.8	40-50 gusting to 60	Depression
01.11.19/1130	15.8/58.2	30-40 gusting to 50	Depression
01.11.19/2330	14.5/56.5	20-30 gusting to 40	Well Marked Low

Warnings:

(i) Wind warning

- Gale wind speed reaching 65-75 kmph gusting to 85 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 40-50 kmph gusting to 60 kmph in the morning of 01st November over westcentral Arabian Sea and 20-30 kmph gusting to 40 kmph by the midnight of 02nd November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is high over westcentral Arabian Sea around the system centre. It will become very rough on 01st November and rough during subsequent 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 2030 hrs IST of 31st October, 2019.

**(Sunitha Devi S)
Scientist-E, RSMC, New Delhi**

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

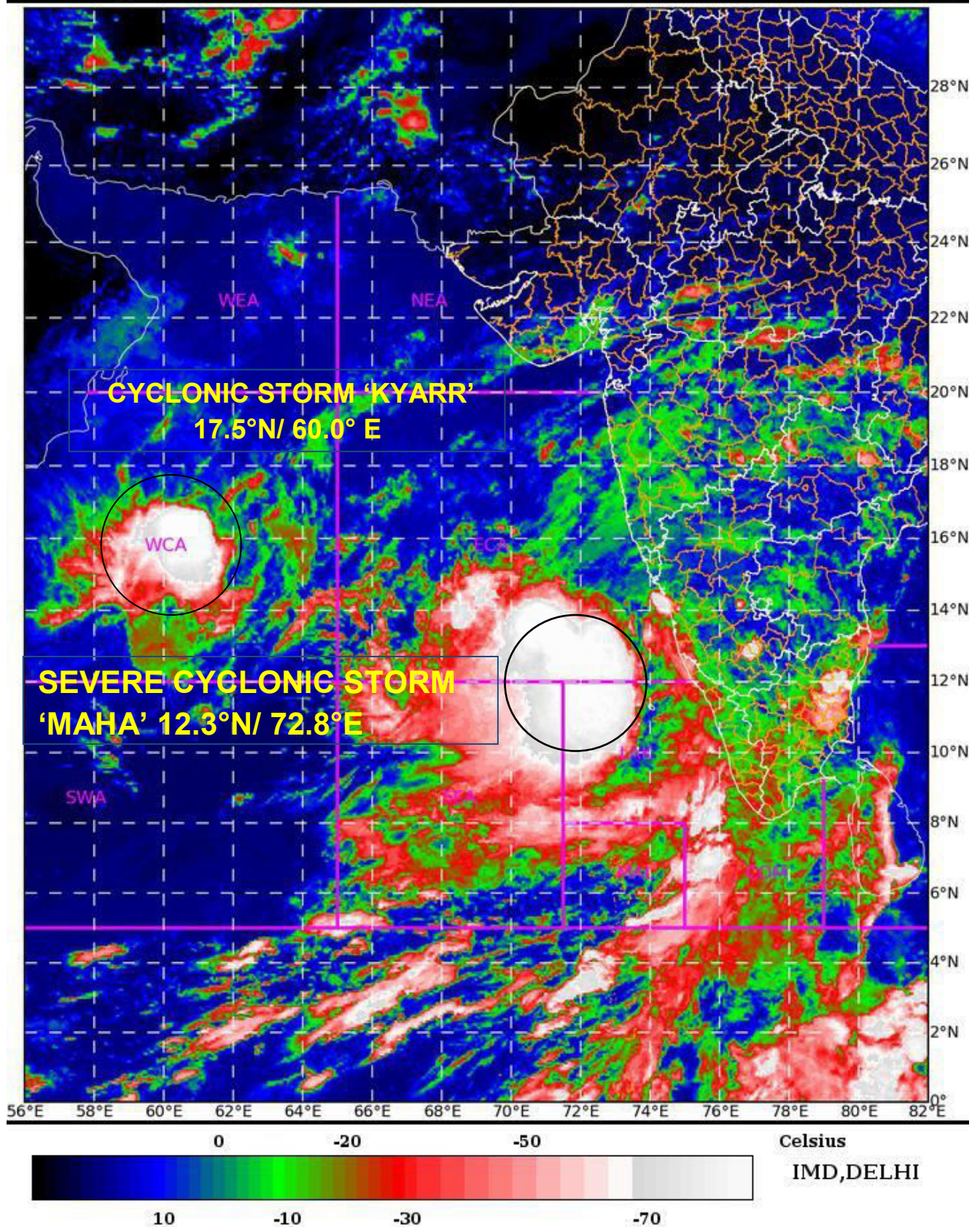
SAT : INSAT-3D IMG

31-10-2019/(1000 to 1026) GMT

IMG_TIR1_TEMP 10.8 um

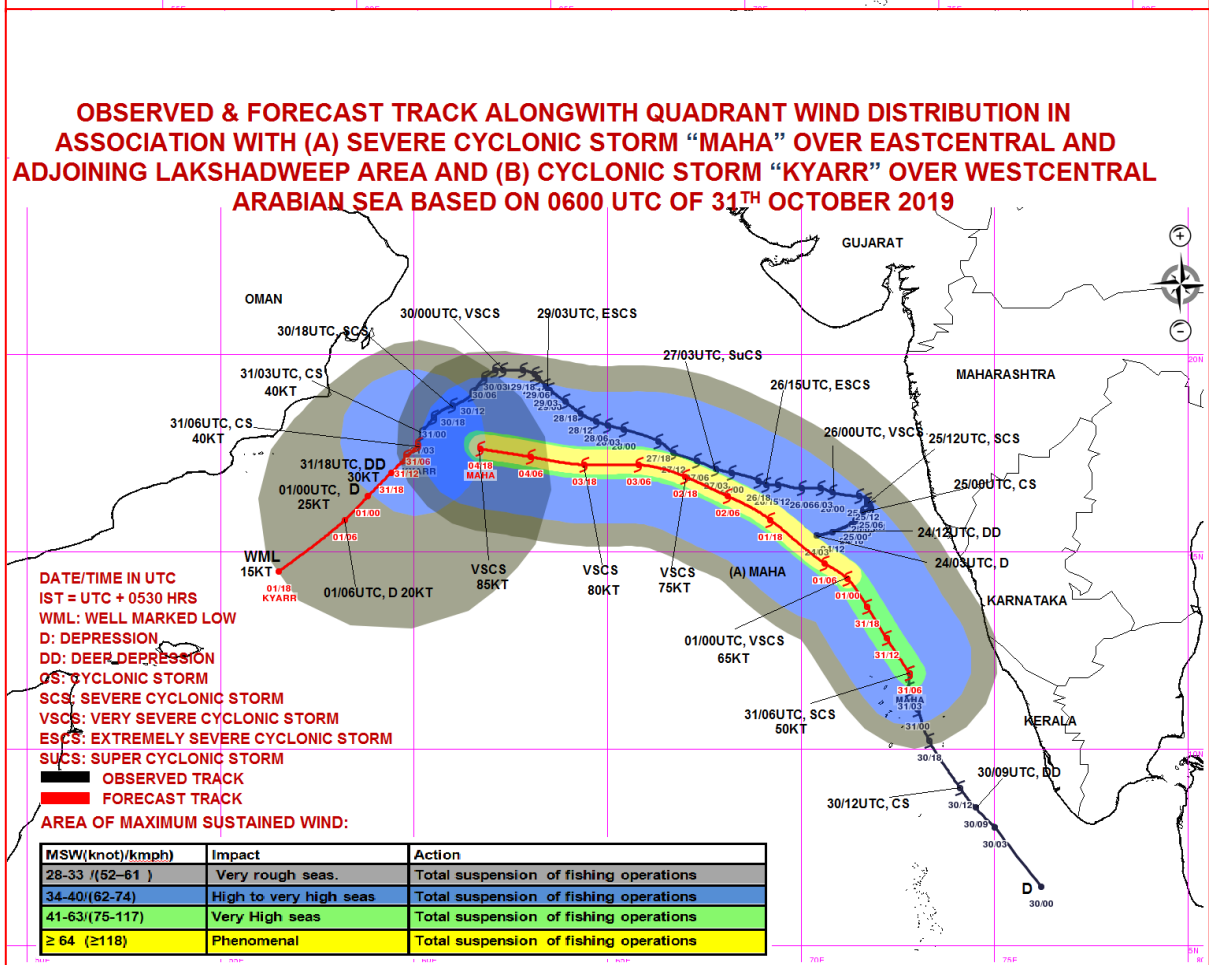
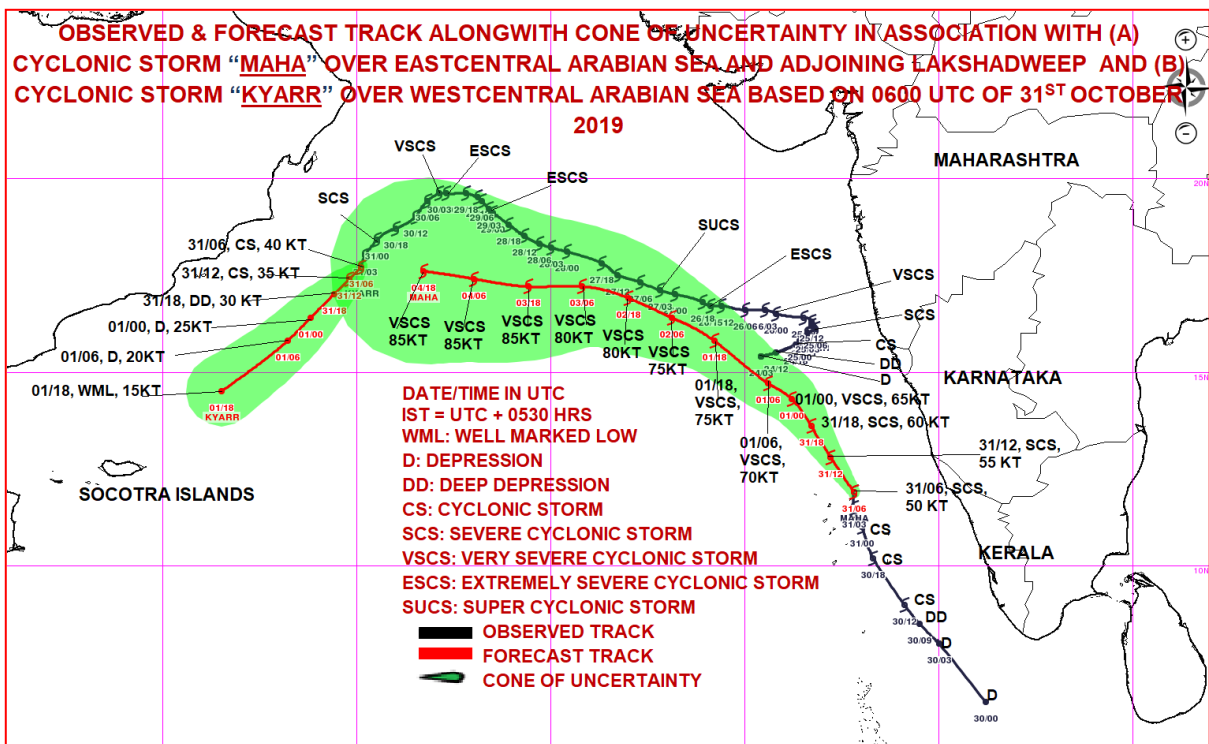
31-10-2019/(1530 to 1556) IST

ARABIAN_SEA



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 (ARB/04/2019) and BULLETIN NO. : 57 (ARB/03/2019)

TIME OF ISSUE: 1900 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea.

BULLETIN NO. : 12 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved north-northwestwards with a speed of 18 kmph during past 06 hours, crossed Lakshadweep Islands and lay centered at 1730 hrs IST of today, the 31st October, 2019 near latitude 12.8°N and longitude 72.4°E over eastcentral Arabian Sea and adjoining Lakshadweep area about 080 km northeast of Cherbaniani Reef (Lakshadweep), 120 km north-northeast of Cheriapani Reef (Lakshadweep), 130 km northeast of Chetlat (Lakshadweep), 190 km north-northeast of Aminidivi (Lakshadweep), 250 km north-northeast of Kavaratti (Lakshadweep), and 400 km west-northwest of Kozhikode (Kerala). It is very likely to move north-northwestwards during next 06 hours. Then, it is very likely to move northwestwards during subsequent 06 hours and thereafter move west-northwestwards. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 24 hours.

Aminidivi reported maximum wind speed of 59 kmph at 1730 hrs IST of today.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/1730	12.8/72.4	90-100 gusting to 110	Severe Cyclonic Storm
31.10.19/2330	13.6/71.7	100-110 gusting to 120	Severe Cyclonic Storm
01.11.19/0530	14.3/71.2	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/1130	14.7/70.6	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/1730	15.3/69.9	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/0530	16.1/68.7	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/1730	16.6/67.6	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/0530	17.0/66.4	135-145 gusting to 160	Very Severe Cyclonic Storm
03.11.19/1730	17.2/65.1	135-145 gusting to 160	Very Severe Cyclonic Storm
04.11.19/0530	17.3/63.7	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1730	17.5/62.3	145-155 gusting to 170	Very Severe Cyclonic Storm
05.11.19/0530	17.7/60.9	150-160 gusting to 175	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Lakshadweep Islands during next 12 hours and isolated heavy to very heavy falls over north Lakshadweep during subsequent 12 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea and adjoining Lakshadweep area around the system centre.
- It is very likely to decrease gradually over Lakshadweep area as the system moves further away from the Islands, becoming 60-70 kmph gusting to 80 kmph by the night of 31st October and 45-55kmph gusting to 65 kmph by 1st November morning.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by midnight of 01st November and 150-160 kmph gusting to 175 kmph by 04th November night.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely along & off Kerala- Karnataka coasts and strong winds, speed reaching 30-40 kmph gusting to 50 kmph along & off Goa- south Maharashtra coasts during next 24 hours.

(iii) Sea condition

- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 12 hours and rough to very rough for subsequent 12 hours.
- Sea conditions will be rough to very rough over eastcentral & adjoining southeast Arabian Sea along & off Karnataka-Kerala coasts and rough along and off Goa – south Maharashtra coast during next 24 hours.
- Sea condition over eastcentral Arabian Sea around the system centre will be high to very high during next 24 hours and phenomenal during subsequent 3 days.

(iv) Storm Surge Warning

- Tidal wave by about 0.5 meter height above the astronomical tides is very likely to inundate low lying areas of north Lakshadweep Islands during next 03 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives during next 12 hours & Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 24 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

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.

(vi) Damage Expected over Lakshadweep Islands during next 06 hours:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 57 (ARB/03/2019)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) over westcentral Arabian Sea

The **Cyclonic Storm 'Kyarr'** over westcentral Arabian Sea moved south-southwestwards with a speed of 07 Kmph during past 06 hrs and lay centred at 1730 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 17.4°N and longitude 59.9°E, about 1380 km west-southwest of Mumbai (Maharashtra), 620 km east-northeast of Salalah (Oman) and 380 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 24 hours. It is very likely to weaken into a Deep Depression during next 06 hours and further into a Depression during subsequent 06 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/1730	17.4/59.9	60-70 gusting to 80	Cyclonic Storm
31.10.19/2330	17.0/59.6	50-60 gusting to 70	Deep Depression
01.11.19/0530	16.4/59.2	40-50 gusting to 60	Depression
01.11.19/1130	15.8/58.7	30-40 gusting to 50	Depression

Warnings:

(i) Wind warning

- Gale wind speed reaching 60-70 kmph gusting to 80 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 40-50 kmph gusting to 60 kmph in the morning of 01st November over westcentral Arabian Sea and 30-40 kmph gusting to 50 kmph by the forenoon of 1st November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is high over westcentral Arabian Sea around the system centre. It will become very rough on 01st November and rough during subsequent 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 2330 hrs IST of 31st October, 2019.

(RK JENAMANI)
Scientist-F, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

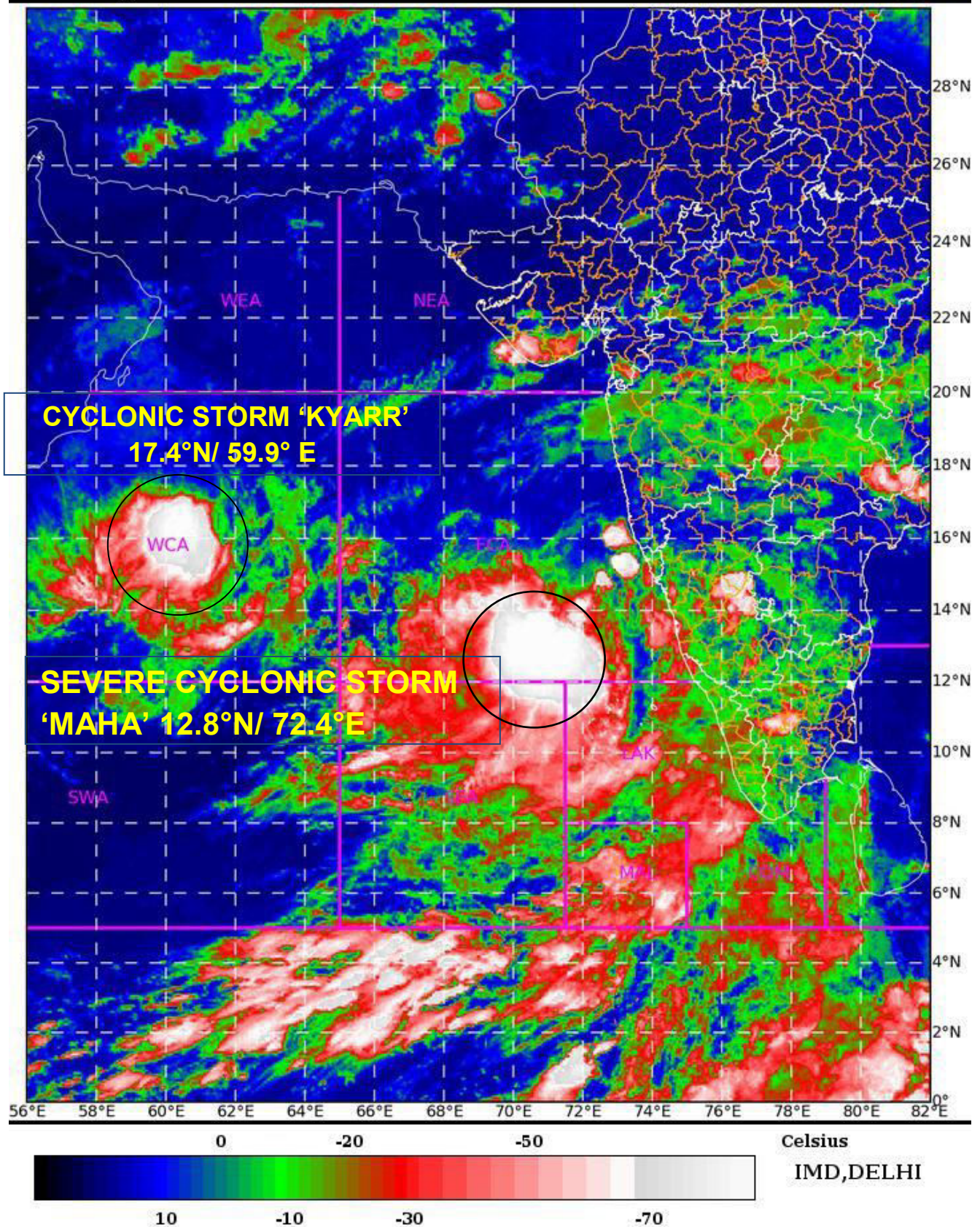
SAT : INSAT-3D IMG

31-10-2019/(1330 to 1356) GMT

IMG_TIR1_TEMP 10.8 um

31-10-2019/(1900 to 1926) IST

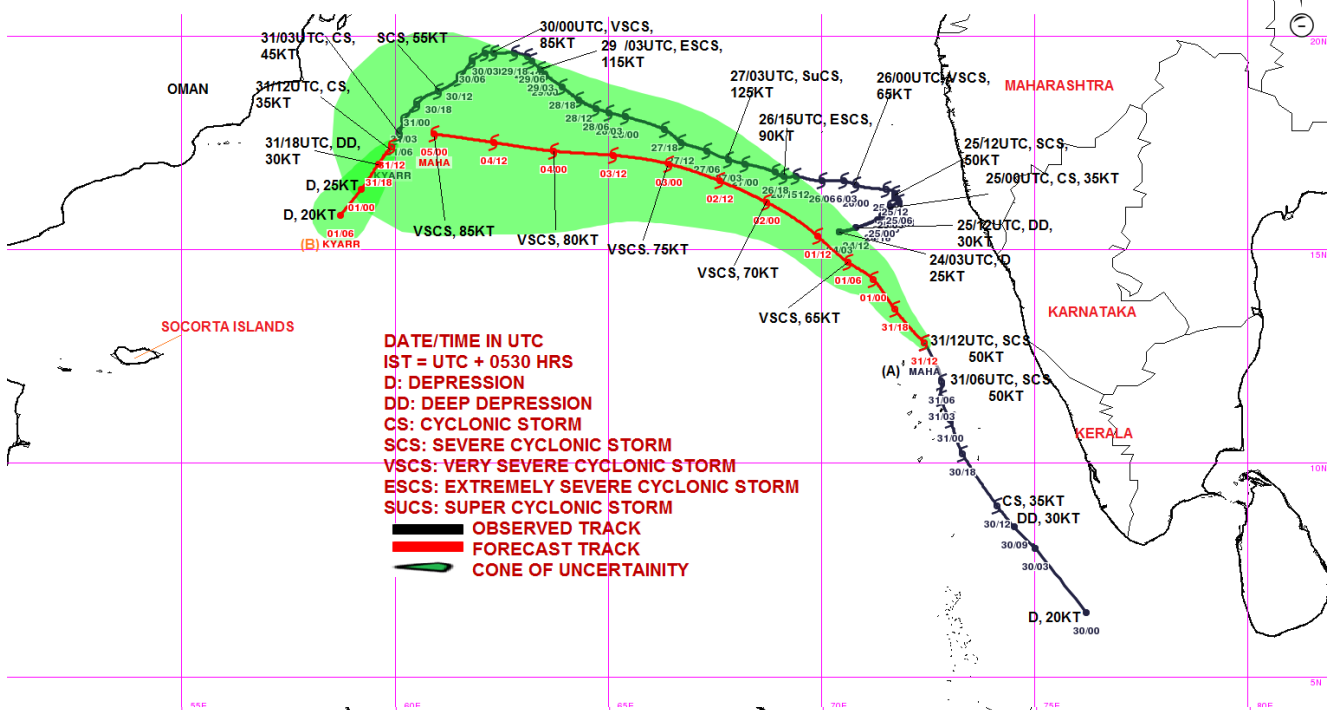
ARABIAN SEA



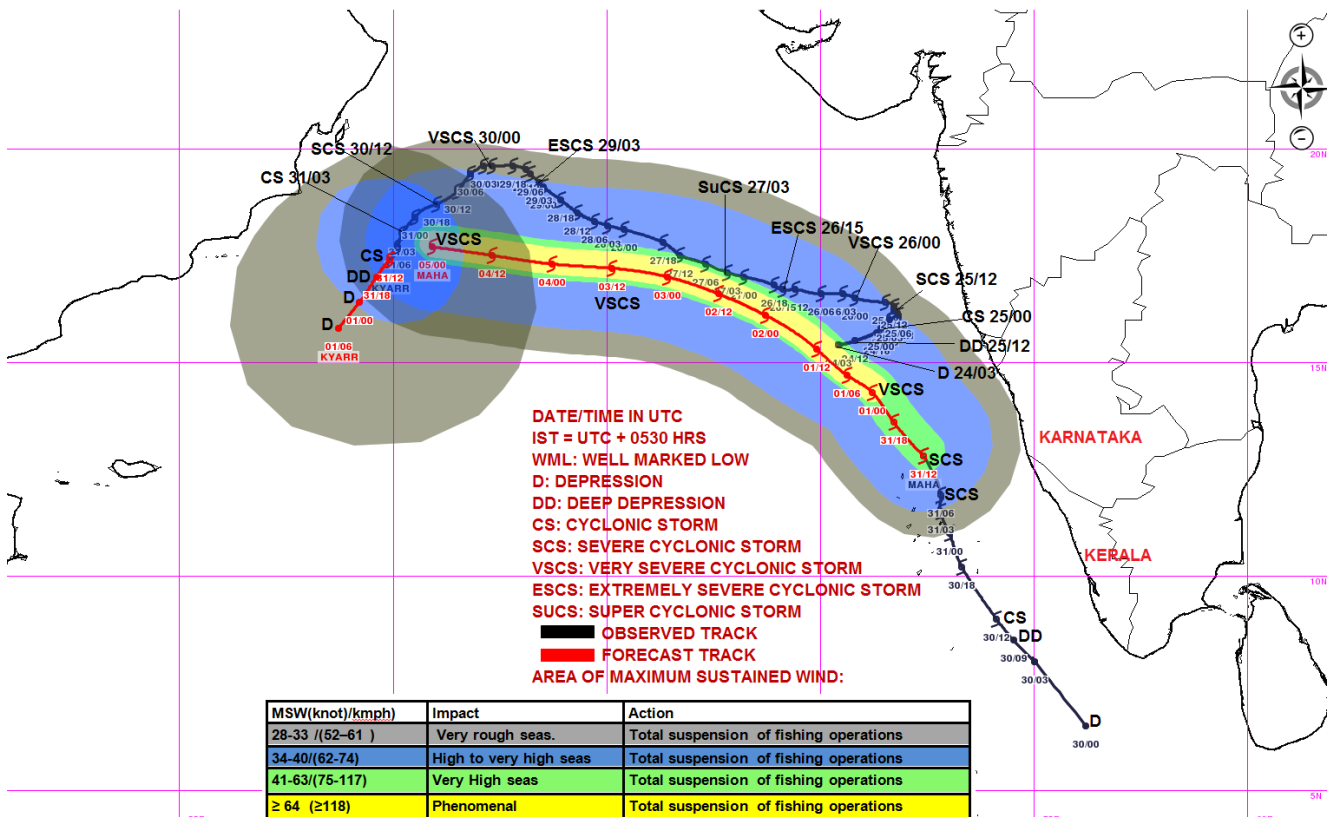
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

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

OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM “MAHA” OVER EASTCENTRAL ARABIAN SEA AND ADJOINING LAKSHADWEEP AREA AND (B) CYCLONIC STORM “KYARR” OVER WESTCENTRAL ARABIAN SEA BASED ON 1200 UTC OF 31ST OCTOBER 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM “MAHA” OVER EASTCENTRAL ARABIAN SEA AND ADJOINING LAKSHADWEEP AREA AND (B) CYCLONIC STORM “KYARR” OVER WESTCENTRAL ARABIAN SEA BASED ON 1200 UTC OF 31ST OCTOBER 2019



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 (ARB/04/2019) and BULLETIN NO. : 58 (ARB/03/2019)

TIME OF ISSUE: 2230 HOURS IST

DATED: 31.10.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) weakened into a Deep Depression over westcentral Arabian Sea.

BULLETIN NO. : 13 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved north-northwestwards with a speed of 21 kmph during past 06 hours, crossed Lakshadweep Islands and lay centered at 2030 hrs IST of today, the 31st October, 2019 near latitude 13.3°N and longitude 72.2°E over eastcentral Arabian Sea and adjoining Lakshadweep area about 110 km north-northwest of Cherbaniani Reef (Lakshadweep), 160 km north-northwest of Cheriapani Reef (Lakshadweep), 190 km north-northwest of Chetlat (Lakshadweep), 250 km north-northwest of Aminidivi (Lakshadweep), 310 km north of Kavaratti (Lakshadweep), and 450 km northwest of Kozhikode (Kerala). It is very likely to move north-northwestwards during next 06 hours. Then, it is very likely to move northwestwards during subsequent 06 hours and thereafter move west-northwestwards. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 24 hours.

Aminidivi reported maximum wind speed of 45 kmph at 2030 hrs IST of today.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/2030	13.3/72.2	95-105 gusting to 115	Severe Cyclonic Storm
31.10.19/2330	13.6/71.7	100-110 gusting to 120	Severe Cyclonic Storm
01.11.19/0530	14.3/71.2	105-115 gusting to 125	Severe Cyclonic Storm
01.11.19/1130	14.7/70.6	110-120 gusting to 130	Very Severe Cyclonic Storm
01.11.19/1730	15.3/69.9	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/0530	16.1/68.7	125-135 gusting to 150	Very Severe Cyclonic Storm
02.11.19/1730	16.6/67.6	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/0530	17.0/66.4	135-145 gusting to 160	Very Severe Cyclonic Storm
03.11.19/1730	17.2/65.1	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/0530	17.3/63.7	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1730	17.5/62.3	145-155 gusting to 170	Very Severe Cyclonic Storm
05.11.19/0530	17.7/60.9	150-160 gusting to 175	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Lakshadweep Islands during next 12 hours and isolated heavy to very heavy falls over north Lakshadweep during subsequent 12 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 95-105 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea and adjoining Lakshadweep area around the system centre.
- It is very likely to decrease gradually over Lakshadweep area as the system moves further away from the Islands, becoming 60-70 kmph gusting to 80 kmph by the night of 31st October and 45-55kmph gusting to 65 kmph by 1st November morning.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by midnight of 01st November and 145-155 kmph gusting to 170 kmph by 04th November night.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely along & off Kerala- Karnataka coasts and strong winds, speed reaching 30-40 kmph gusting to 50 kmph along & off Goa- south Maharashtra coasts during next 24 hours.

(iii) Sea condition

- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 12 hours and rough to very rough for subsequent 12 hours.
- Sea conditions will be rough to very rough over eastcentral & adjoining southeast Arabian Sea along & off Karnataka-Kerala coasts and rough along and off Goa – south Maharashtra coast during next 24 hours.
- Sea condition over eastcentral Arabian Sea around the system centre will be high to very high during next 24 hours and phenomenal during subsequent 3 days.

(v) Fishermen Warning

- Total suspension of fishing operations over Comorin-Maldives during next 12 hours & Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 24 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

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.

(vi) Damage Expected over Lakshadweep Islands during next 06 hours:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 58(ARB/03/2019)

(B) Cyclonic Storm 'Kyarr' (Pronounced as Kyarr) weakened into a Deep Depression over westcentral Arabian Sea

The **Cyclonic Storm 'Kyarr'** over westcentral Arabian Sea moved west-southwestwards with a speed of 09 Kmph during past 06 hrs, weakened into a Deep Depression and lay centred at 2030 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 17.2°N and longitude 59.6°E, about 1410 km west-southwest of Mumbai (Maharashtra), 580 km east-northeast of Salalah (Oman) and 390 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 24 hours. It is very likely to weaken further into a Depression during next 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/2030	17.2/59.6	55-65 gusting to 75	Deep Depression
31.10.19/2330	17.0/59.3	50-60 gusting to 70	Deep Depression
01.11.19/0530	16.4/59.0	40-50 gusting to 60	Depression
01.11.19/1130	15.8/58.7	35-45 gusting to 55	Depression

Warnings:

(i) Wind warning

- Gale wind speed reaching 55-65 kmph gusting to 75 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 40-50 kmph gusting to 60 kmph in the morning of 01st November over westcentral Arabian Sea and 35-45 kmph gusting to 55 kmph by the forenoon of 1st November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is high over westcentral Arabian Sea around the system centre. It will become very rough on 01st November and rough during subsequent 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 0230 hrs IST of 01st November, 2019.

(D.R Pattanaik)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

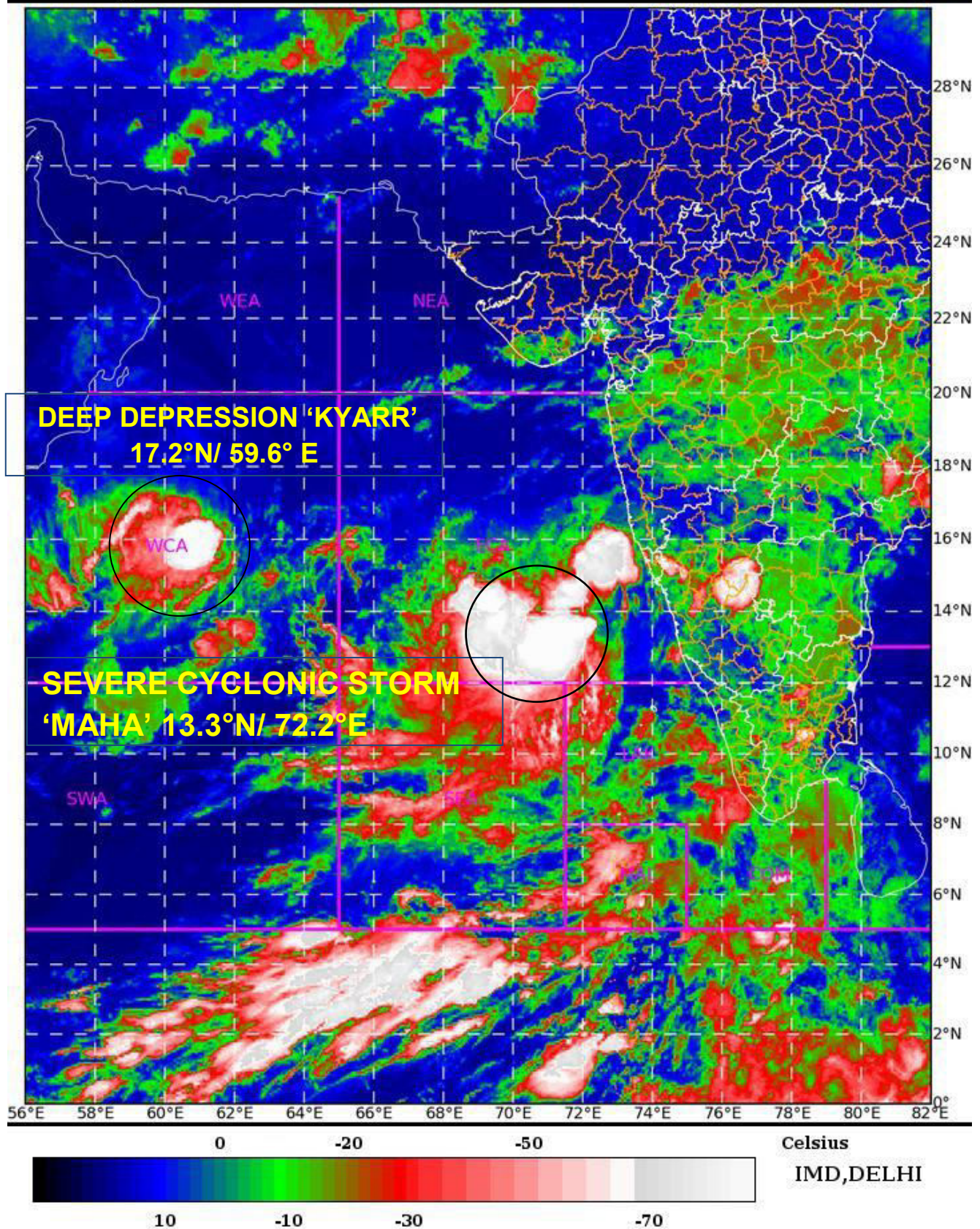
SAT : INSAT-3D IMG

31-10-2019/(1600 to 1626) GMT

IMG_TIR1_TEMP 10.8 um

31-10-2019/(2130 to 2156) IST

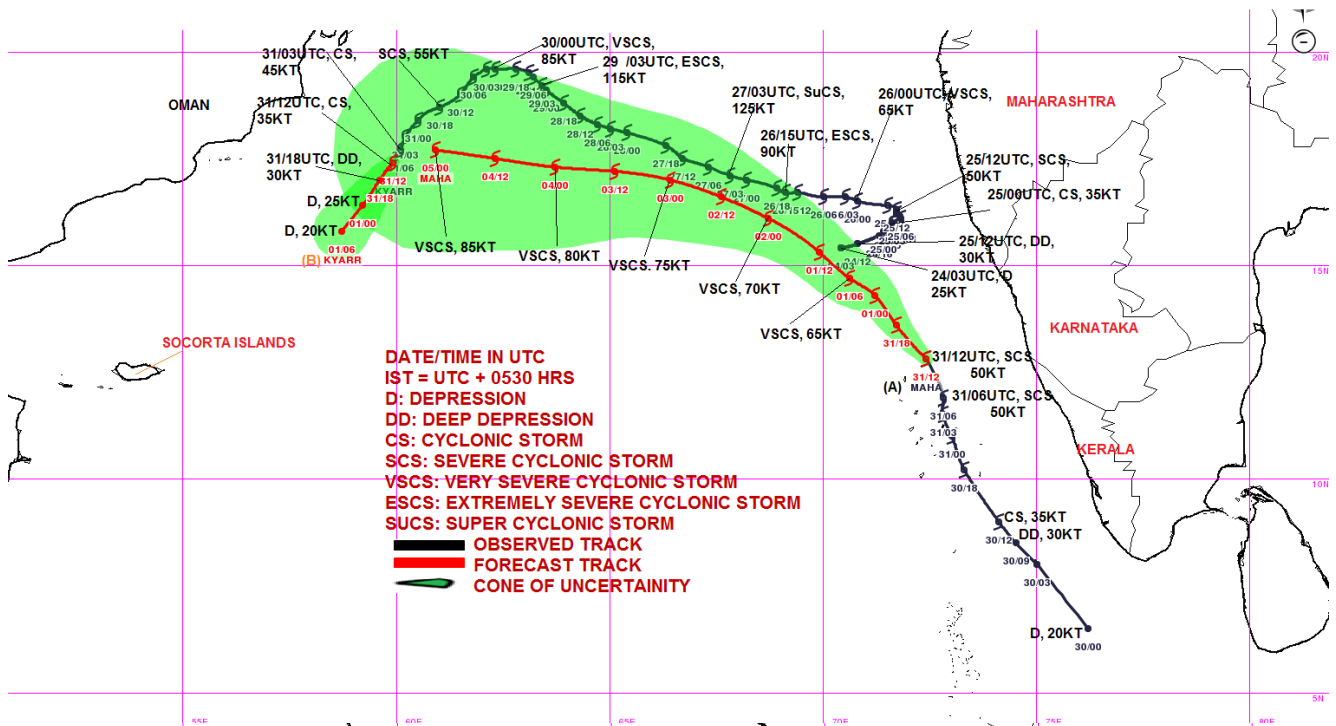
ARABIAN SEA



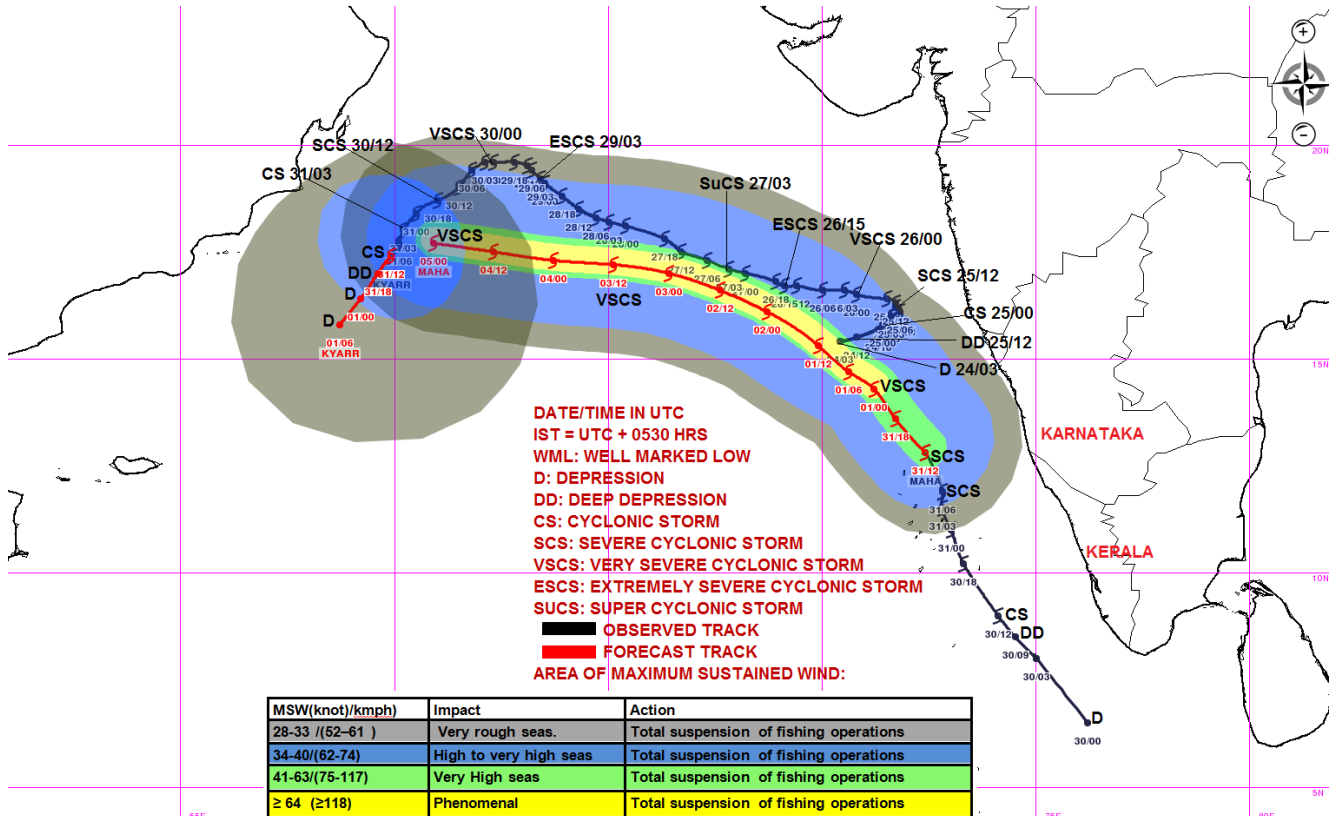
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

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

OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM “MAHA” OVER EASTCENTRAL ARABIAN SEA AND ADJOINING LAKSHADWEEP AREA AND (B) CYCLONIC STORM “KYARR” OVER WESTCENTRAL ARABIAN SEA BASED ON 1200 UTC OF 31ST OCTOBER 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM “MAHA” OVER EASTCENTRAL ARABIAN SEA AND ADJOINING LAKSHADWEEP AREA AND (B) CYCLONIC STORM “KYARR” OVER WESTCENTRAL ARABIAN SEA BASED ON 1200 UTC OF 31ST OCTOBER 2019



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 (ARB/04/2019) and BULLETIN NO. : 59 (ARB/03/2019)

TIME OF ISSUE: 0230 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Deep Depression over westcentral Arabian Sea.

BULLETIN NO. : 14 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved north-northwestwards with a speed of 17 kmph during past 06 hours, and lay centered at 2330 hrs IST of 31st October, 2019 near latitude 13.7°N and longitude 72.1°E over eastcentral Arabian Sea and adjoining Lakshadweep area about 160 km north-northwest of Cherbaniani Reef (Lakshadweep), 200 km north-northwest of Cheriapani Reef (Lakshadweep), 230 km north-northwest of Chetlat (Lakshadweep), 290 km north-northwest of Aminidivi (Lakshadweep), 350 km north of Kavaratti (Lakshadweep), and 470 km northwest of Kozhikode (Kerala). It is very likely to move north-northwestwards during next 06 hours. Then, it is very likely to move northwestwards during subsequent 06 hours and thereafter move west-northwestwards. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 24 hours.

Aminidivi reported maximum wind speed of 35 kmph at 2330 hrs IST of 31st October.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/2330	13.7/72.1	95-105 gusting to 115	Severe Cyclonic Storm
01.11.19/0530	14.4/71.5	105-115 gusting to 125	Severe Cyclonic Storm
01.11.19/1130	14.9/71.0	110-120 gusting to 130	Very Severe Cyclonic Storm
01.11.19/1730	15.4/70.4	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/2330	15.9/69.8	125-135 gusting to 150	Very Severe Cyclonic Storm
02.11.19/1130	16.3/68.5	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/2330	16.8/67.5	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1130	17.1/66.4	135-145 gusting to 160	Very Severe Cyclonic Storm
03.11.19/2330	17.3/65.3	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/1130	17.4/63.5	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/2330	17.7/62.0	145-155 gusting to 170	Very Severe Cyclonic Storm
05.11.19/1130	17.8/60.8	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/2330	17.9/59.7	150-160 gusting to 175	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places over Lakshadweep during next 24 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 95-105 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 110-120 kmph gusting to 130 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by morning of 02nd November and 150-160 kmph gusting to 175 kmph by 05th November morning.
- Wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail over Lakshadweep area during next 06 hours and decrease gradually thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely along & off Kerala- Karnataka coasts and strong winds, speed reaching 30-40 kmph gusting to 50 kmph along & off Goa- south Maharashtra coasts during next 24 hours.

(iii) Sea condition

- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 12 hours and rough to very rough for subsequent 12 hours.
- Sea conditions will be rough to very rough over eastcentral & adjoining southeast Arabian Sea along & off Karnataka-Kerala coasts and rough along and off Goa – south Maharashtra coast during next 24 hours.
- Sea condition over eastcentral Arabian Sea around the system centre will be high to very high during next 24 hours and phenomenal during subsequent 3 days.

(v) Fishermen Warning

- Total suspension of fishing operations over Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 12 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

(vi) Damage Expected over Lakshadweep Islands during next 06 hours:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Damage to power and communication lines.

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.

- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of trees. Damage to banana and papaya trees. Dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

BULLETIN NO. : 59(ARB/03/2019)

(B) Deep Depression over westcentral Arabian Sea

The Deep Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 12 Kmph during past 06 hrs and lay centred at 2330 hrs IST of 31st October, 2019 over westcentral Arabian Sea near latitude 16.8°N and longitude 59.6°E, about 1420 km west-southwest of Mumbai (Maharashtra), 590 km east-northeast of Salalah (Oman) and 430 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 24 hours. It is very likely to weaken further into a Depression during next 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
31.10.19/2330	16.8/59.6	55-65 gusting to 75	Deep Depression
01.11.19/0530	16.4/59.2	50-60 gusting to 70	Deep Depression
01.11.19/1130	16.0/58.9	45-55 gusting to 65	Depression
01.11.19/1730	15.6/58.6	40-50 gusting to 60	Depression
01.11.19/2330	15.0/58.3	40-50 gusting to 60	Depression
02.11.19/1130	14.4/58.0	30-40 gusting to 50	Depression

Warnings:

(i) Wind warning

- Gale wind speed reaching 55-65 kmph gusting to 75 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 50-60 kmph gusting to 70 kmph in the morning of 01st November over westcentral Arabian Sea and 40-50 kmph gusting to 60 kmph by the evening of 1st November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is high over westcentral Arabian Sea around the system centre. It will become very rough on 01st November and rough during subsequent 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 0530 hrs IST of 01st November, 2019.

(D.R Pattanaik)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

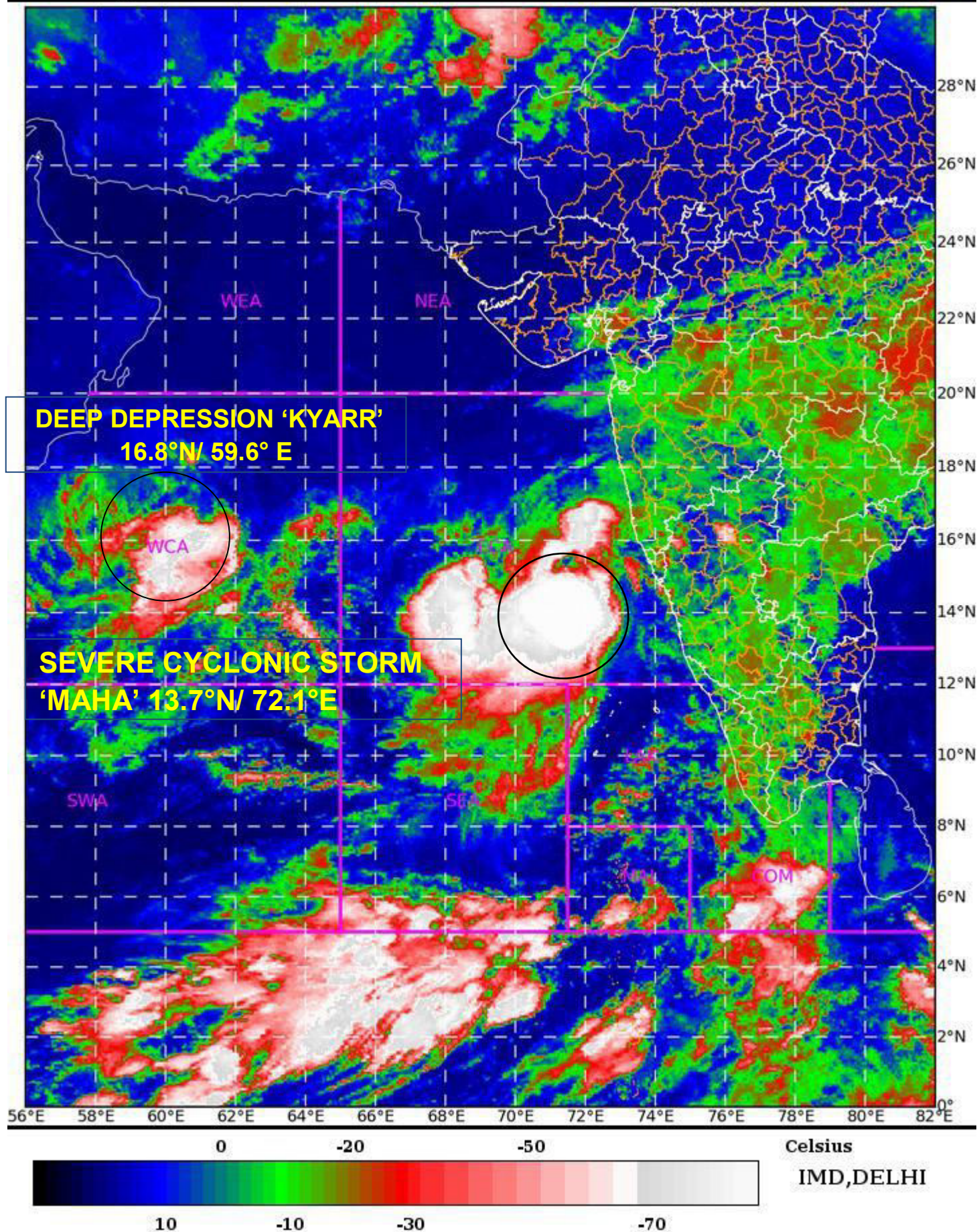
SAT : INSAT-3D IMG

31-10-2019/(2004 to 2026) GMT

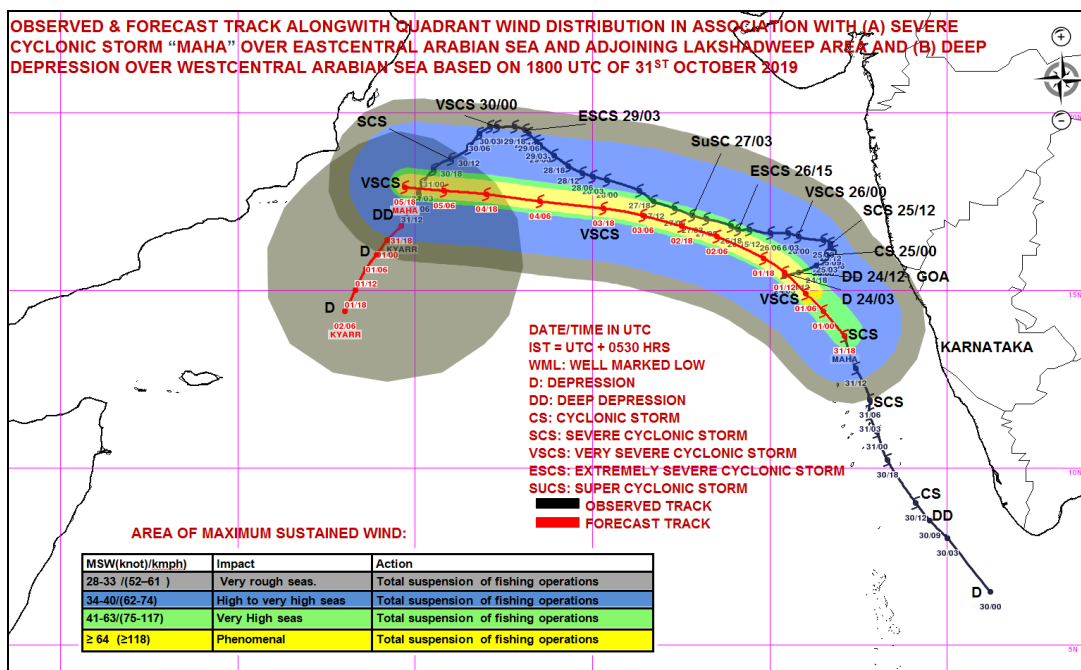
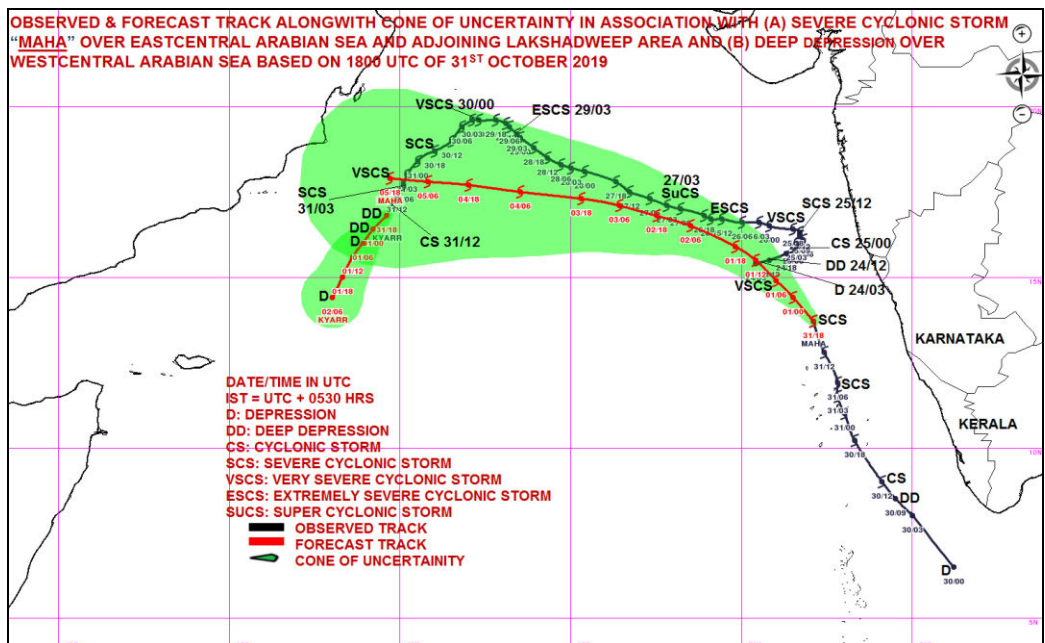
IMG_TIR1_TEMP 10.8 um

01-11-2019/(0134 to 0156) IST

ARABIAN_SEA



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 (ARB/04/2019) and BULLETIN NO. : 60 (ARB/03/2019)

TIME OF ISSUE: 0445 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

(B) Deep Depression over westcentral Arabian Sea.

BULLETIN NO. : 15 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area: CYCLONE WARNING FOR LAKSHADWEEP ISLANDS (RED MESSAGE)

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved north-northwestwards with a speed of 12 kmph during past 06 hours, and lay centered at 0230 hrs IST of 01st November, 2019 near latitude 13.9°N and longitude 72.0°E over eastcentral Arabian Sea and adjoining Lakshadweep area about 180 km north-northwest of Cherbaniani Reef (Lakshadweep), 220 km north-northwest of Cheriapani Reef (Lakshadweep), 260 km north-northwest of Chetlat (Lakshadweep), 320 km north-northwest of Aminidivi (Lakshadweep), 380 km north of Kavaratti (Lakshadweep), and 500 km northwest of Kozhikode (Kerala). It is very likely to move north-northwestwards during next 06 hours. Then, it is very likely to move northwestwards during subsequent 06 hours and thereafter move west-northwestwards. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea 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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/0230	13.9/72.0	95-105 gusting to 115	Severe Cyclonic Storm
01.11.19/0530	14.4/71.5	105-115 gusting to 125	Severe Cyclonic Storm
01.11.19/1130	14.9/71.0	110-120 gusting to 130	Very Severe Cyclonic Storm
01.11.19/1730	15.4/70.4	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/2330	15.9/69.8	125-135 gusting to 150	Very Severe Cyclonic Storm
02.11.19/1130	16.3/68.5	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/2330	16.8/67.5	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1130	17.1/66.4	135-145 gusting to 160	Very Severe Cyclonic Storm
03.11.19/2330	17.3/65.3	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/1130	17.4/63.5	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/2330	17.7/62.0	145-155 gusting to 170	Very Severe Cyclonic Storm
05.11.19/1130	17.8/60.8	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/2330	17.9/59.7	150-160 gusting to 175	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy falls at isolated places over Lakshadweep during next 24 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Kerala, coastal Karnataka and south Tamil Nadu during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 95-105 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 110-120 kmph gusting to 130 kmph by 1st November Morning, 130-140 kmph gusting to 155 kmph likely over eastcentral Arabian Sea by morning of 02nd November and 150-160 kmph gusting to 175 kmph by 05th November morning.
- Wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail over Lakshadweep area during next 06 hours and decrease gradually thereafter.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely along & off Kerala- Karnataka coasts and strong winds, speed reaching 30-40 kmph gusting to 50 kmph along & off Goa- south Maharashtra coasts during next 24 hours.

(iii) Sea condition

- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be high to very high during next 12 hours and rough to very rough for subsequent 12 hours.
- Sea conditions will be rough to very rough over eastcentral & adjoining southeast Arabian Sea along & off Karnataka-Kerala coasts and rough along and off Goa – south Maharashtra coast during next 24 hours.
- Sea condition over eastcentral Arabian Sea around the system centre will be high to very high during next 24 hours and phenomenal during subsequent 3 days.

(v) Fishermen Warning

- Total suspension of fishing operations over Lakshadweep area and adjoining southeast Arabian Sea and along & off Kerala-Karnataka coasts during next 12 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 4th November, 2019.

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.

BULLETIN NO. : 60 (ARB/03/2019)**(B) Deep Depression over westcentral Arabian Sea**

The Deep Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 09 Kmph during past 06 hrs and lay centred at 0230 hrs IST of 01st November, 2019 over westcentral Arabian Sea near latitude 16.7°N and longitude 59.5°E, about 1430 km west-southwest of Mumbai (Maharashtra), 580 km east-northeast of Salalah (Oman) and 440 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 24 hours. It is very likely to weaken further into a Depression during next 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/0230	16.7/59.5	55-65 gusting to 75	Deep Depression
01.11.19/0530	16.4/59.2	50-60 gusting to 70	Deep Depression
01.11.19/1130	16.0/58.9	45-55 gusting to 65	Depression
01.11.19/1730	15.6/58.6	40-50 gusting to 60	Depression
01.11.19/2330	15.0/58.3	40-50 gusting to 60	Depression
02.11.19/1130	14.4/58.0	30-40 gusting to 50	Depression

Warnings:**(i) Wind warning**

- Gale wind speed reaching 55-65 kmph gusting to 75 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce gradually becoming 50-60 kmph gusting to 70 kmph in the morning of 01st November over westcentral Arabian Sea and 40-50 kmph gusting to 60 kmph by the evening of 1st November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is high over westcentral Arabian Sea around the system centre. It will become very rough on 01st November and rough during subsequent 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 24 hours.

The next bulletin will be issued at 0830 hrs IST of 01st November, 2019.

(D.R Pattanaik)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

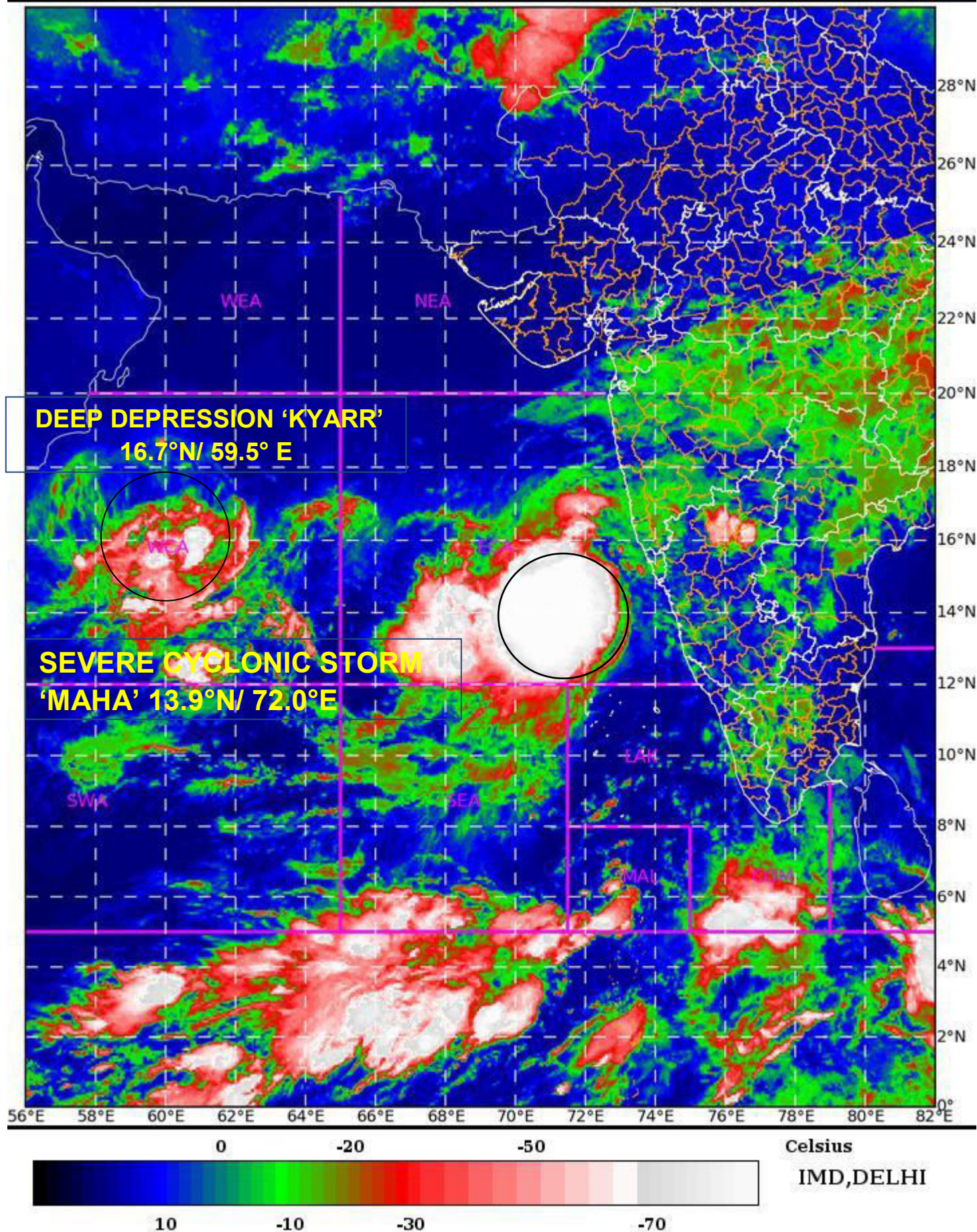
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31-10-2019/(2200 to 2226) GMT

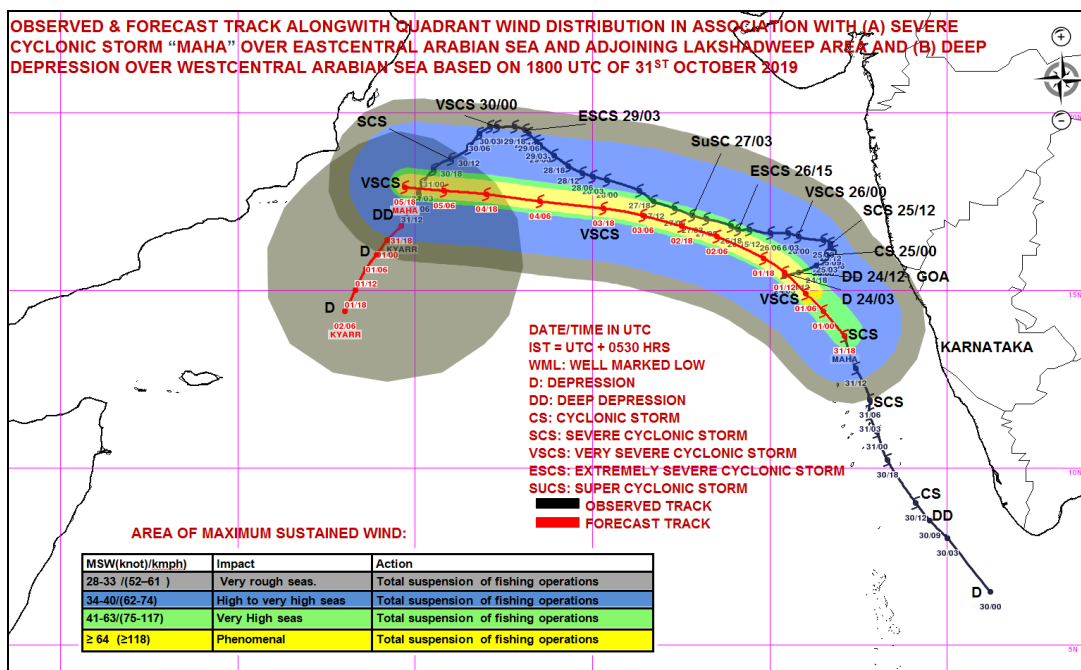
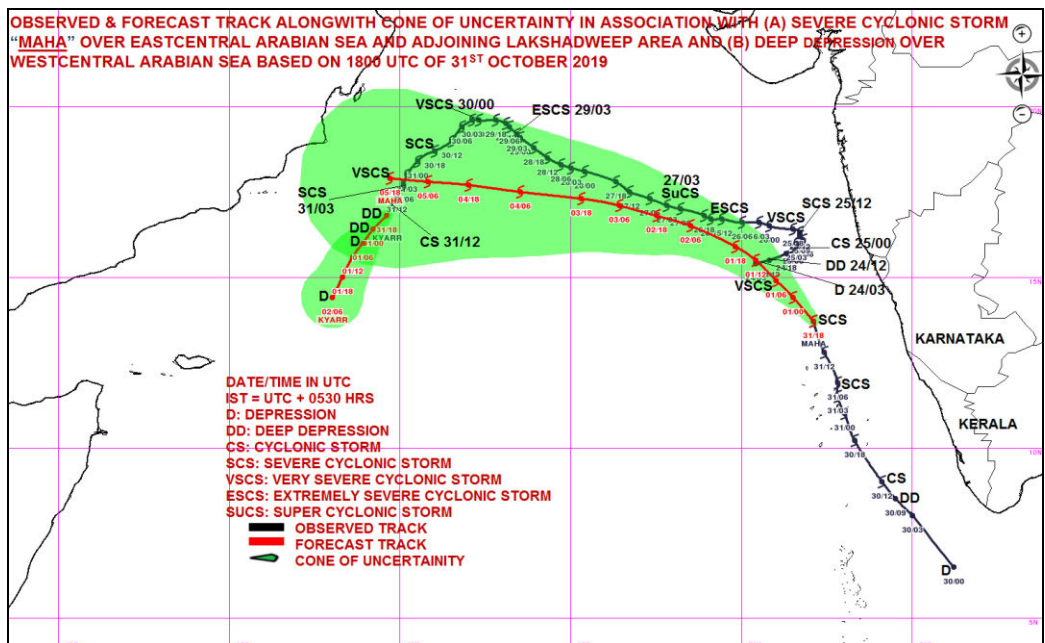
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01-11-2019/(0330 to 0356) IST

ARABIAN_SEA



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 (ARB/04/2019) and BULLETIN NO. : 61 (ARB/03/2019)

TIME OF ISSUE: 0900 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

(B) Depression over westcentral Arabian Sea.

BULLETIN NO. : 16 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved north-northwestwards with a speed of 17 kmph during past 06 hours, and lay centered at 0530 hrs IST of 01st November, 2019 near latitude 14.6°N and longitude 71.7°E over eastcentral Arabian Sea about 300 km north of Cheriapani Reef (Lakshadweep), 400 km north-northwest of Aminidivi (Lakshadweep) and 390 km west-northwest of Mangaluru (Karnataka). It is very likely to move north-northwestwards during next 06 hours. Then, it is very likely to move northwestwards during subsequent 06 hours and thereafter move west-northwestwards. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 12 hours.

No adverse weather likely over Lakshadweep Islands as the cyclonic storm 'MAHA' has moved further away from the Islands.

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/0530	14.6/71.7	100-110 gusting to 120	Severe Cyclonic Storm
01.11.19/1130	15.2/71.2	110-120 gusting to 130	Severe Cyclonic Storm
01.11.19/1730	15.8/70.4	120-130 gusting to 145	Very Severe Cyclonic Storm
01.11.19/2330	16.3/69.8	125-135 gusting to 150	Very Severe Cyclonic Storm
02.11.19/0530	16.8/69.3	130-140 gusting to 155	Very Severe Cyclonic Storm
02.11.19/1730	17.3/68.3	135-145 gusting to 160	Very Severe Cyclonic Storm
03.11.19/0530	17.7/67.5	140-150 gusting to 165	Very Severe Cyclonic Storm
03.11.19/1730	18.0/66.7	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/0530	18.2/65.8	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1730	18.4/65.1	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/0530	18.6/64.6	145-155 gusting to 170	Very Severe Cyclonic Storm
05.11.19/1730	18.8/64.0	140-150 gusting to 165	Very Severe Cyclonic Storm
06.11.19/0530	19.0/63.5	135-145 gusting to 160	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 100-110 kmph gusting to 120 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by 1st November Evening and 150-160 kmph gusting to 175 kmph over eastcentral adjoining westcentral Arabian Sea by 04th November evening.
- Wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail over Lakshadweep area during next 06 hours and decrease gradually thereafter.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Karnataka, Goa- Maharashtra coasts during next 24 hours.

(iii) Sea condition

- Sea conditions is high to very high over eastcentral Arabian Sea during next 12 hours and will become phenomenal from today evening for subsequent 04 days and over eastcentral and adjoining west central Arabian Sea on 5th November.
- Sea conditions over Lakshadweep area and adjoining southeast Arabian Sea will be rough to very rough for next 12 hours.

(v) Fishermen Warning

- Total suspension of fishing operations over Lakshadweep area and adjoining southeast Arabian Sea during next 06 hours and along & off Karnataka-Goa- Maharashtra coasts during next 24 hours.
- The fishermen are advised not to venture over eastcentral Arabian Sea till 6th November, 2019 and over west eastcentral Arabian Sea from 04th November onwards.

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.

BULLETIN NO. : 61 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Deep Depression over westcentral Arabian Sea moved southwestwards with a speed of 06 Kmph during past 06 hrs, weakened into a Depression and lay centred at 0530 hrs IST of 01st November, 2019 over westcentral Arabian Sea near latitude 16.4°N and longitude 59.5°E, about 1440 km west-southwest of Mumbai (Maharashtra), 580 km east-northeast of Salalah (Oman) and 470 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea during next 12 hours. It is very likely to weaken further into a Well Marked Low Pressure Area during next 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/0530	16.4/59.5	45-55 gusting to 65	Depression
01.11.19/1130	16.1/59.4	40-50 gusting to 60	Depression
01.11.19/1730	15.8/59.3	15-25 gusting to 35	Well Marked Low Pressure Area

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph by forenoon of 01st November over westcentral Arabian Sea and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough by the forenoon of 01st November and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 1130 hrs IST of 01st November, 2019.

(D.R Pattanaik)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

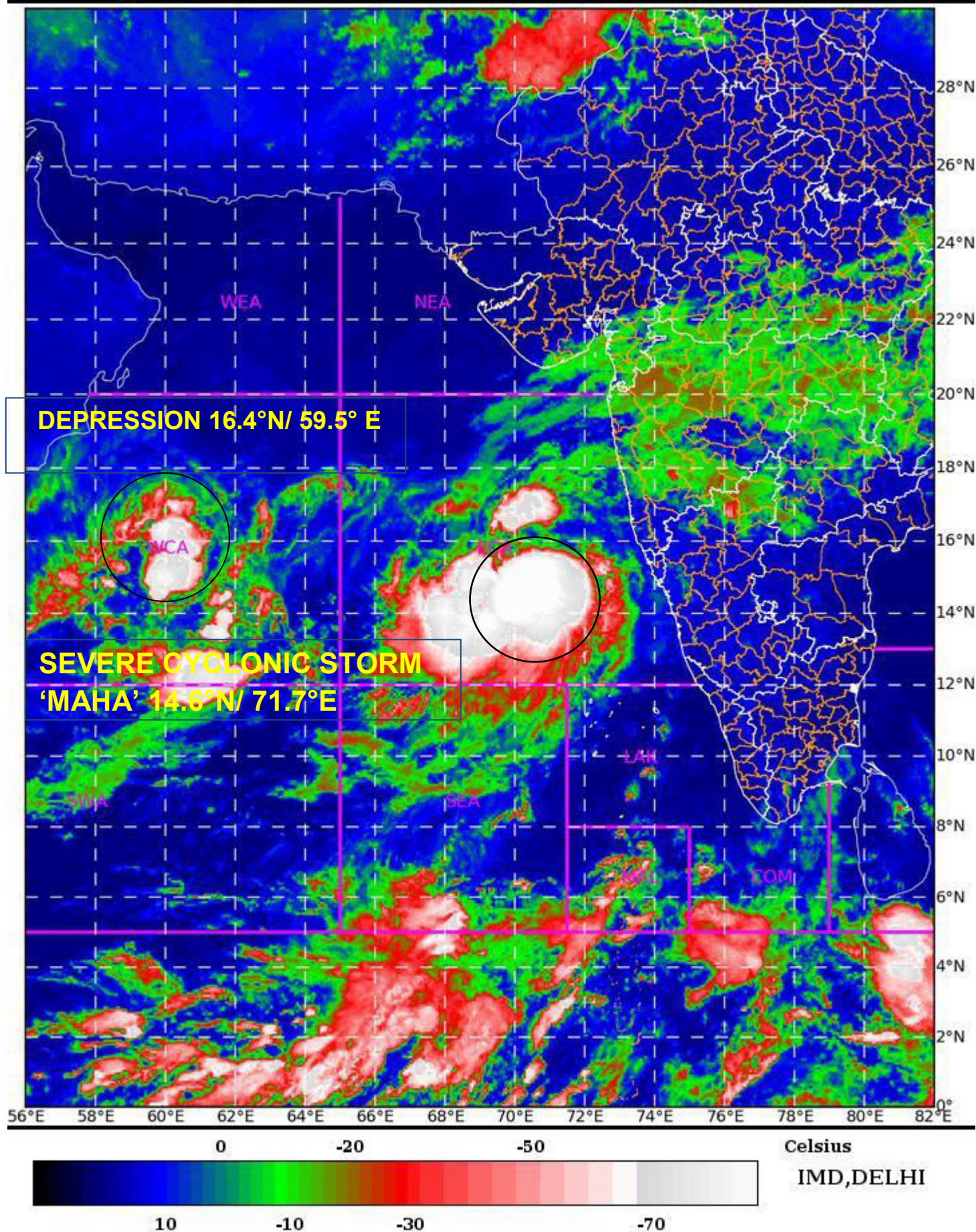
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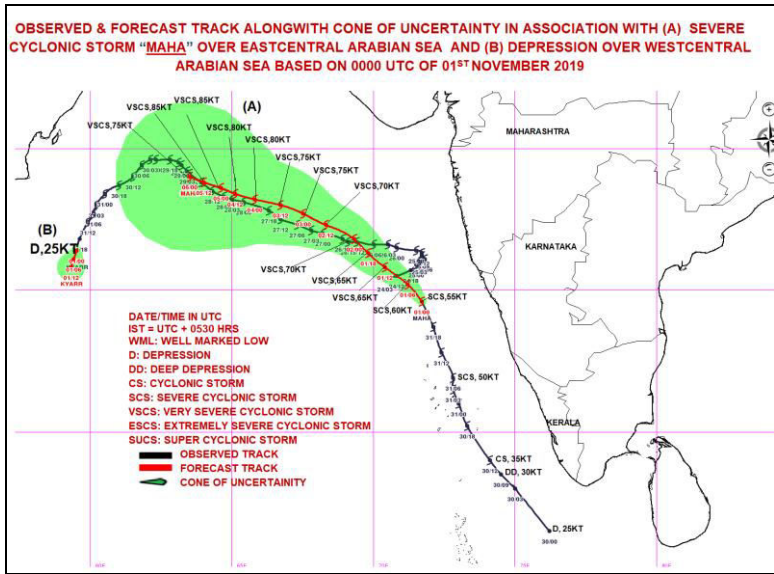
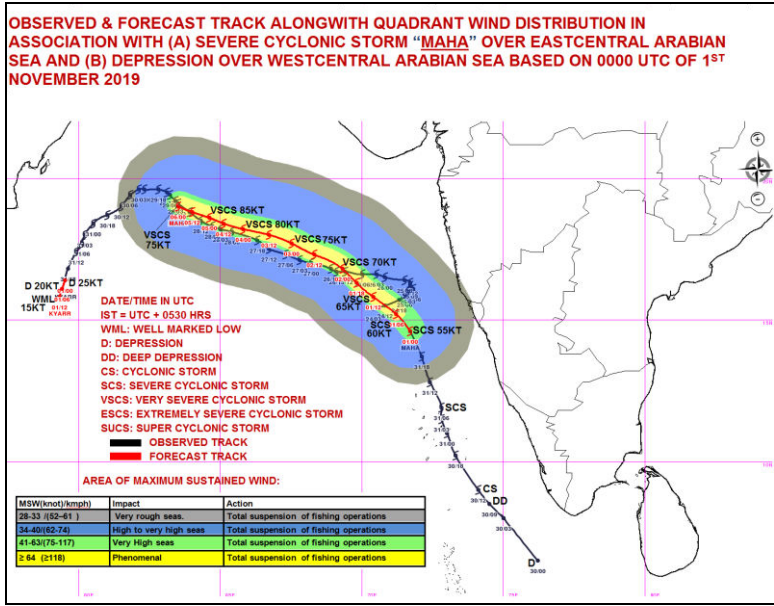
01-11-2019/(0200 to 0226) GMT

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01-11-2019/(0730 to 0756) IST

ARABIAN_SEA





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 (ARB/04/2019) and BULLETIN NO. : 62 (ARB/03/2019)

TIME OF ISSUE: 1130 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

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ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

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CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

(B) Depression over westcentral Arabian Sea.

BULLETIN NO. : 17 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved northwestwards with a speed of 24 kmph during past 06 hours, and lay centered at 0830 hrs IST of 01st November, 2019 near latitude 14.8°N and longitude 71.0°E over eastcentral Arabian Sea about 450 km north-northwest of Aminidivi (Lakshadweep), 460 km north-northwest of Mangaluru (Karnataka) and 310 km south-southwest of Goa. It is very likely to move northwestwards during next 06 hours and thereafter move west-northwestwards till 5th November morning and recurve northeastwards subsequently. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 12 hours.

(continued on next page)

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/0830	14.8/71.0	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/1130	15.2/70.5	105-115 gusting to 130	Severe Cyclonic Storm
01.11.19/1730	15.7/70.1	115-125 gusting to 140	Very Severe Cyclonic Storm
01.11.19/2330	16.1/69.6	115-125 gusting to 140	Very Severe Cyclonic Storm
02.11.19/0530	16.5/69.1	125-135 gusting to 150	Very Severe Cyclonic Storm
02.11.19/1730	17.1/68.3	125-135 gusting to 150	Very Severe Cyclonic Storm
03.11.19/0530	17.5/67.5	135-145 gusting to 160	Very Severe Cyclonic Storm
03.11.19/1730	17.8/66.7	135-145 gusting to 160	Very Severe Cyclonic Storm
04.11.19/0530	18.0/65.4	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1730	18.4/64.3	145-155 gusting to 170	Very Severe Cyclonic Storm
05.11.19/0530	18.8/64.0	155-165 gusting to 180	Very Severe Cyclonic Storm
05.11.19/1730	19.3/64.5	145-155 gusting to 170	Very Severe Cyclonic Storm
06.11.19/0530	19.8/65.5	135-145 gusting to 160	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 100-110 kmph gusting to 125 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 115-125 kmph gusting to 140 kmph by the evening of 1st November and 155-166 kmph gusting to 180 kmph over eastcentral adjoining westcentral Arabian Sea by 05th November morning.
- Gale wind speed reaching 115-125 kmph gusting to 140 kmph likely to commence over west-central Arabian Sea from the morning of 4th November, becoming 155-165 kmph gusting to 180 kmph by the morning of 5th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Karnataka, Goa- Maharashtra coasts during next 24 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 12 hours and will become phenomenal from today evening for subsequent 04 days and over eastcentral and adjoining west central Arabian Sea from 5th November.
- Sea condition over Lakshadweep area and adjoining southeast Arabian Sea will be rough to very rough for next 12 hours.

(v) Fishermen Warning

- The fishermen are advised not to venture sea along & off Karnataka-Goa- Maharashtra coasts during next 24 hours and into eastcentral Arabian Sea till 6th November, 2019 and over west eastcentral Arabian Sea from 04th November onwards.

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.

BULLETIN NO. : 62 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved southwestwards with a speed of 11 kmph during past 6 hours and lay centred at 0830 hrs IST of today, the 01st November, 2019 over westcentral Arabian Sea near latitude 16.3°N and longitude 59.0°E, about 1490 km west-southwest of Mumbai (Maharashtra), 540 km east-northeast of Salalah (Oman) and 480 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea and weaken into a Well Marked Low Pressure Area during next 12 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/0830	16.3/59.0	45-55 gusting to 65	Depression
01.11.19/1130	16.1/58.7	40-50 gusting to 60	Depression
01.11.19/1730	15.7/58.1	15-25 gusting to 35	Well Marked Low Pressure Area

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph during next 6 hours and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough during next 6 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 1430 hrs IST of 01st November, 2019.

(Sunitha Devi S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

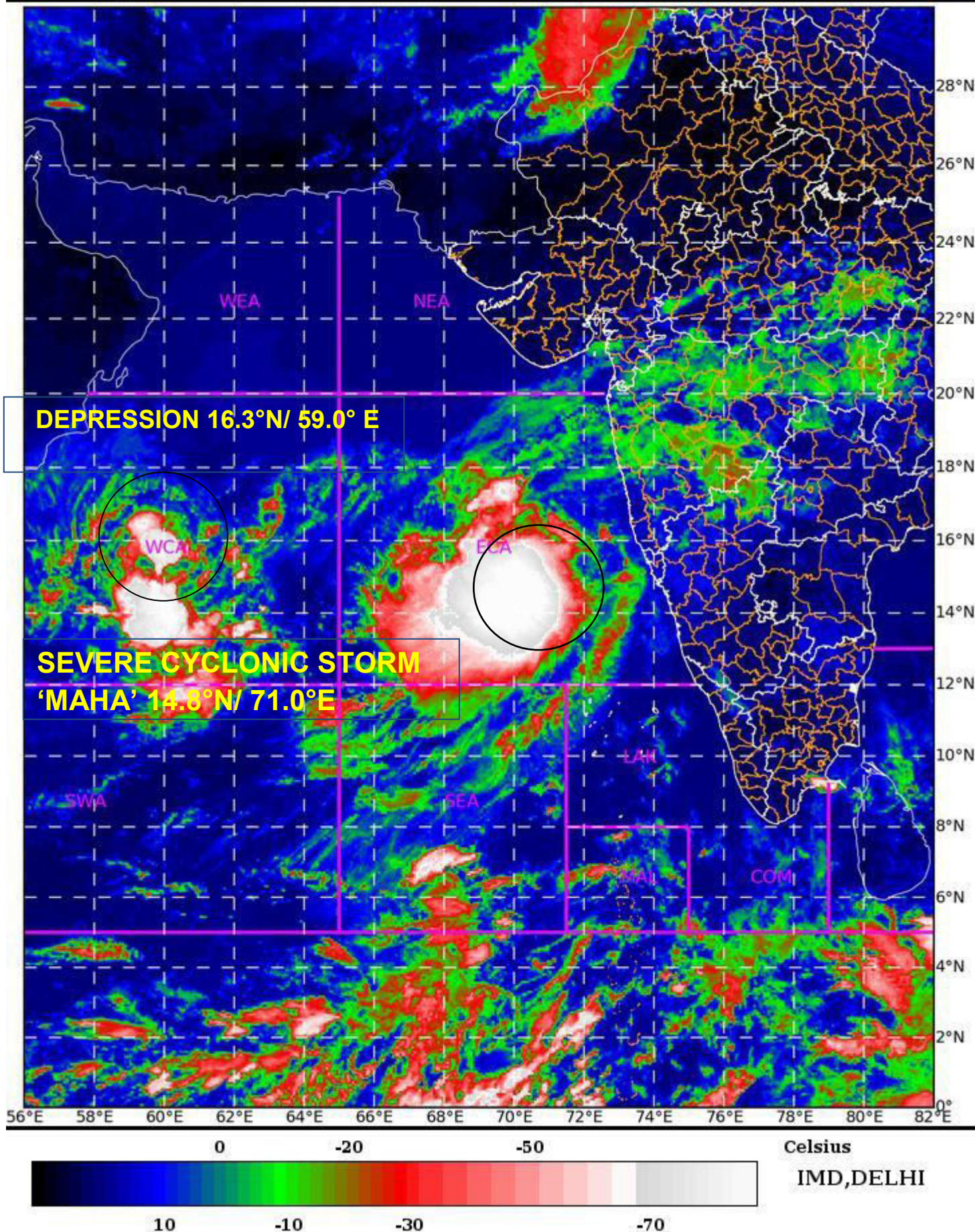
SAT : INSAT-3D IMG

01-11-2019/(0500 to 0526) GMT

IMG_TIR1_TEMP 10.8 um

01-11-2019/(1030 to 1056) IST

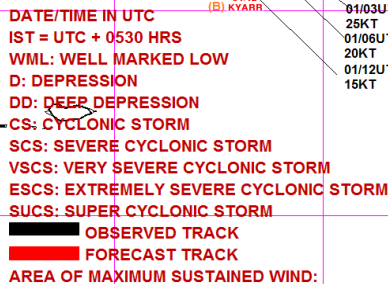
ARABIAN_SEA



2019



0300 UTC OF 1ST NOVEMBER 2019



MSW(knot)/kmph	Impact	Action
28-33 (/52-61)	Very rough seas.	Total suspension of fishing operations
34-40(62-74)	High to very high seas	Total suspension of fishing operations
41-63/(75-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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 (ARB/04/2019) and BULLETIN NO. : 63 (ARB/03/2019)

TIME OF ISSUE: 1450 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

(B) Depression over westcentral Arabian Sea.

BULLETIN NO. : 18 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea continued to move northwestwards with a speed of 24 kmph during past 06 hours, and lay centered at 1130 hrs IST of today, the 01st November, 2019 over eastcentral Arabian Sea near latitude 15.2°N and longitude 70.5°E, about 640 km south of Veraval (Gujarat), 530 km north-northwest of Mangaluru (Karnataka) and 350 km west-southwest of Goa. It is very likely to move northwestwards during next 24 hours, west-northwestwards during 02nd to 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 24 hours.

(continued on next page)

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/1130	15.2/70.5	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/1730	15.7/70.1	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/2330	16.1/69.6	110-120 gusting to 135	Severe Cyclonic Storm
02.11.19/0530	16.5/69.1	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/1130	17.0/68.7	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/2330	17.7/67.9	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1130	18.0/67.1	140-150 gusting to 165	Very Severe Cyclonic Storm
03.11.19/2330	18.2/66.3	150-160 gusting to 175	Very Severe Cyclonic Storm
04.11.19/1130	18.5/65.6	160-170 gusting to 185	Very Severe Cyclonic Storm
04.11.19/2330	19.0/65.0	160-170 gusting to 185	Very Severe Cyclonic Storm
05.11.19/1130	19.4/65.1	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/2330	19.7/66.0	150-160 gusting to 175	Very Severe Cyclonic Storm
06.11.19/1130	20.0/67.4	140-150 gusting to 165	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 100-110 kmph gusting to 125 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 115-125 kmph gusting to 140 kmph by the evening of 1st November and 155-165 kmph gusting to 180 kmph over eastcentral, adjoining westcentral and northeast Arabian Sea by 05th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Goa-Maharashtra coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast and adjoining from 6th November morning.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 18 hours and will become phenomenal from 02nd November morning for subsequent 04 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 4th to 6th November.

(v) Fishermen Warning

- The fishermen are advised not to venture sea along & off Goa- Maharashtra coasts during next 24 hours and into eastcentral Arabian Sea till 6th November, 2019 and over westcentral and northeast Arabian Sea from 03rd November onwards.

BULLETIN NO. : 63 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved southwestwards with a speed of 16 kmph during past 6 hours and lay centred at 1130 hrs IST of today, the 01st November, 2019 over westcentral Arabian Sea near latitude 16.0°N and longitude 58.7°E, about 1530 km west-southwest

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.

of Mumbai (Maharashtra), 510 km east-northeast of Salalah (Oman) and 510 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea and weaken into a Well Marked Low Pressure Area during next 12 hours.

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph during next 6 hours and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough during next 6 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 1730 hrs IST of 01st November, 2019.

(Sunitha Devi S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

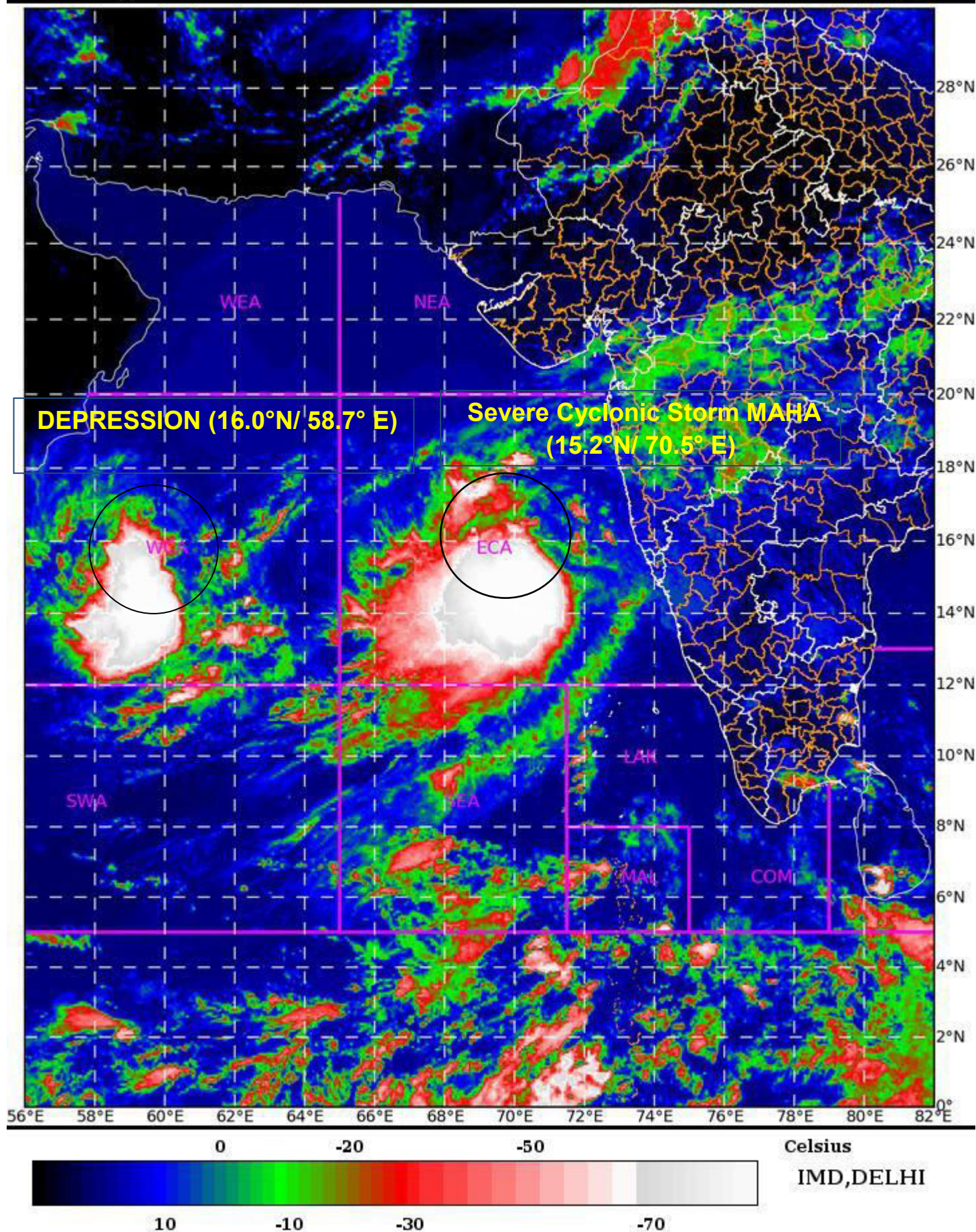
SAT : INSAT-3D IMG

01-11-2019/(0800 to 0827) GMT

IMG_TIR1_TEMP 10.8 um

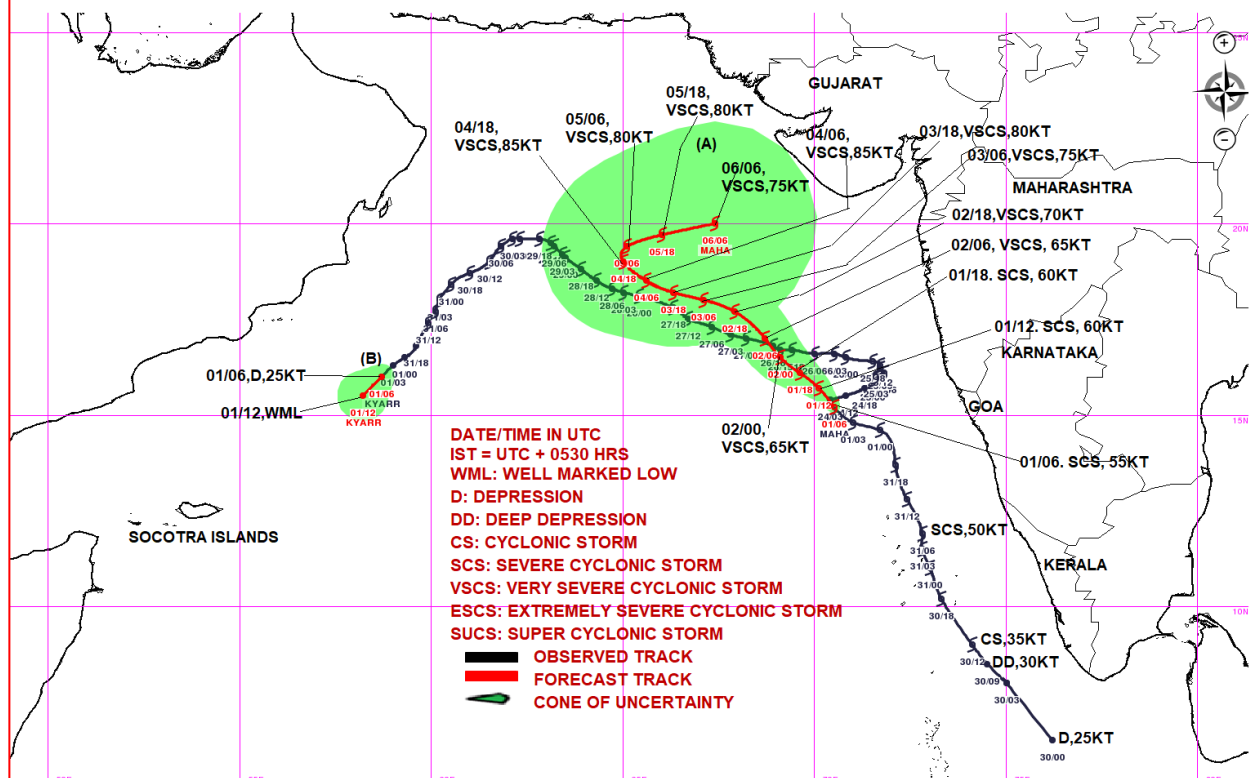
01-11-2019/(1330 to 1357) IST

ARABIAN_SEA

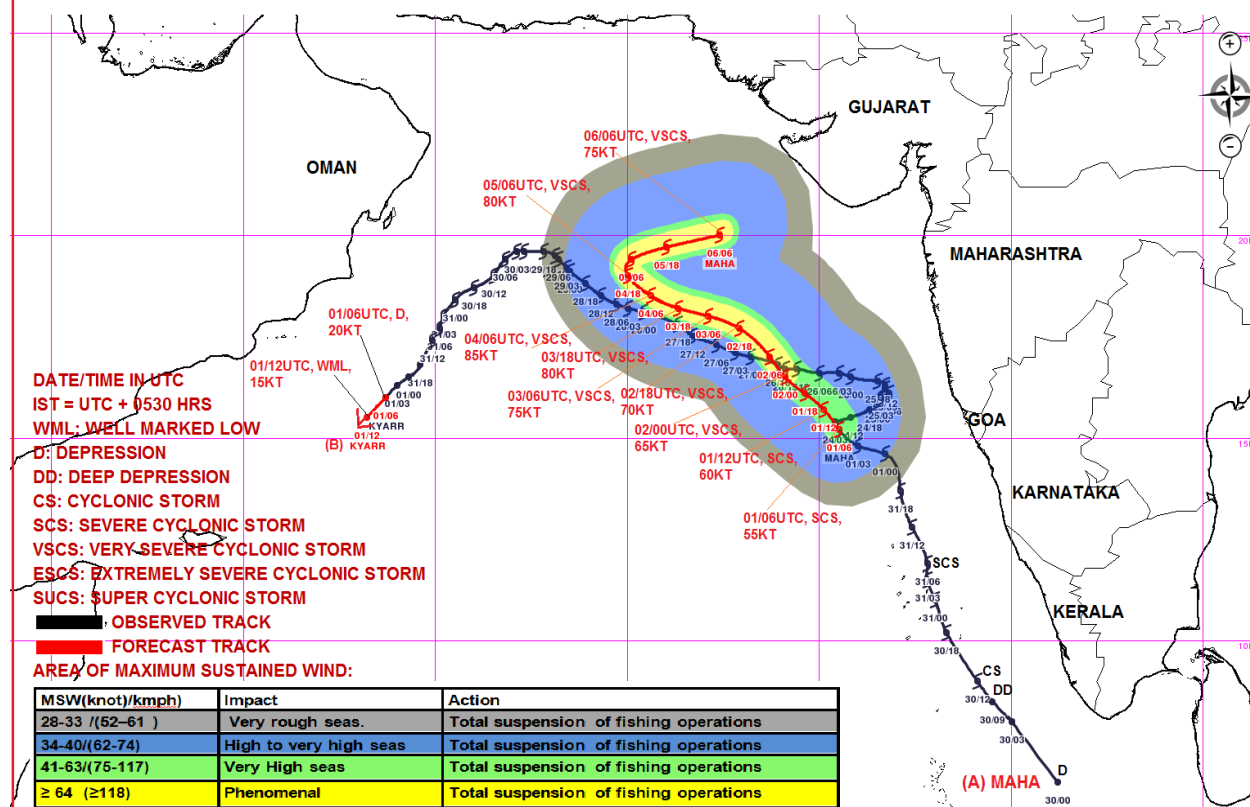


Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM "MAHA" OVER EASTCENTRAL ARABIAN SEA AND (B) DEPRESSION OVER WESTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 01ST NOVEMBER 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM "MAHA" OVER EASTCENTRAL ARABIAN SEA AND (B) DEPRESSION OVER WESTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 01ST NOVEMBER 2019



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 (ARB/04/2019) and BULLETIN NO. : 64 (ARB/03/2019)

TIME OF ISSUE: 1650 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

(B) Depression over westcentral Arabian Sea.

BULLETIN NO. : 19 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved west-northwestwards with a speed of 21 kmph during past 06 hours, and lay centered at 1430 hrs IST of today, the 01st November, 2019 over eastcentral Arabian Sea near latitude 15.4°N and longitude 70.0°E, about 610 km south of Veraval (Gujarat), 590 km north-northwest of Mangaluru (Karnataka) and 410 km west of Goa. It is very likely to move northwestwards during next 24 hours, west-northwestwards during 02nd to 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 24 hours.

(Continued on next page)

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.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/1430	15.4/70.0	100-110 gusting to 125	Severe Cyclonic Storm
01.11.19/1730	15.7/69.7	110-120 gusting to 135	Severe Cyclonic Storm
01.11.19/2330	16.1/69.3	110-120 gusting to 135	Severe Cyclonic Storm
02.11.19/0530	16.5/68.9	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/1130	17.0/68.6	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/2330	17.7/67.9	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1130	18.0/67.1	140-150 gusting to 165	Very Severe Cyclonic Storm
03.11.19/2330	18.2/66.3	150-160 gusting to 175	Very Severe Cyclonic Storm
04.11.19/1130	18.5/65.6	160-170 gusting to 185	Very Severe Cyclonic Storm
04.11.19/2330	19.0/65.0	160-170 gusting to 185	Very Severe Cyclonic Storm
05.11.19/1130	19.4/65.1	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/2330	19.7/66.0	150-160 gusting to 175	Very Severe Cyclonic Storm
06.11.19/1130	20.0/67.4	140-150 gusting to 165	Very Severe Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.

(ii) Wind warning

- Gale wind speed reaching 100-110 kmph gusting to 125 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 115-125 kmph gusting to 140 kmph by the evening of 1st November and 155-165 kmph gusting to 180 kmph over eastcentral, adjoining westcentral and northeast Arabian Sea by 05th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Goa-Maharashtra coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast and adjoining from 6th November morning.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 18 hours and will become phenomenal from 02nd November morning for subsequent 04 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 4th to 6th November.

(v) Fishermen Warning

- The fishermen are advised not to venture sea along & off Goa- Maharashtra coasts during next 24 hours and into eastcentral Arabian Sea till 6th November, 2019 and over westcentral and northeast Arabian Sea from 03rd November onwards.

BULLETIN NO. : 64 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved southwestwards with a speed of 14 kmph during past 6 hours and lay centred at 1430 hrs IST of today, the 01st November, 2019 over westcentral Arabian Sea near latitude 15.8°N and longitude 58.4°E, about 1570 km west-southwest

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.

of Mumbai (Maharashtra), 490 km east-northeast of Salalah (Oman) and 540 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea and weaken into a Well Marked Low Pressure Area during next 06 hours.

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph during next 6 hours and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough during next 6 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 2030 hrs IST of 01st November, 2019.

(Sunitha Devi S)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

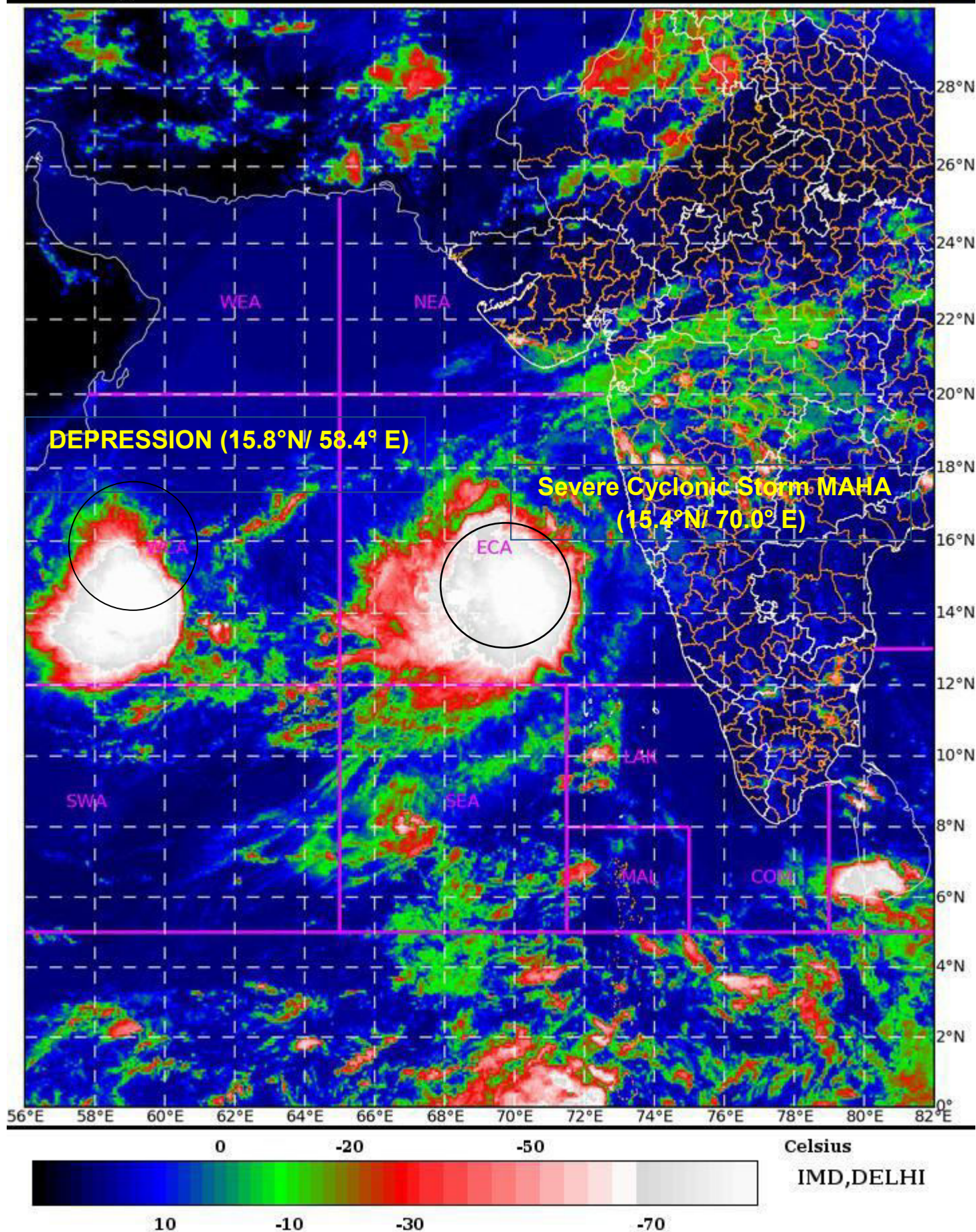
SAT : INSAT-3D IMG

01-11-2019/(1030 to 1056) GMT

IMG_TIR1_TEMP 10.8 um

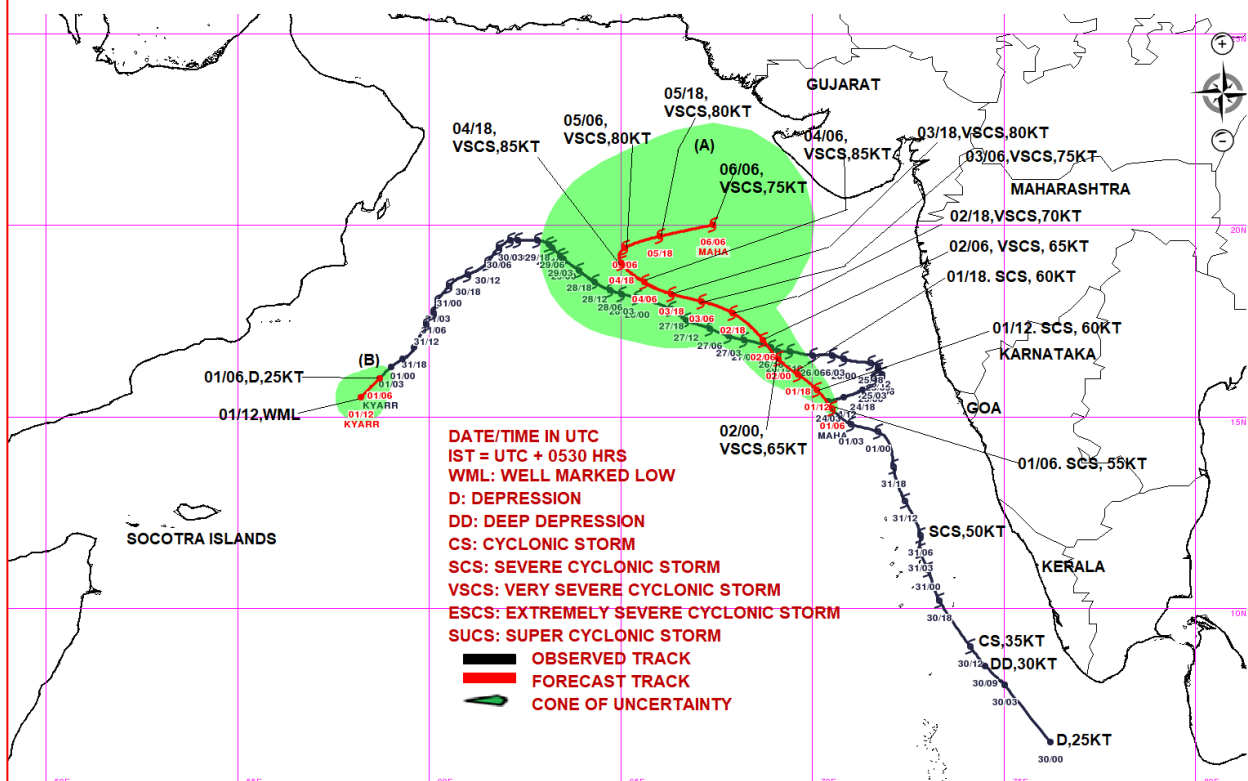
01-11-2019/(1600 to 1626) IST

ARABIAN_SEA

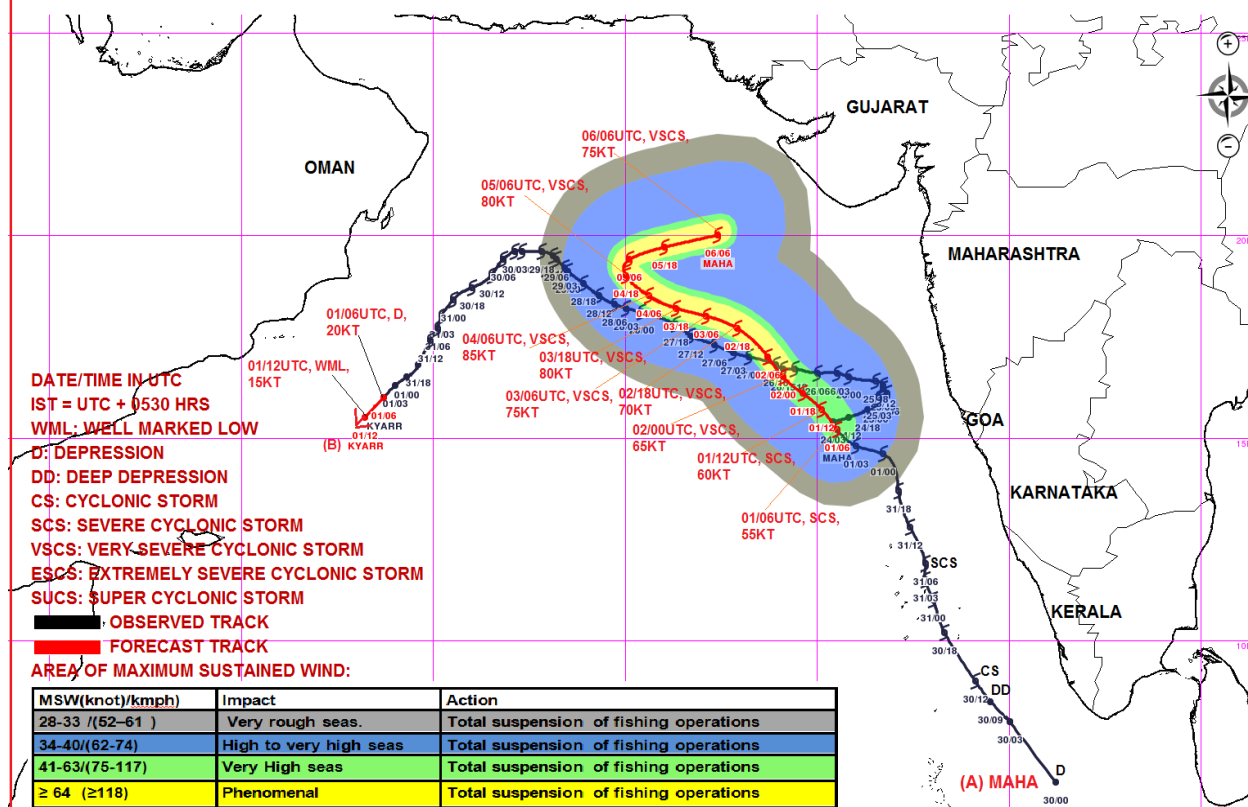


Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM "MAHA" OVER EASTCENTRAL ARABIAN SEA AND (B) DEPRESSION OVER WESTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 01ST NOVEMBER 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM "MAHA" OVER EASTCENTRAL ARABIAN SEA AND (B) DEPRESSION OVER WESTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 1ST NOVEMBER 2019



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 (ARB/04/2019) and BULLETIN NO. : 65 (ARB/03/2019)

TIME OF ISSUE: 2000 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral Arabian Sea.**

BULLETIN NO. : 20 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved further west-northwestwards with a speed of 19 kmph during past 06 hours, and lay centered at 1730 hrs IST of today, the 01st November, 2019 over eastcentral Arabian Sea near latitude 15.6°N and longitude 69.5°E, about 590 km south-southwest of Veraval (Gujarat) and 460 km west of Goa. It is very likely to move northwestwards during next 24 hours, west-northwestwards during 02nd to 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a very severe cyclonic storm over eastcentral Arabian Sea during next 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/1730	15.6/69.5	90-100 gusting to 115	Severe Cyclonic Storm
01.11.19/2330	16.1/69.0	95-105 gusting to 120	Severe Cyclonic Storm
02.11.19/0530	16.6/68.6	100-110 gusting to 125	Severe Cyclonic Storm
02.11.19/1130	17.0/68.2	110-120 gusting to 135	Severe Cyclonic Storm
02.11.19/1730	17.4/67.9	120-130 gusting to 145	Very Severe Cyclonic Storm
03.11.19/0530	17.8/67.5	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1730	18.1/66.7	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/0530	18.3/66.0	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1730	18.7/65.2	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/0530	19.1/65.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/1730	19.6/65.5	140-150 gusting to 165	Very Severe Cyclonic Storm
06.11.19/0530	19.8/66.7	130-140 gusting to 155	Very Severe Cyclonic Storm
06.11.19/1730	20.2/67.9	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.
- Light to moderate rainfall at many places with isolated heavy falls over Saurashtra and Gujarat region on 6th & 7th November, 2019.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by the evening of 2nd November and 150-160 kmph gusting to 175 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by 04th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Goa-Maharashtra coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast from 6th November morning.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 24 hours and will become phenomenal from 02nd November evening for subsequent 04 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 4th to 6th November.

(v) Fishermen Warning

- The fishermen are advised not to venture into the sea along & off Goa- Maharashtra coasts during next 24 hours and into eastcentral Arabian Sea till 6th November, 2019 and over westcentral and northeast Arabian Sea from 03rd November onwards.

BULLETIN NO. : 65 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 24 kmph during past 06 hours and lay centred at 1730 hrs IST of today, the 01st November, 2019 over westcentral Arabian Sea near latitude 15.4°N and longitude 57.5°E, about 1670 km west-southwest of Mumbai (Maharashtra), 420 km east-southeast of Salalah (Oman) and 600 km south-southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea, maintaining the intensity of a depression during next 12 hours and weaken into a Well Marked Low Pressure Area thereafter.

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph during next 12 hours and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough during next 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 2330 hrs IST of 01st November, 2019.

(Sunitha Devi S)

Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

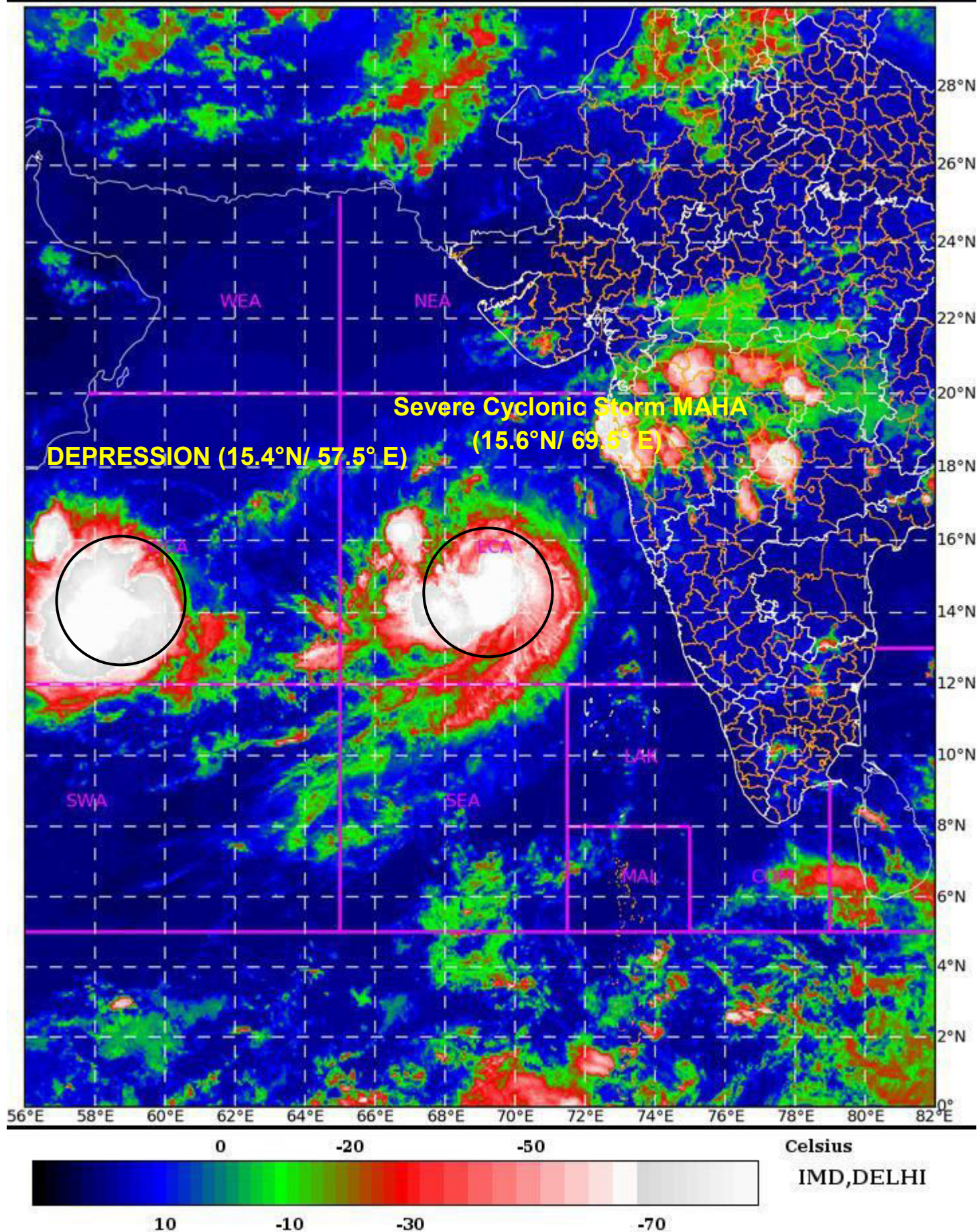
SAT : INSAT-3D IMG

01-11-2019/(1330 to 1356) GMT

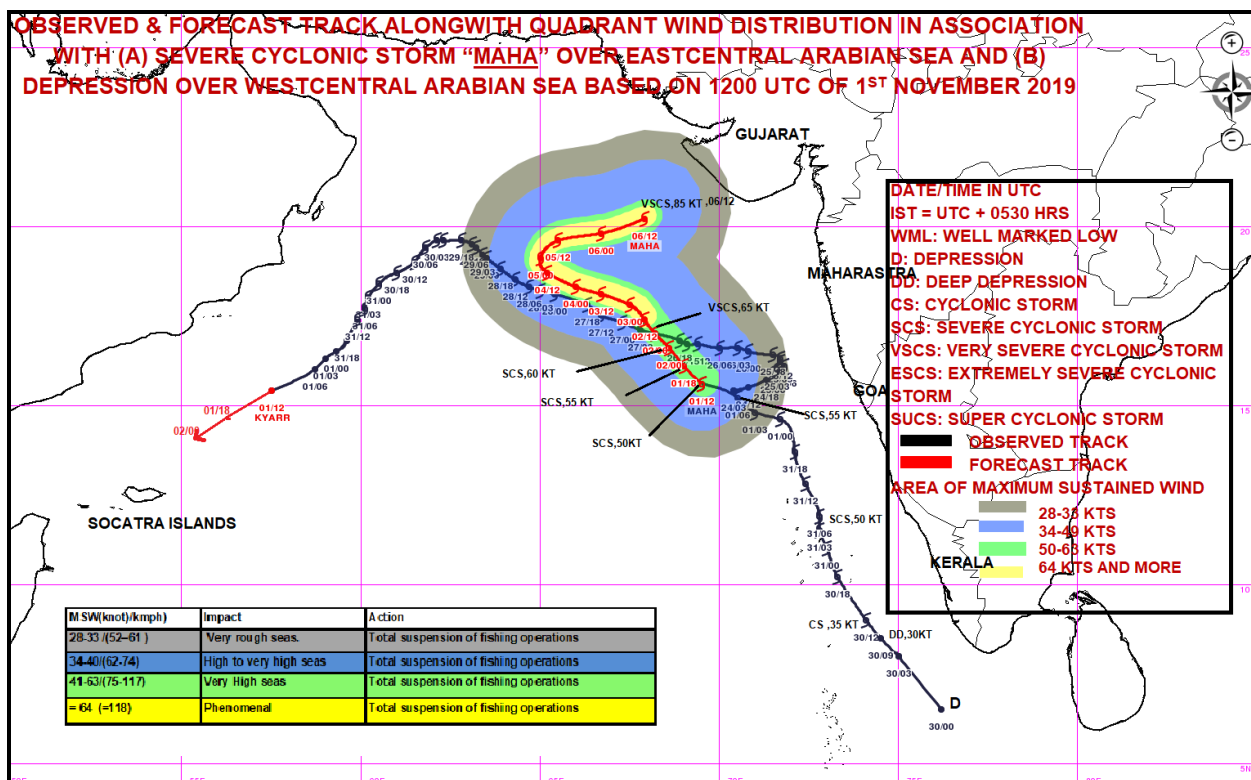
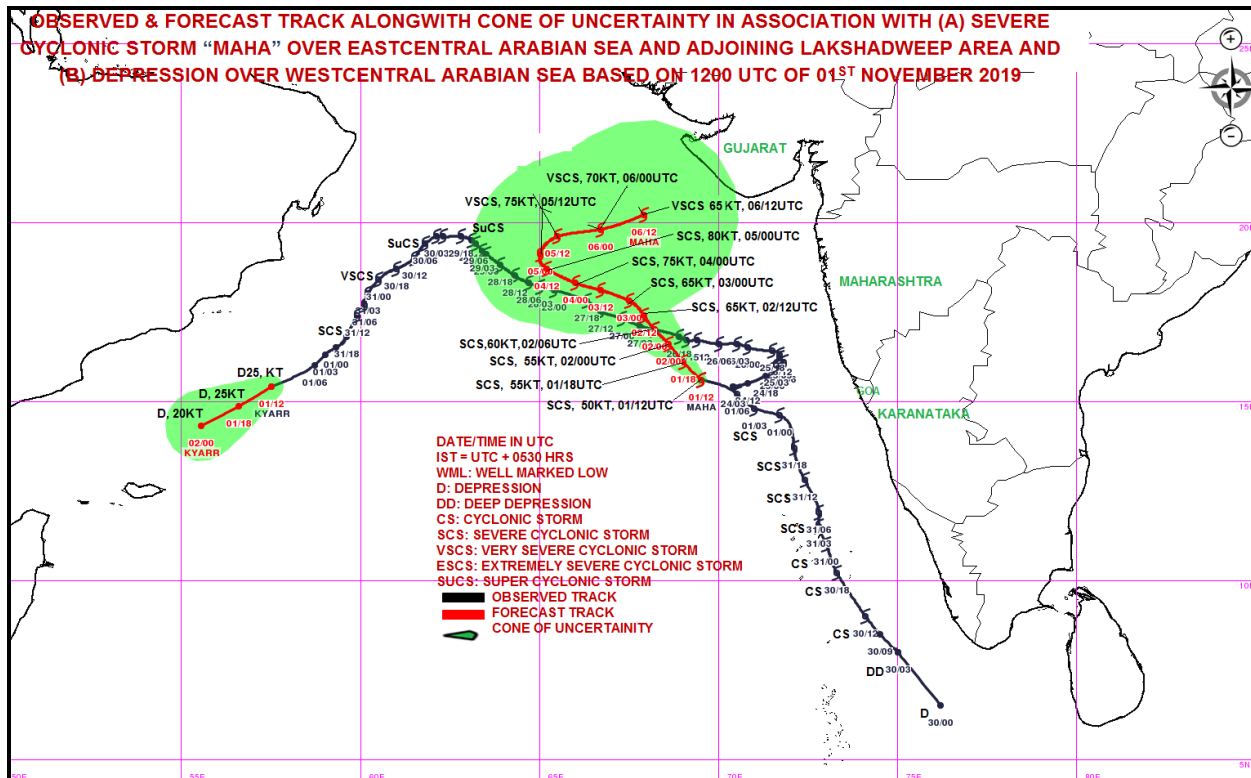
IMG_TIR1_TEMP 10.8 um

01-11-2019/(1900 to 1926) IST

ARABIAN_SEA



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 (ARB/04/2019) and BULLETIN NO. : 66 (ARB/03/2019)

TIME OF ISSUE: 2215 HOURS IST

DATED: 01.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral Arabian Sea.**

BULLETIN NO. : 21 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe Cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved further west-northwestwards with a speed of 15 kmph during past 06 hours, and lay centered at 2030 hrs IST of today, the 01st November, 2019 over eastcentral Arabian Sea near latitude 15.7°N and longitude 69.2°E, about 590 km south-southwest of Veraval (Gujarat) and 490 km west of Goa. It is very likely to move northwestwards during next 24 hours, west-northwestwards during 02nd to 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/2030	15.7/69.2	90-100 gusting to 115	Severe Cyclonic Storm
01.11.19/2330	16.1/69.0	95-105 gusting to 120	Severe Cyclonic Storm
02.11.19/0530	16.6/68.6	100-110 gusting to 125	Severe Cyclonic Storm
02.11.19/1130	17.0/68.2	110-120 gusting to 135	Severe Cyclonic Storm
02.11.19/1730	17.4/67.9	120-130 gusting to 145	Very Severe Cyclonic Storm
03.11.19/0530	17.8/67.5	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1730	18.1/66.7	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/0530	18.3/66.0	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1730	18.7/65.2	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/0530	19.1/65.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/1730	19.6/65.5	140-150 gusting to 165	Very Severe Cyclonic Storm
06.11.19/0530	19.8/66.7	130-140 gusting to 155	Very Severe Cyclonic Storm
06.11.19/1730	20.2/67.9	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.
- Light to moderate rainfall at many places with isolated heavy falls over Saurashtra and Gujarat region on 6th & 7th November, 2019.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by the evening of 2nd November and 150-160 kmph gusting to 175 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by 04th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Goa-Maharashtra coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast from 6th November morning.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 24 hours and will become phenomenal from 02nd November evening for subsequent 04 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 4th to 6th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the sea along & off Goa- Maharashtra coasts during next 24 hours and into eastcentral Arabian Sea till 6th November, 2019 and over westcentral and northeast Arabian Sea from 03rd November onwards.

BULLETIN NO. : 66 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 23 kmph during past 06 hours and lay centred at 2030 hrs IST of today, the 01st November, 2019 over westcentral Arabian Sea near latitude 15.0°N and longitude 57.4°E, about 1700 km west-southwest of Mumbai (Maharashtra), 420 km east-southeast of Salalah (Oman) and 650 km south-southwest of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea, maintaining the intensity of a depression during next 12 hours and weaken into a Well Marked Low Pressure Area thereafter.

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph during next 12 hours and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough during next 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 0230 hrs IST of 02nd November, 2019.

(V R Durai)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

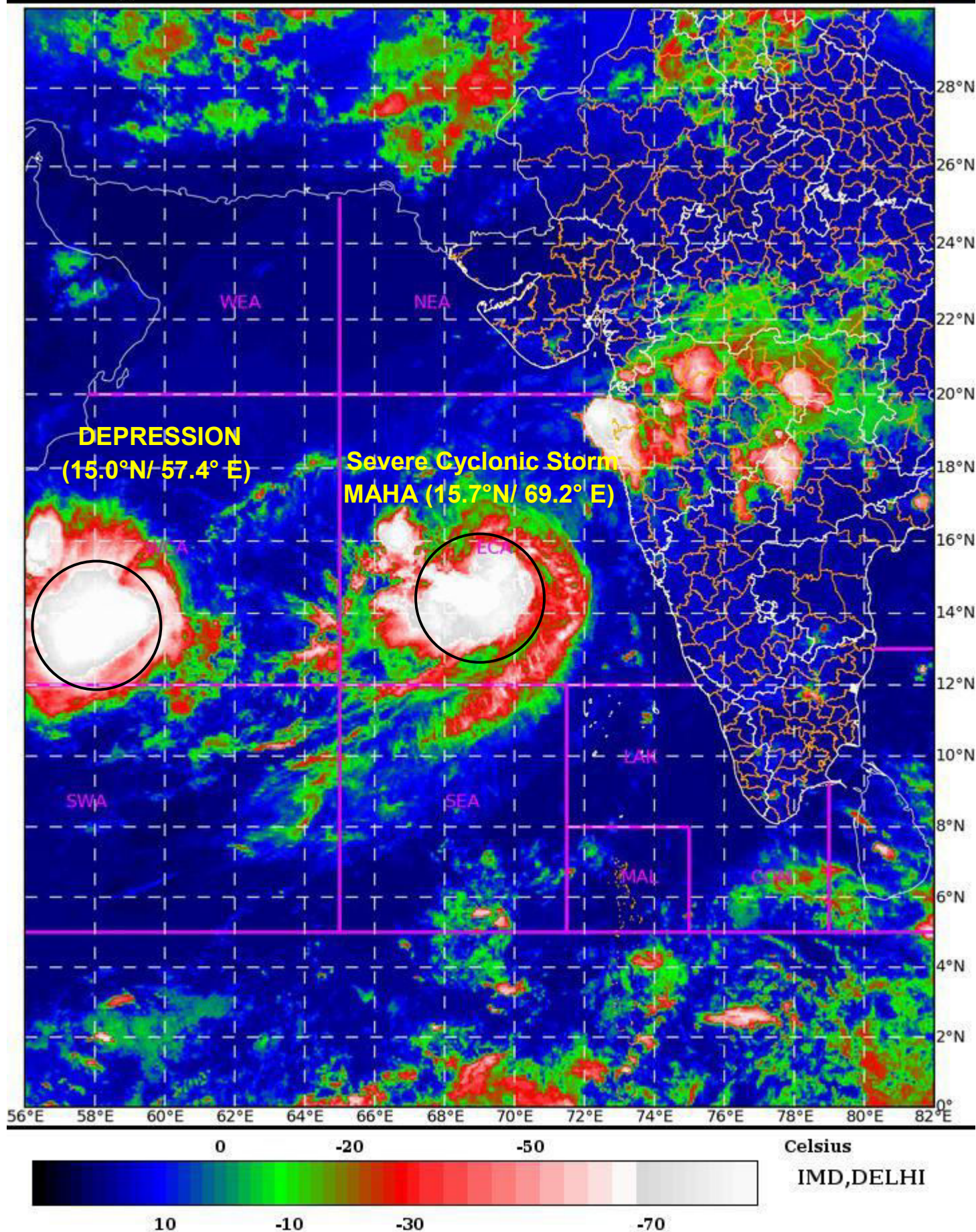
SAT : INSAT-3D IMG

01-11-2019/(1430 to 1456) GMT

IMG_TIR1_TEMP 10.8 um

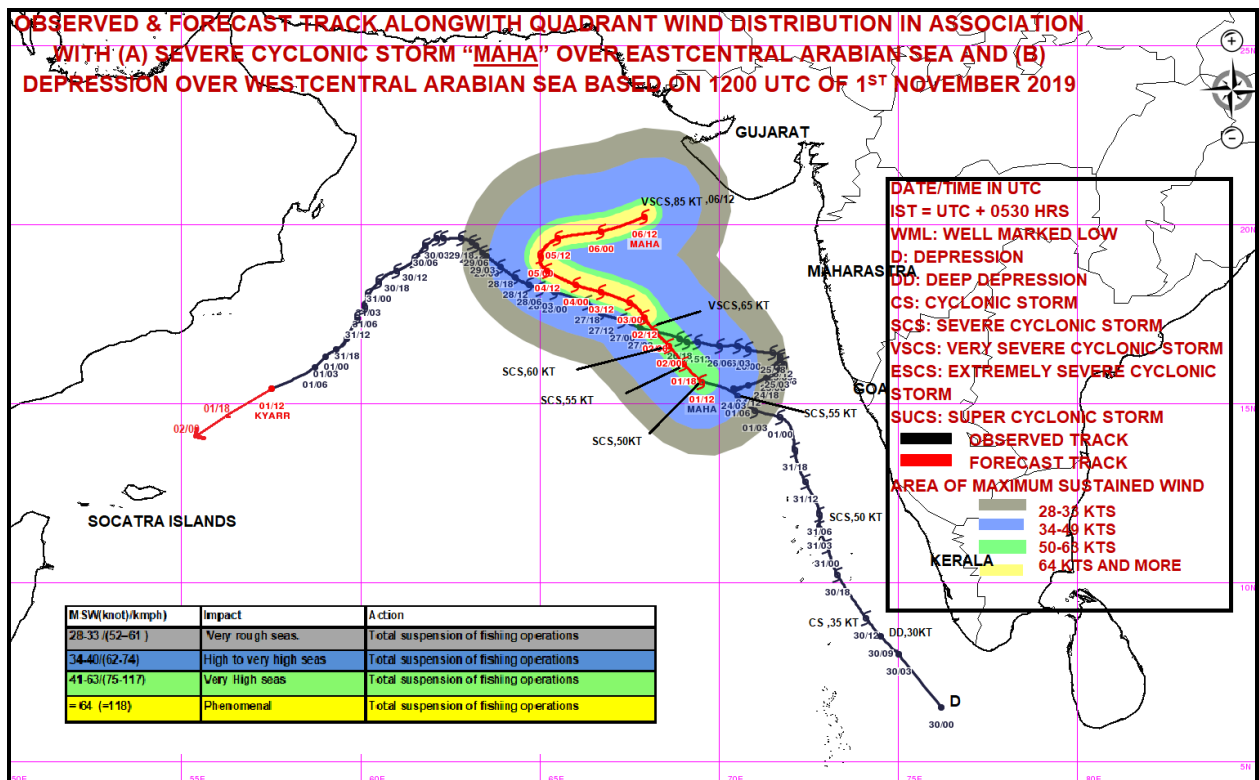
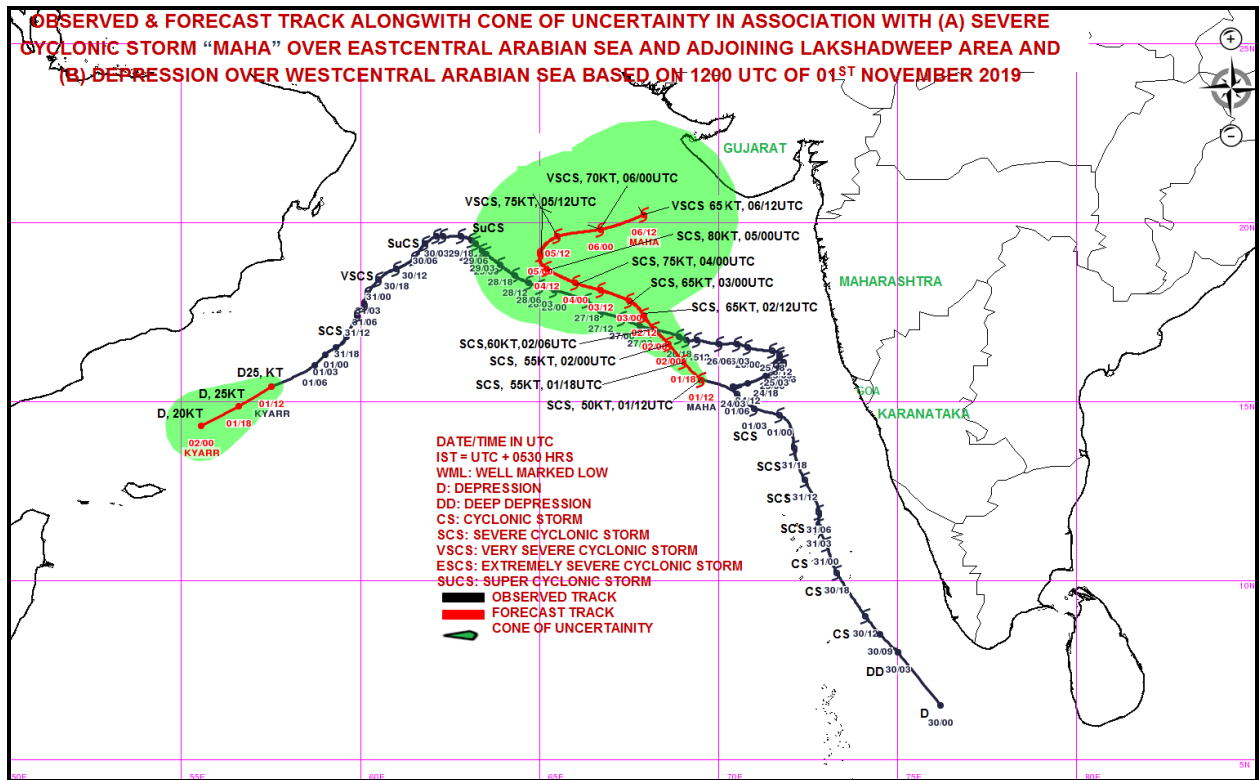
01-11-2019/(2000 to 2026) IST

ARABIAN_SEA



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 (ARB/04/2019) and BULLETIN NO. : 67 (ARB/03/2019)

TIME OF ISSUE: 0230 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral Arabian Sea.**

BULLETIN NO. : 22 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe Cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved further west-northwestwards with a speed of 09 kmph during past 06 hours, and lay centered at 2330 hrs IST of yesterday, the 01st November, 2019 over eastcentral Arabian Sea near latitude 15.9°N and longitude 69.1°E, about 570 km south-southwest of Veraval (Gujarat) and 500 km west-northwest of Goa. It is very likely to move northwestwards during next 24 hours, west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.11.19/2330	15.9/69.1	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/0530	16.6/68.6	95-105 gusting to 115	Severe Cyclonic Storm
02.11.19/1130	16.9/68.2	110-120 gusting to 135	Severe Cyclonic Storm
02.11.19/1730	17.3/67.8	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/2330	17.5/67.4	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1130	17.8/66.5	140-150 gusting to 165	Very Severe Cyclonic Storm
03.11.19/2330	18.0/65.7	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1130	18.3/64.5	150-160 gusting to 175	Very Severe Cyclonic Storm
04.11.19/2330	18.7/64.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/1130	19.1/64.3	140-150 gusting to 165	Very Severe Cyclonic Storm
05.11.19/2330	19.4/65.1	130-140 gusting to 155	Very Severe Cyclonic Storm
06.11.19/1130	19.6/66.5	120-130 gusting to 145	Very Severe Cyclonic Storm
06.11.19/2330	19.9/67.9	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.
- Light to moderate rainfall at many places with isolated heavy falls over Saurashtra and Gujarat region on 6th & 7th November, 2019.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by the evening of 2nd November and 150-160 kmph gusting to 175 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by 04th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Goa-Maharashtra coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast from 6th November morning.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 24 hours and will become phenomenal from 02nd November evening for subsequent 04 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 4th to 6th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the sea along & off Goa- Maharashtra coasts during next 24 hours and into eastcentral Arabian Sea till 6th November, 2019 and over westcentral and northeast Arabian Sea from 03rd November onwards.

BULLETIN NO. : 67 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 19 kmph during past 06 hours and lay centred at 2330 hrs IST of yesterday, the 01st November, 2019 over westcentral Arabian Sea near latitude 14.5°N and longitude 57.0°E, about 1760 km west-southwest of Mumbai (Maharashtra), 420 km east-southeast of Salalah (Oman) and 710 km south-southwest of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea, maintaining the intensity of a depression during next 06 hours and weaken into a Well Marked Low Pressure Area thereafter.

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph during next 12 hours and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough during next 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 0530 hrs IST of 02nd November, 2019.

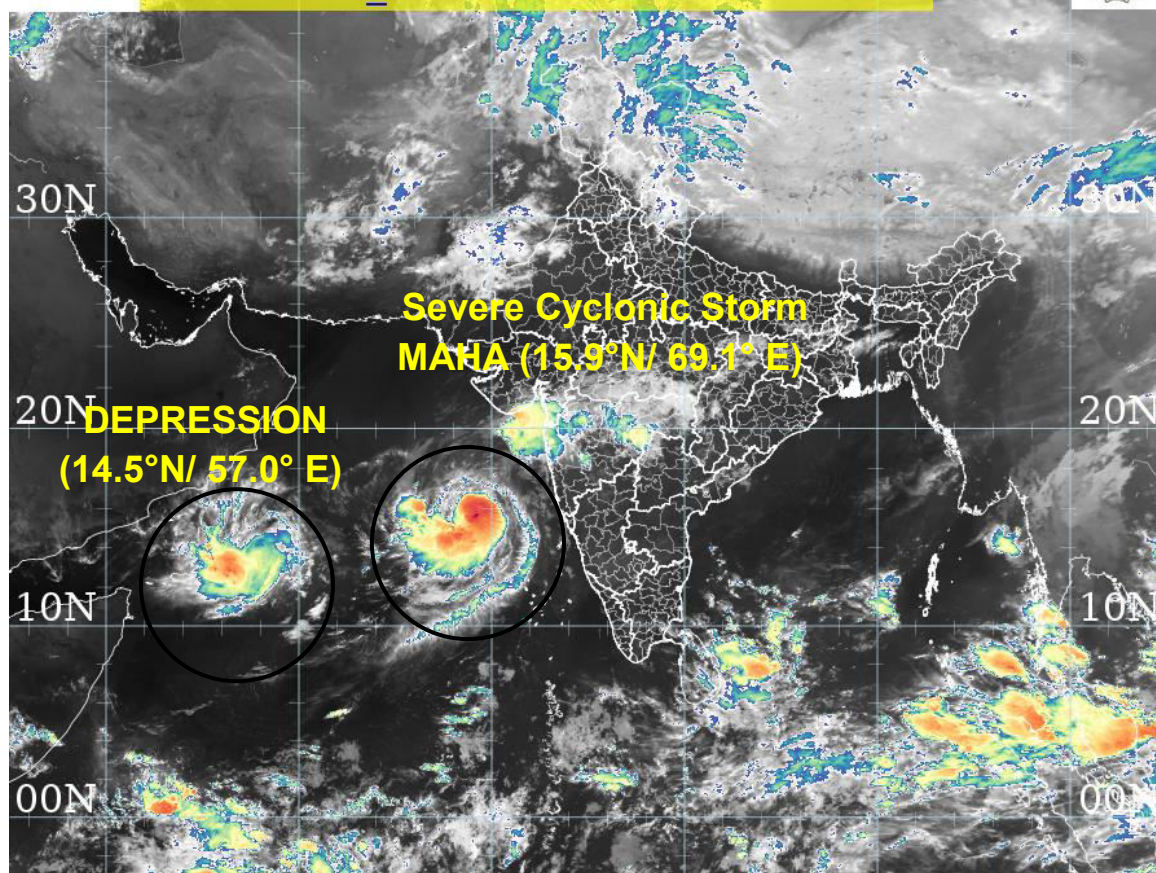
(V R Durai)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.



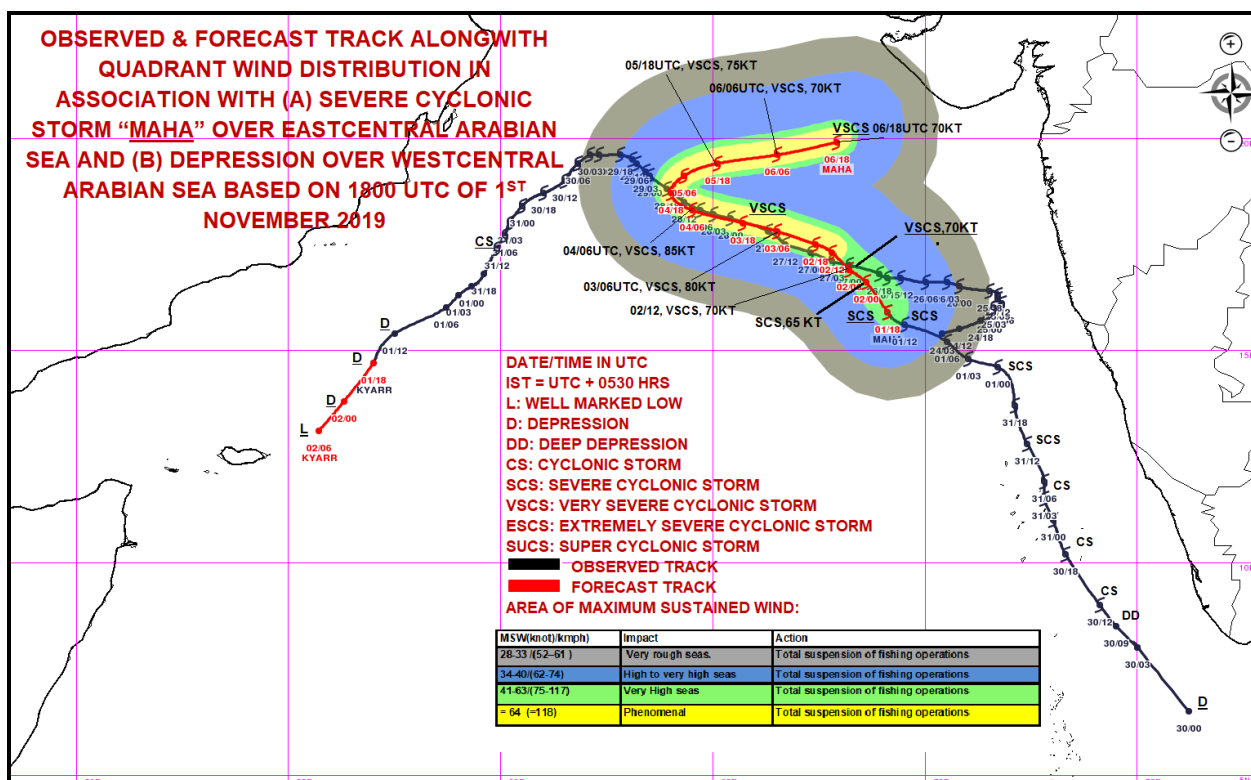
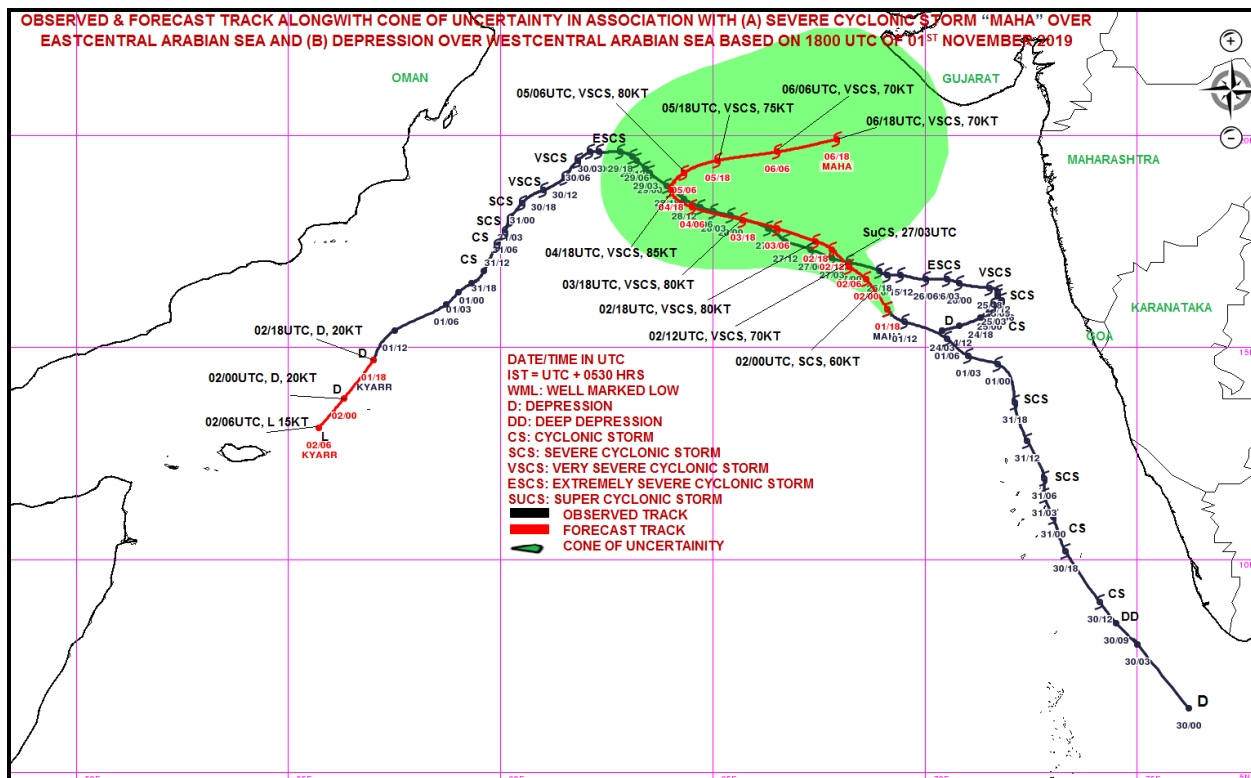
MSG-1: SEVIRI [colorized_ir_clouds]
20191101_1915UTC



 **EUMETSAT**

 **PyTROLL**

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 (ARB/04/2019) and BULLETIN NO. : 68 (ARB/03/2019)

TIME OF ISSUE: 0530 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

(B) Depression over westcentral Arabian Sea.

BULLETIN NO. : 23 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe Cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved further west-northwestwards with a speed of 12 kmph during past 06 hours, and lay centered at 0230 hrs IST of today, the 02nd November, 2019 over eastcentral Arabian Sea near latitude 16.2°N and longitude 68.8°E, about 550 km south-southwest of Veraval (Gujarat) and 540 km west-northwest of Goa. It is very likely to move northwestwards during next 24 hours, west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 24 hours.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/0230	16.2/68.8	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/0530	16.6/68.6	95-105 gusting to 115	Severe Cyclonic Storm
02.11.19/1130	16.9/68.2	110-120 gusting to 135	Severe Cyclonic Storm
02.11.19/1730	17.3/67.8	120-130 gusting to 145	Very Severe Cyclonic Storm
02.11.19/2330	17.5/67.4	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1130	17.8/66.5	140-150 gusting to 165	Very Severe Cyclonic Storm
03.11.19/2330	18.0/65.7	145-155 gusting to 170	Very Severe Cyclonic Storm
04.11.19/1130	18.3/64.5	150-160 gusting to 175	Very Severe Cyclonic Storm
04.11.19/2330	18.7/64.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/1130	19.1/64.3	140-150 gusting to 165	Very Severe Cyclonic Storm
05.11.19/2330	19.4/65.1	130-140 gusting to 155	Very Severe Cyclonic Storm
06.11.19/1130	19.6/66.5	120-130 gusting to 145	Very Severe Cyclonic Storm
06.11.19/2330	19.9/67.9	120-130 gusting to 145	Very Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at a few places very likely over Konkan & Goa, Madhya Maharashtra and south Gujarat during next 24 hours.
- Light to moderate rainfall at many places with isolated heavy falls over Saurashtra and Gujarat region on 6th & 7th November, 2019.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 120-130 kmph gusting to 145 kmph by the evening of 2nd November and 150-160 kmph gusting to 175 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by 04th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Goa-Maharashtra coasts during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast from 6th November morning.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 24 hours and will become phenomenal from 02nd November evening for subsequent 04 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 4th to 6th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the sea along & off Goa- Maharashtra coasts during next 24 hours and into eastcentral Arabian Sea till 6th November, 2019 and over westcentral and northeast Arabian Sea from 03rd November onwards.

BULLETIN NO. : 68 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 25 kmph during past 06 hours and lay centred at 0230 hrs IST of today, the 02nd November, 2019 over westcentral Arabian Sea near latitude 14.0°N and longitude 56.4°E, about 1840 km west-southwest of Mumbai (Maharashtra), 420 km east-southeast of Salalah (Oman) and 790 km south-southwest of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea, maintaining the intensity of a depression during next 03 hours and weaken into a Well Marked Low Pressure Area thereafter.

Warnings:

(i) Wind warning

- Gale wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing around the system centre over westcentral Arabian Sea. It is very likely to reduce becoming 40-50 kmph gusting to 60 kmph during next 12 hours and decrease thereafter.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea around the system centre. It will become rough during next 12 hours and improve gradually thereafter.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea during next 12 hours.

The next bulletin will be issued at 0830 hrs IST of 02nd November, 2019.

(V R Durai)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

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.

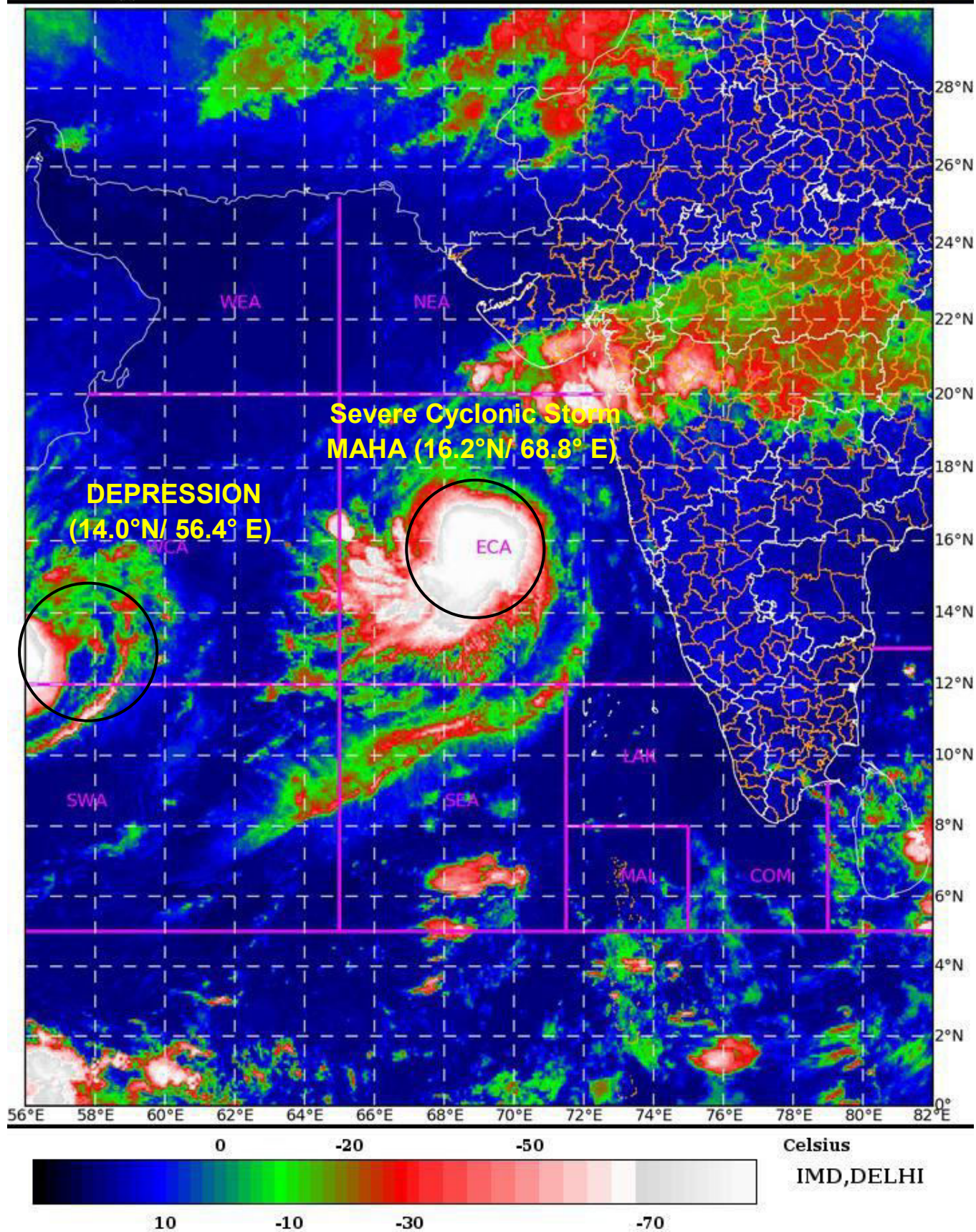
SAT : INSAT-3D IMG

01-11-2019/(2230 to 2256) GMT

IMG_TIR1_TEMP 10.8 um

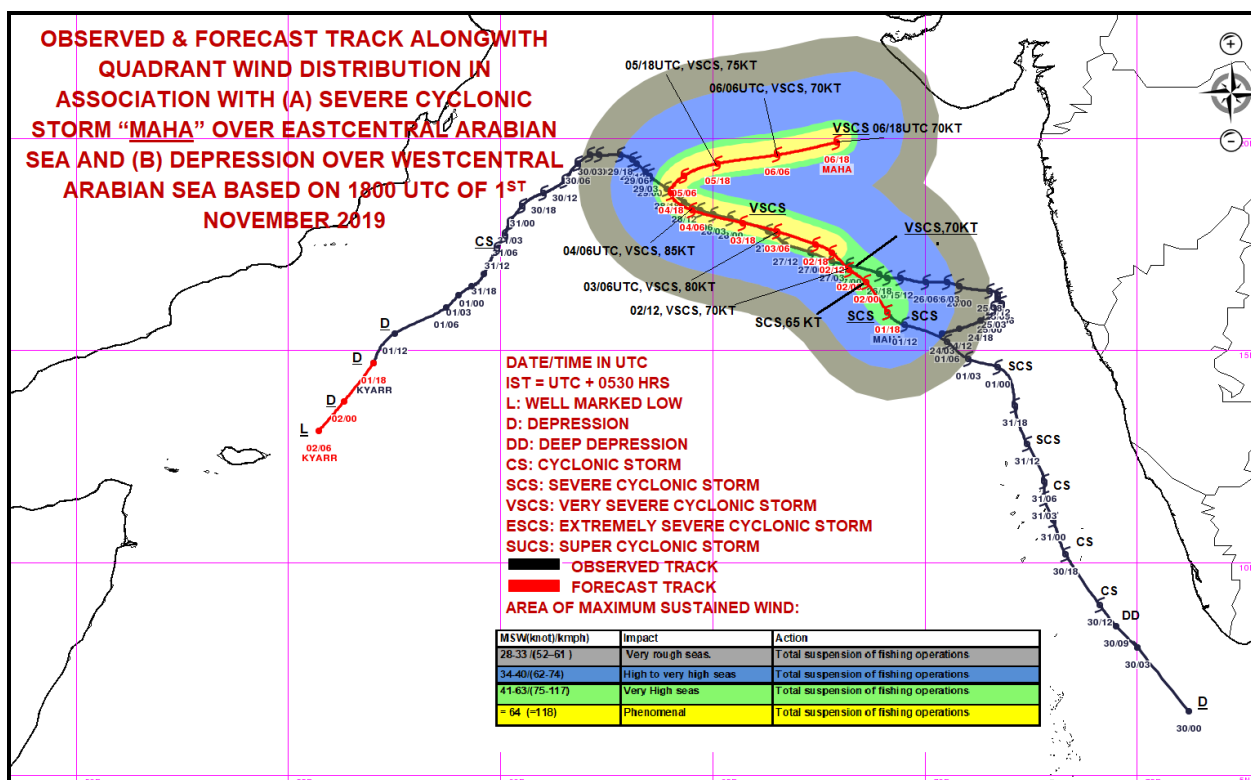
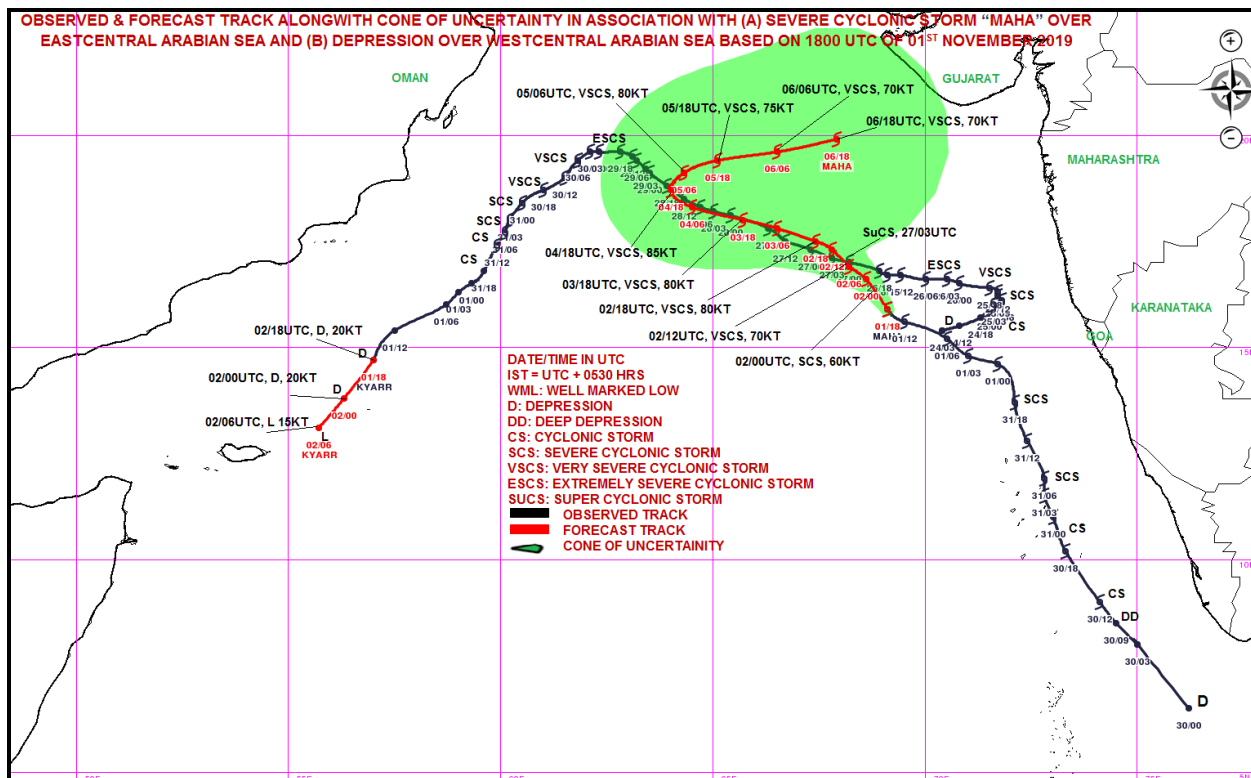
02-11-2019/(0400 to 0426) IST

ARABIAN_SEA



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 (ARB/04/2019) and BULLETIN NO. : 69 (ARB/03/2019)

TIME OF ISSUE: 0900 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral Arabian Sea.**

BULLETIN NO. : 24 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe Cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved further west-northwestwards with a speed of 13 kmph during past 06 hours, and lay centered at 0530 hrs IST of today, the 02nd November, 2019 over eastcentral Arabian Sea near latitude 16.3°N and longitude 68.5°E, about 550 km south-southwest of Veraval (Gujarat) and 570 km west-northwest of Goa. It is very likely to move west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 48 hours. However, after the recurvature, it is very likely to weaken gradually while moving east-northeastwards towards south Gujarat coast.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/0530	16.3/68.5	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/1130	16.6/68.2	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/1730	17.0/67.8	100-110 gusting to 120	Severe Cyclonic Storm
02.11.19/2330	17.2/67.4	100-110 gusting to 120	Severe Cyclonic Storm
03.11.19/0530	17.5/66.6	110-120 gusting to 135	Severe Cyclonic Storm
03.11.19/1730	17.8/65.5	110-120 gusting to 135	Severe Cyclonic Storm
04.11.19/0530	18.0/64.2	125-135 gusting to 150	Very Severe Cyclonic Storm
04.11.19/1730	18.2/63.1	135-145 gusting to 160	Very Severe Cyclonic Storm
05.11.19/0530	18.7/62.9	155-165 gusting to 180	Very Severe Cyclonic Storm
05.11.19/1730	19.2/63.1	155-165 gusting to 180	Very Severe Cyclonic Storm
06.11.19/0530	19.4/64.5	125-135 gusting to 145	Very Severe Cyclonic Storm
06.11.19/1730	19.7/66.5	120-130 gusting to 145	Very Severe Cyclonic Storm
07.11.19/0530	20.0/69.0	110-120 gusting to 135	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with isolated heavy to very heavy falls over Saurashtra and Gujarat region from 6th November evening to 8th November morning.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 125-135 kmph gusting to 150 kmph by the morning of 4th November and 155-165 kmph gusting to 180 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by 05th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra coast during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast from 6th November morning for subsequent 48 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 24 hours and will become phenomenal from 04th November morning for subsequent 02 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 3rd -6th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the sea along & off Maharashtra coast during next 24 hours and into eastcentral Arabian Sea till 7th November and over westcentral and northeast Arabian Sea from 03rd to 07th November.

BULLETIN NO. : 69 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 26 kmph during past 06 hours and lay centred at 0530 hrs IST of today, the 02nd November, 2019 over westcentral Arabian Sea near latitude 13.7°N and longitude 55.8°E, about 240 km east-northeast of Socotra Island and 550 km east-northeast of Bereeda (Somalia). It is very likely to move west-southwestwards towards Somalia coast across Socotra Island during next 24 hours and weaken into a Well Marked Low Pressure Area thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/0530	13.7/55.8	40-50 gusting to 60	Depression
02.11.19/1130	12.9/54.4	40-50 gusting to 60	Depression
02.11.19/1730	12.2/53.0	35-45 gusting to 55	Depression
02.11.19/2330	11.4/51.5	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.

Warnings:

(i) Wind warning

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to prevail around the system centre over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 24 hours.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 24 hours.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea around system center, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 24 hours.

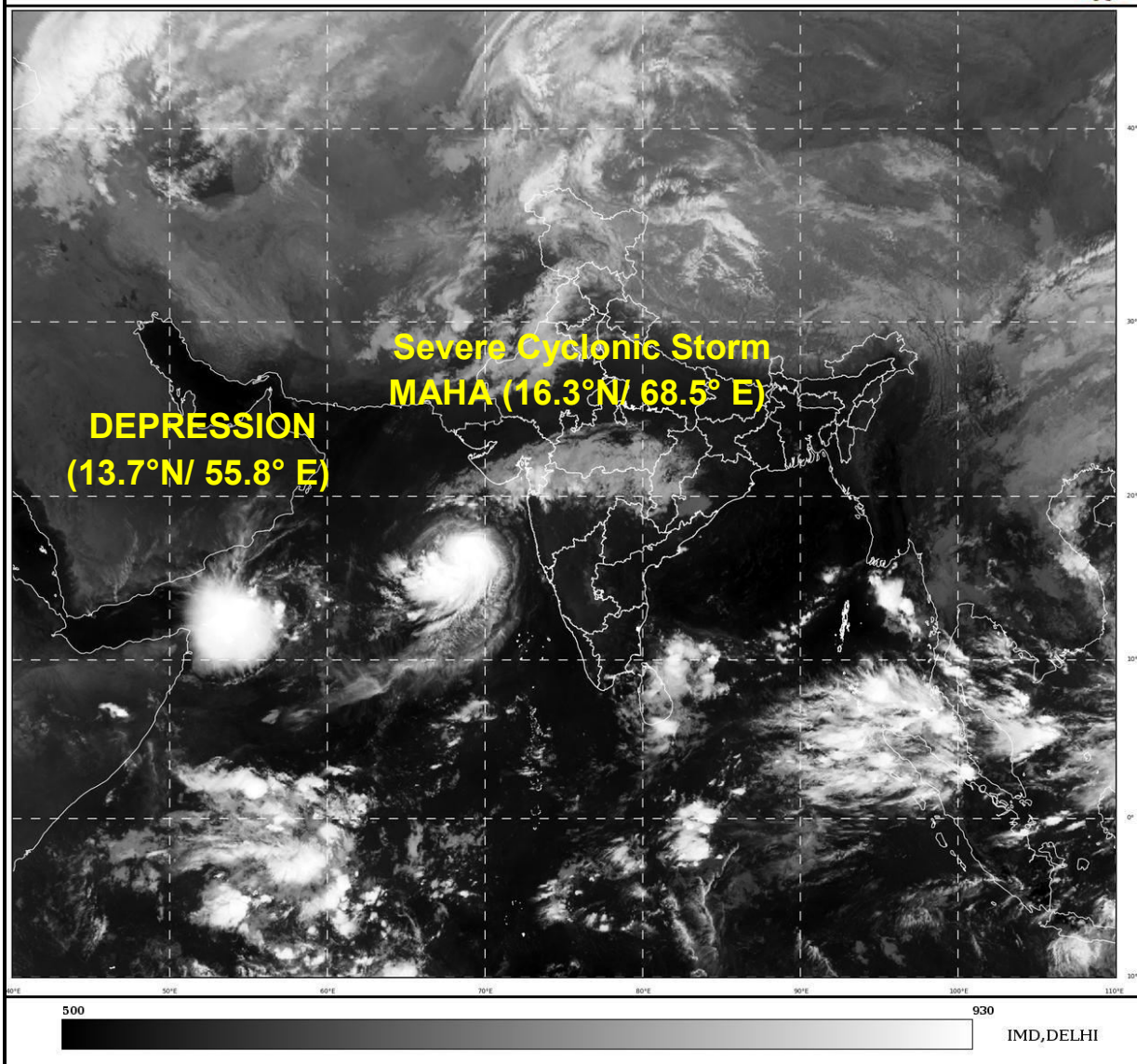
The next bulletin will be issued at 1130 hrs IST of 02nd November, 2019.

(V R Durai)
Scientist-E, RSMC, New Delhi

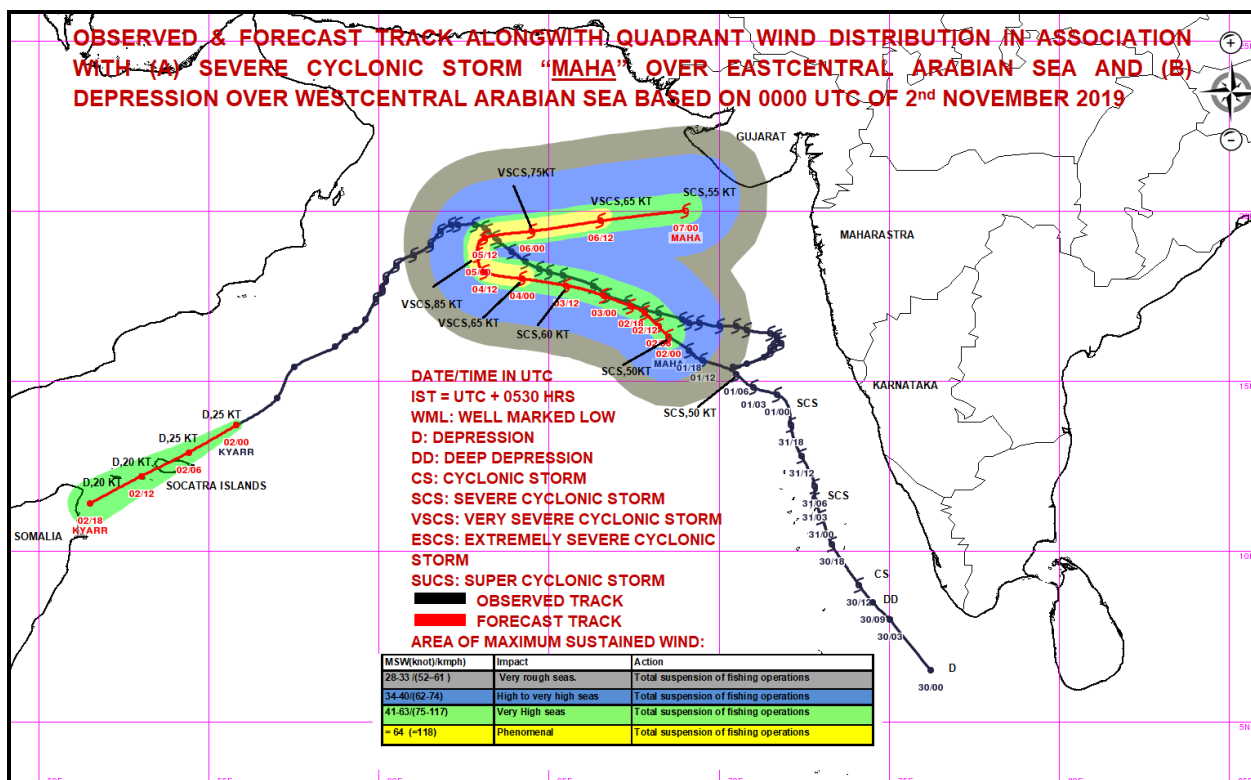
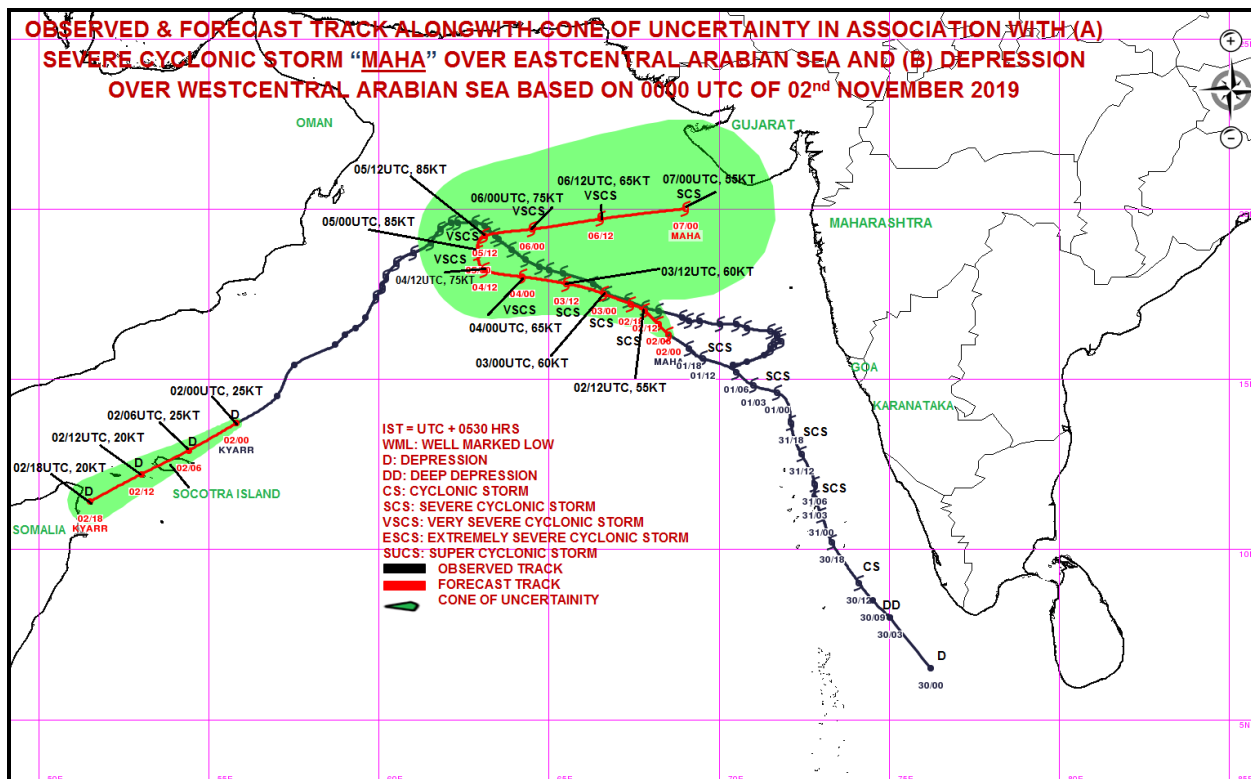
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG
IMG_TIR1 10.8 um
L1C Mercator

02-11-2019/(0230 to 0256) GMT
02-11-2019/(0800 to 0826) 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. : 25 (ARB/04/2019) and BULLETIN NO. : 70 (ARB/03/2019)

TIME OF ISSUE: 1130 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral Arabian Sea.**

BULLETIN NO. : 25 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe Cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved further west-northwestwards with a speed of 10 kmph during past 06 hours, and lay centered at 0830 hrs IST of today, the 02nd November, 2019 over eastcentral Arabian Sea near latitude 16.4°N and longitude 68.3°E, about 540 km south-southwest of Veraval (Gujarat) and 550 km south-southwest of Diu. It is very likely to move west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat coast thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 48 hours. However, after the re-curvature, it is very likely to weaken gradually while moving east-northeastwards towards south Gujarat coast.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/0830	16.4/68.3	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/1130	16.6/68.0	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/1730	16.9/67.7	100-110 gusting to 120	Severe Cyclonic Storm
02.11.19/2330	17.1/67.4	100-110 gusting to 120	Severe Cyclonic Storm
03.11.19/0530	17.5/66.6	110-120 gusting to 135	Severe Cyclonic Storm
03.11.19/1730	17.8/65.5	110-120 gusting to 135	Severe Cyclonic Storm
04.11.19/0530	18.0/64.2	125-135 gusting to 150	Very Severe Cyclonic Storm
04.11.19/1730	18.2/63.1	135-145 gusting to 160	Very Severe Cyclonic Storm
05.11.19/0530	18.7/62.9	155-165 gusting to 180	Very Severe Cyclonic Storm
05.11.19/1730	19.2/63.1	155-165 gusting to 180	Very Severe Cyclonic Storm
06.11.19/0530	19.4/64.5	125-135 gusting to 145	Very Severe Cyclonic Storm
06.11.19/1730	19.7/66.5	120-130 gusting to 145	Very Severe Cyclonic Storm
07.11.19/0530	20.0/69.0	110-120 gusting to 135	Severe 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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with isolated heavy falls over Saurashtra, Gujarat region and north Madhya Maharashtra and north Konkan from 6th November evening to 8th November morning.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 125-135 kmph gusting to 150 kmph by the morning of 4th November and 155-165 kmph gusting to 180 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by 05th November morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra coast during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat coast from 6th November morning for subsequent 48 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 48 hours and will become phenomenal from 04th November morning for subsequent 02 days.
- Sea condition will be high to phenomenal over westcentral and adjoining northeast Arabian Sea during 3rd -6th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the sea along & off Maharashtra coast during next 24 hours and into eastcentral Arabian Sea till 7th November and over westcentral and northeast Arabian Sea from 03rd to 07th November and along & off Gujarat coast adjoining north Maharashtra coast from 5th – 7th November.

BULLETIN NO. : 70 (ARB/03/2019)

(B) Depression over westcentral Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 26 kmph during past 06 hours and lay centred at 0830 hrs IST of today, the 02nd November, 2019 over westcentral Arabian Sea near latitude 13.5°N and longitude 55.0°E, about 150 km east-northeast of Socotra Island and 460 km east-northeast of Bereeda (Somalia). It is very likely to move west-southwestwards towards Somalia coast across Socotra Island during next 24 hours and weaken into a Well Marked Low Pressure Area thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/0830	13.5/55.0	40-50 gusting to 60	Depression
02.11.19/1130	13.0/54.2	40-50 gusting to 60	Depression
02.11.19/1730	12.2/53.0	35-45 gusting to 55	Depression
02.11.19/2330	11.4/51.5	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.

Warnings:

(i) Wind warning

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to prevail around the system centre over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 24 hours.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 24 hours.

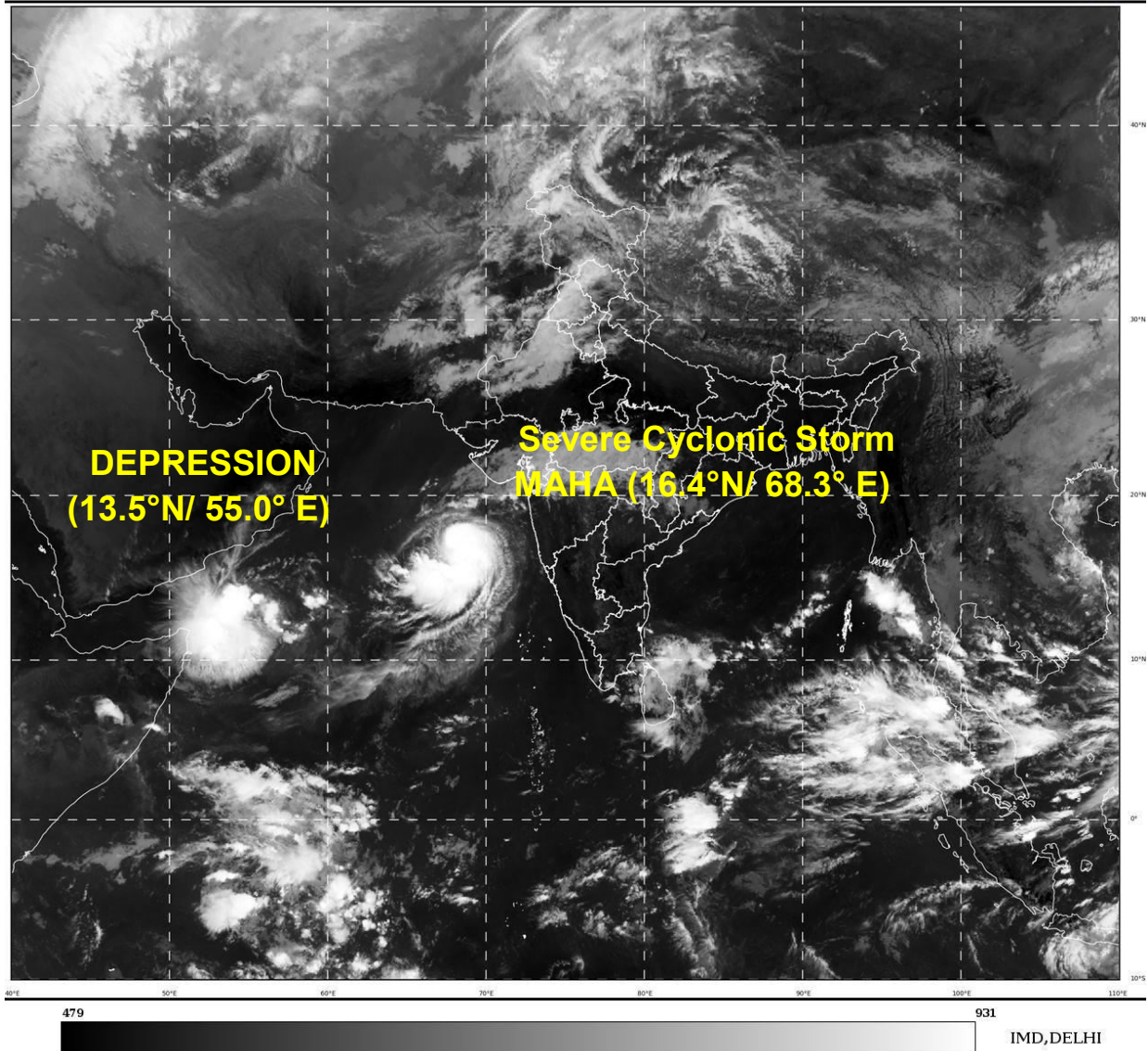
(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea around system centre, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 24 hours.

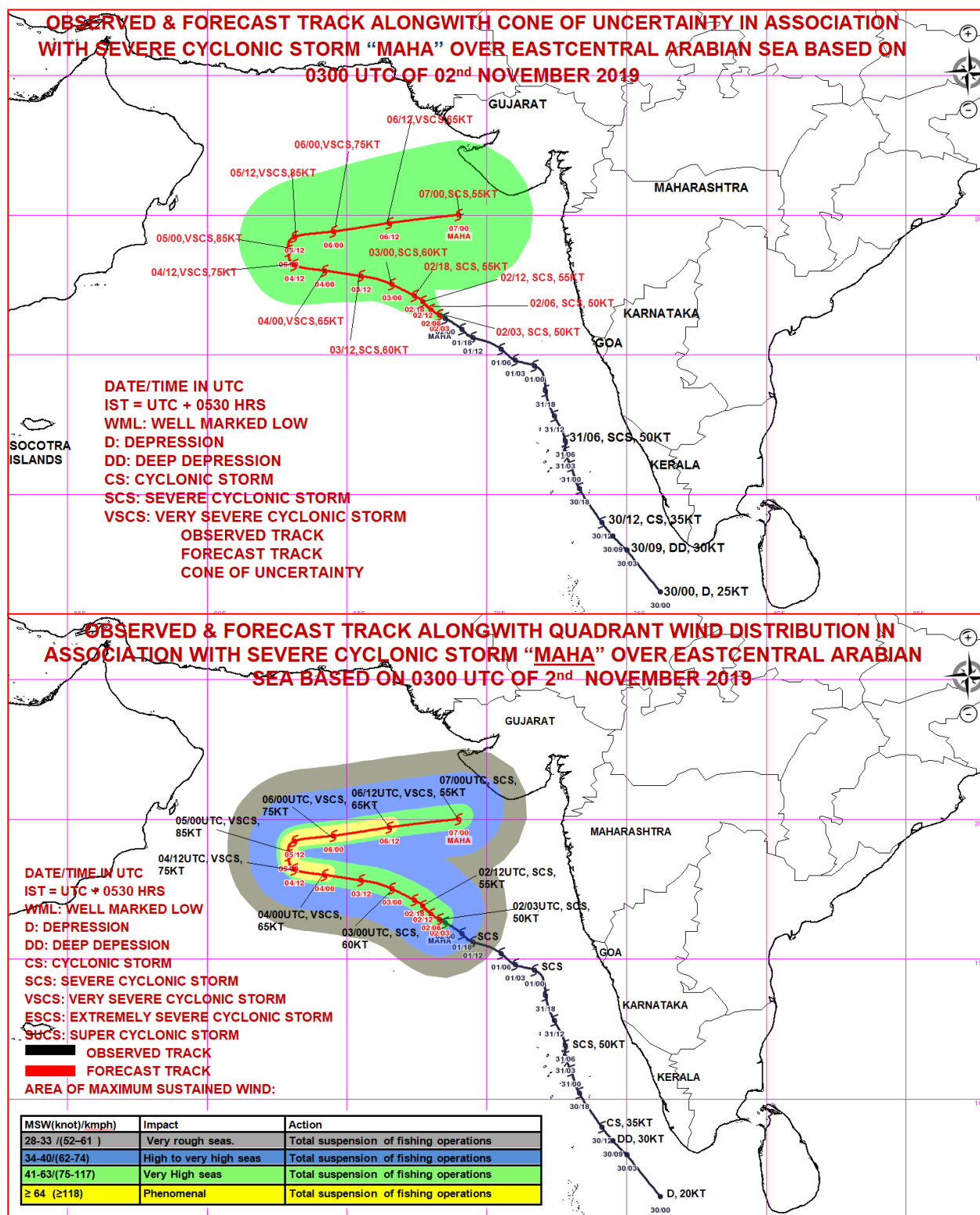
The next bulletin will be issued at 1430 hrs IST of 02nd November, 2019.

(Sunitha devi.S)
Scientist-E, RSMC, New Delhi

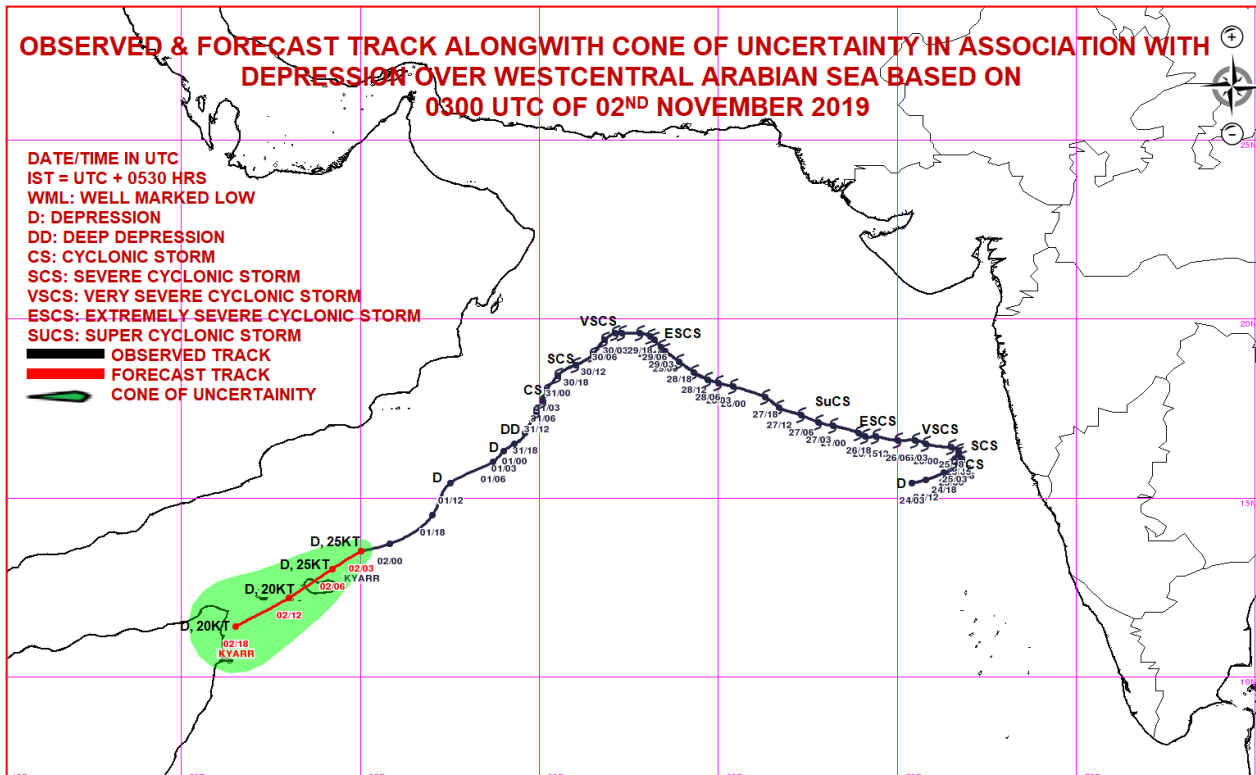
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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 (ARB/04/2019) and BULLETIN NO. : 71 (ARB/03/2019)

TIME OF ISSUE: 1430 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral Arabian Sea.**

BULLETIN NO. : 26 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe Cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved further west-northwestwards with a speed of 06 kmph during past 06 hours, and lay centered at 1130 hrs IST of today, the 02nd November, 2019 over eastcentral Arabian Sea near latitude 16.5°N and longitude 68.2°E, about 540 km south-southwest of Veraval (Gujarat) and 550 km south-southwest of Diu. It is very likely to move west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat and adjoining north Maharashtra coasts thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 24 hours. However, after the re-curvature, it is very likely to weaken gradually while moving east-northeastwards. Forecast track and intensity are given in the following table:

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.

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/1130	16.5/68.2	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/1730	16.9/67.7	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/2330	17.0/67.1	100-110 gusting to 120	Severe Cyclonic Storm
03.11.19/0530	17.0/66.6	110-120 gusting to 135	Severe Cyclonic Storm
03.11.19/1130	17.6/66.0	120-130 gusting to 145	Very Severe Cyclonic Storm
03.11.19/2330	17.9/64.9	130-140 gusting to 155	Very Severe Cyclonic Storm
04.11.19/1130	18.1/63.6	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/2330	18.5/63.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/1130	18.9/63.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/2330	19.4/64.0	130-140 gusting to 155	Very Severe Cyclonic Storm
06.11.19/1130	19.6/66.0	100-110 gusting to 120	Severe Cyclonic Storm
06.11.19/2330	19.9/68.2	90-100 gusting to 110	Severe Cyclonic Storm
07.11.19/1130	20.1/70.2	70-80 gusting to 90	Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with isolated heavy falls likely over Saurashtra, Gujarat region and north Madhya Maharashtra and north Konkan from 6th November evening to 8th November morning.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 140-150 kmph gusting to 165 kmph by the morning of 4th November and 150-160 kmph gusting to 175 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by early hours of 05th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra coast during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat and adjoining north Maharashtra coasts from 6th November morning for subsequent 48 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 48 hours and will become phenomenal from 04th November morning for subsequent 02 days.
- Sea condition will be high to phenomenal over westcentral Arabian Sea during 3rd-6th November and over northeast Arabian Sea during 3rd -7th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the sea along & off Maharashtra coast during next 24 hours and into eastcentral Arabian Sea till 7th November and over westcentral and northeast Arabian Sea from 03rd to 07th November and along & off Gujarat coast and adjoining north Maharashtra coast from 5th – 7th November.

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.

BULLETIN NO. : 71 (ARB/03/2019)**(B) Depression over westcentral Arabian Sea**

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 32 kmph during past 06 hours and lay centred at 1130 hrs IST of today, the 02nd November, 2019 over westcentral Arabian Sea near latitude 13.1°N and longitude 54.1°E, about 50 km east-northeast of Socotra Island and 350 km east-northeast of Bereeda (Somalia). It is very likely to move west-southwestwards towards Somalia coast across Socotra Island during next 12 hours and weaken into a Well Marked Low Pressure Area thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/1130	13.1/54.1	40-50 gusting to 60	Depression
02.11.19/1730	12.5/53.0	30-40 gusting to 50	Depression
02.11.19/2330	11.9/51.5	30-40 gusting to 50	Depression

Warnings:**(i) Wind warning**

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to prevail around the system centre over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

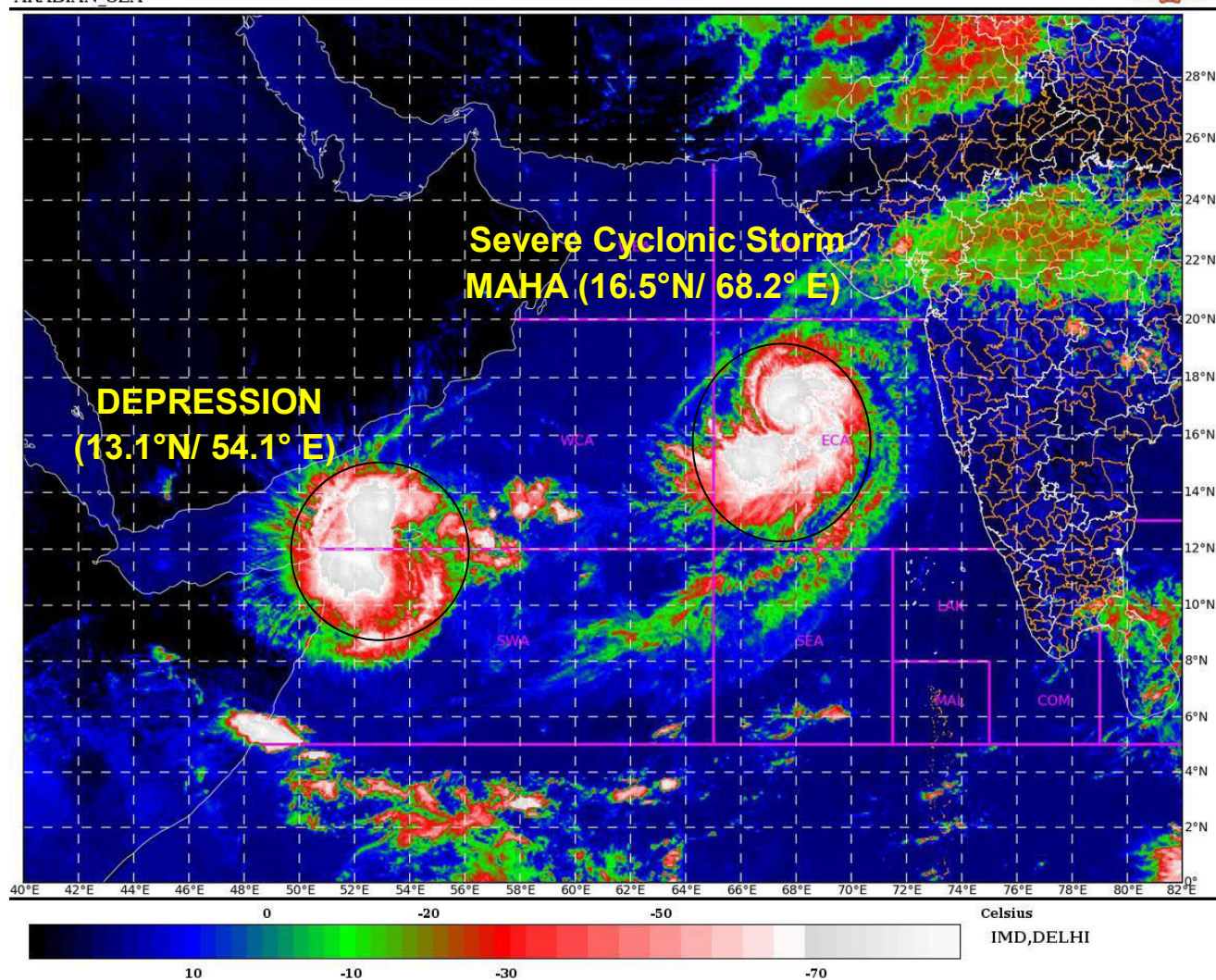
(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea around system centre, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

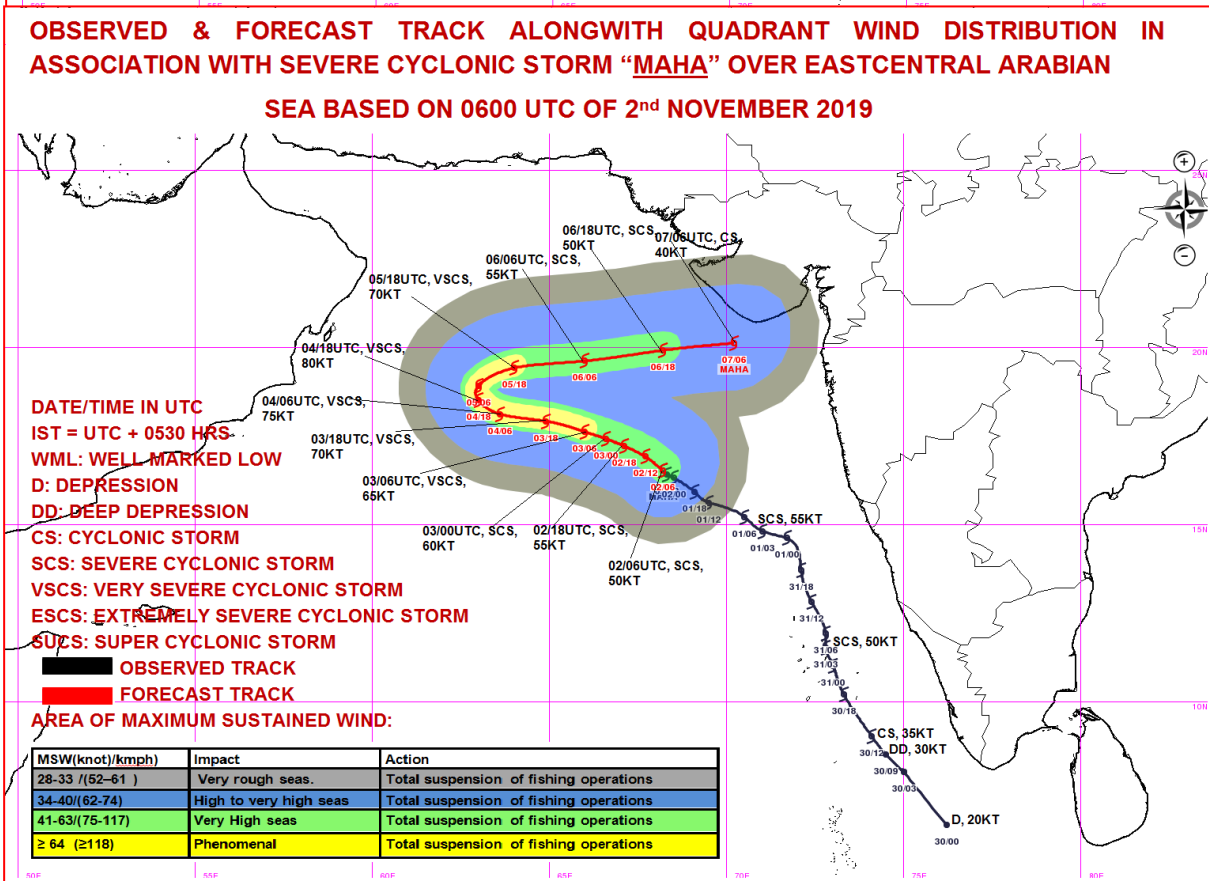
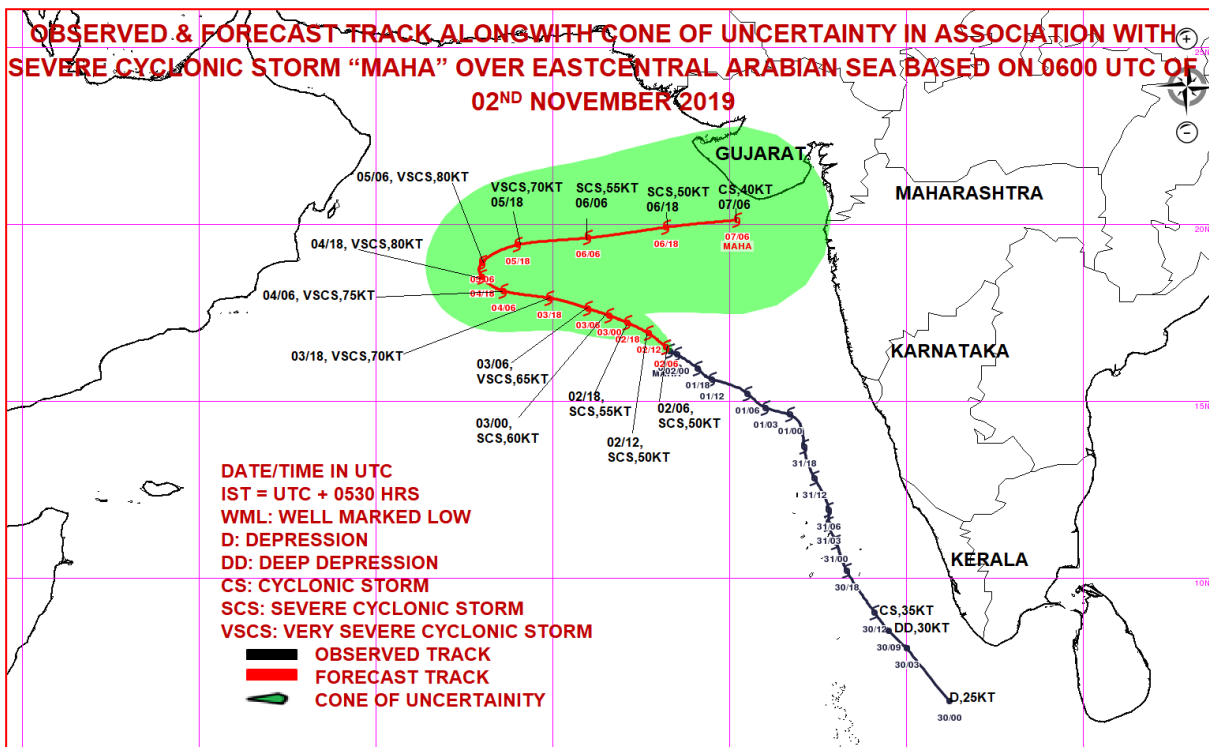
The next bulletin will be issued at 1730 hrs IST of 02nd November, 2019.

(RK JENAMANI)
Scientist-F, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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 (ARB/04/2019) and BULLETIN NO. : 72 (ARB/03/2019)

TIME OF ISSUE: 1650 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral Arabian Sea.**

BULLETIN NO. : 27 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The Severe Cyclonic storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea moved northwestwards with a speed of 10 kmph during past 06 hours, and lay centered at 1430 hrs IST of today, the 02nd November, 2019 over eastcentral Arabian Sea near latitude 16.8°N and longitude 67.9°E, about 520 km south-southwest of Veraval (Gujarat) and 540 km south-southwest of Diu. It is very likely to move west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat and adjoining north Maharashtra coasts thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 24 hours. However, after the re-curvature, it is very likely to weaken gradually while moving east-northeastwards.

Forecast track and intensity are given in the following table:

(Continued on next page)

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.

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/1430	16.8/67.9	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/1730	17.0/67.7	90-100 gusting to 110	Severe Cyclonic Storm
02.11.19/2330	17.1/67.1	100-110 gusting to 120	Severe Cyclonic Storm
03.11.19/0530	17.1/66.6	110-120 gusting to 135	Severe Cyclonic Storm
03.11.19/1130	17.6/66.0	120-130 gusting to 145	Very Severe Cyclonic Storm
03.11.19/2330	17.9/64.9	130-140 gusting to 155	Very Severe Cyclonic Storm
04.11.19/1130	18.1/63.6	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/2330	18.5/63.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/1130	18.9/63.0	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/2330	19.4/64.0	130-140 gusting to 155	Very Severe Cyclonic Storm
06.11.19/1130	19.6/66.0	100-110 gusting to 120	Severe Cyclonic Storm
06.11.19/2330	19.9/68.2	90-100 gusting to 110	Severe Cyclonic Storm
07.11.19/1130	20.1/70.2	70-80 gusting to 90	Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with isolated heavy falls likely over Saurashtra, Gujarat region and north Madhya Maharashtra and north Konkan from 6th November evening to 8th November morning.

(ii) Wind warning

- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 140-150 kmph gusting to 165 kmph by the morning of 4th November and 150-160 kmph gusting to 175 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by early hours of 05th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra coast during next 24 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat and adjoining north Maharashtra coasts from 6th November morning for subsequent 48 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 48 hours and will become phenomenal from 04th November morning for subsequent 02 days.
- Sea condition will be high to phenomenal over westcentral Arabian Sea during 3rd- 6th November and over northeast Arabian Sea during 3rd -7th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra coast during next 24 hours and into eastcentral Arabian Sea till 7th November and over westcentral and northeast Arabian Sea from 03rd to 07th November and along & off Gujarat coast and adjoining north Maharashtra coast from 5th – 7th November.

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.

BULLETIN NO. : 72 (ARB/03/2019)**(B) Depression over westcentral Arabian Sea**

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 27 kmph during past 06 hours and lay centred at 1430 hrs IST of today, the 02nd November, 2019 over westcentral Arabian Sea near latitude 12.5°N and longitude 53.8°E, close to Socotra Island and 300 km east-northeast of Bereeda (Somalia). It is very likely to move west-southwestwards towards Somalia coast across Socotra Island during next 12 hours and weaken into a Well Marked Low Pressure Area thereafter.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/1430	12.5/53.8	40-50 gusting to 60	Depression
02.11.19/1730	11.9/51.5	30-40 gusting to 50	Depression
02.11.19/2330	11.3/51.3	30-40 gusting to 50	Depression

Warnings:**(i) Wind warning**

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to prevail around the system centre over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

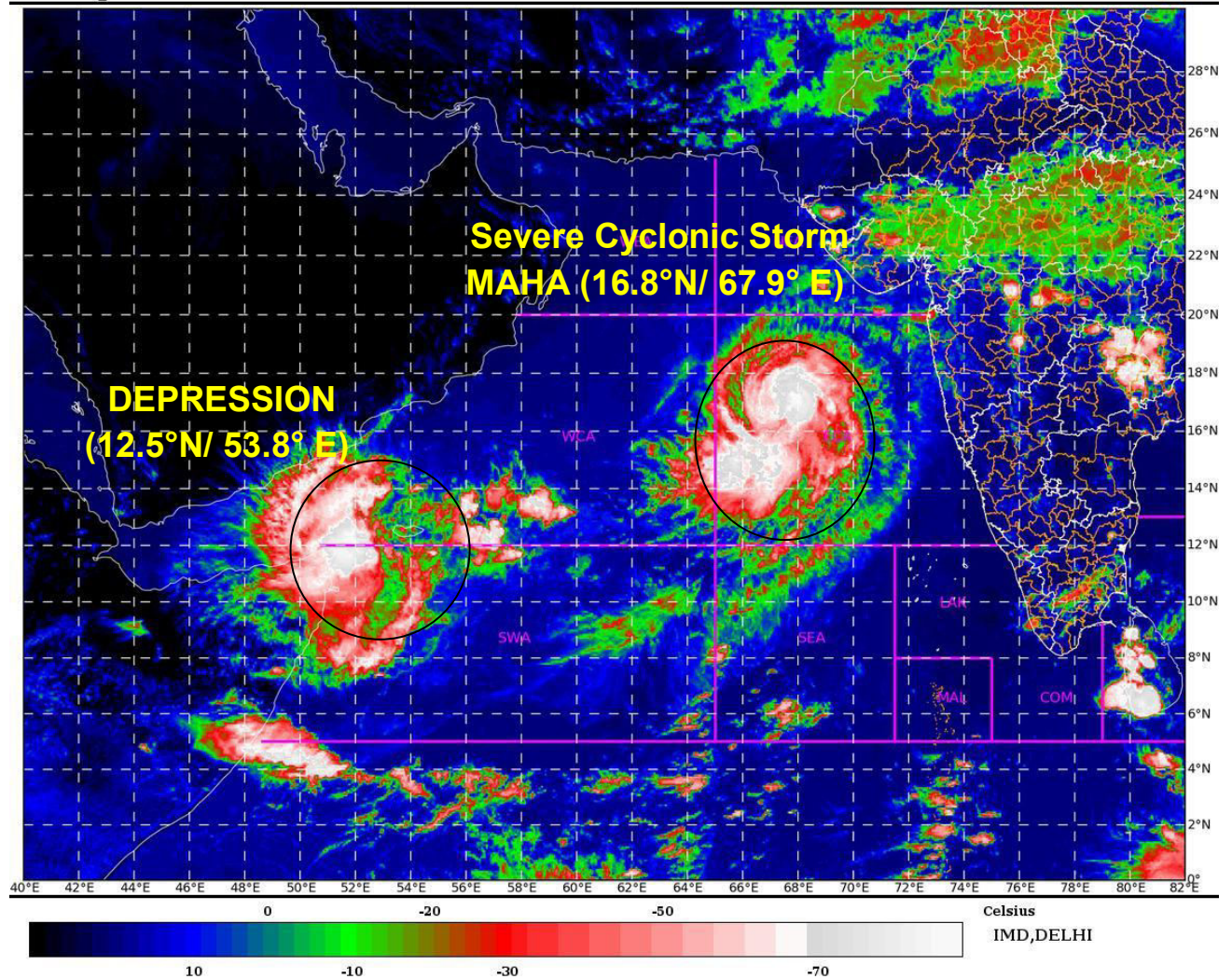
(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea around system centre, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

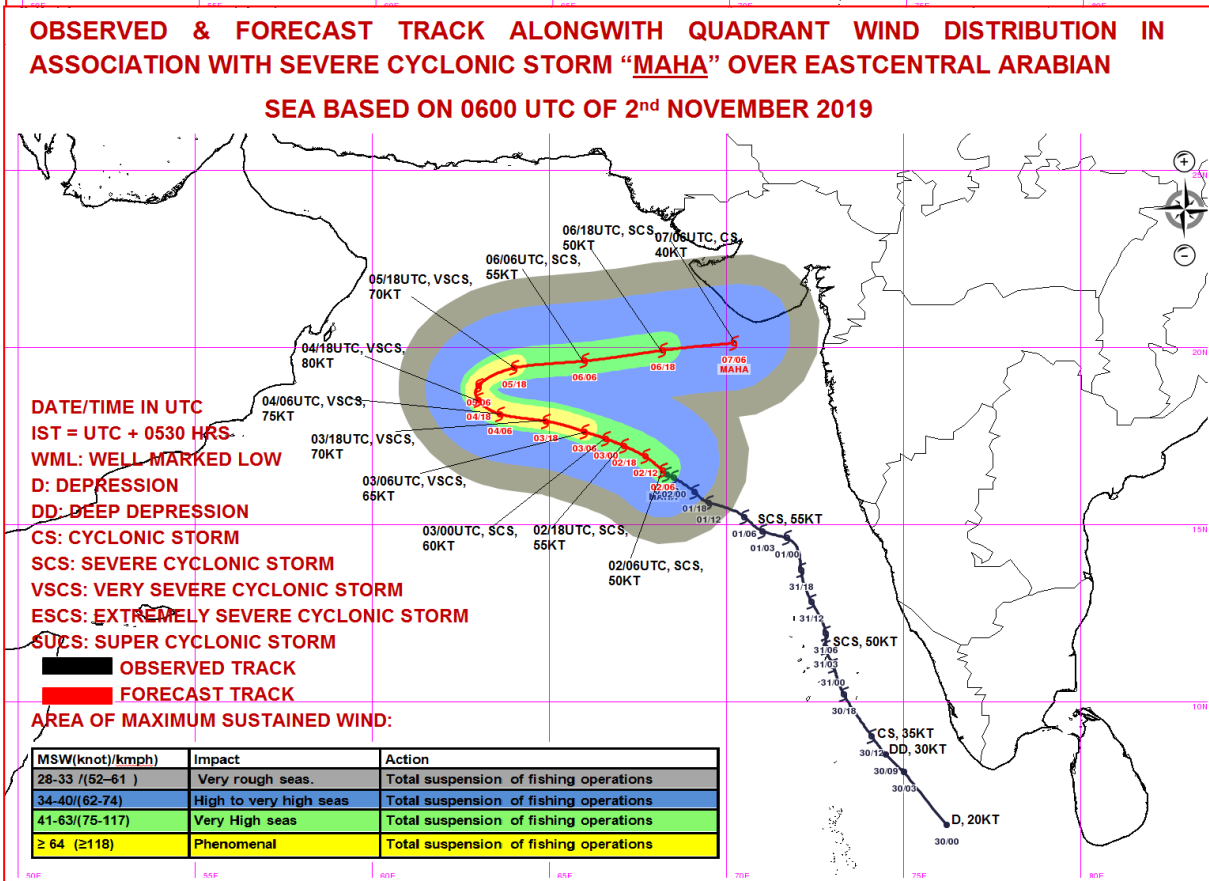
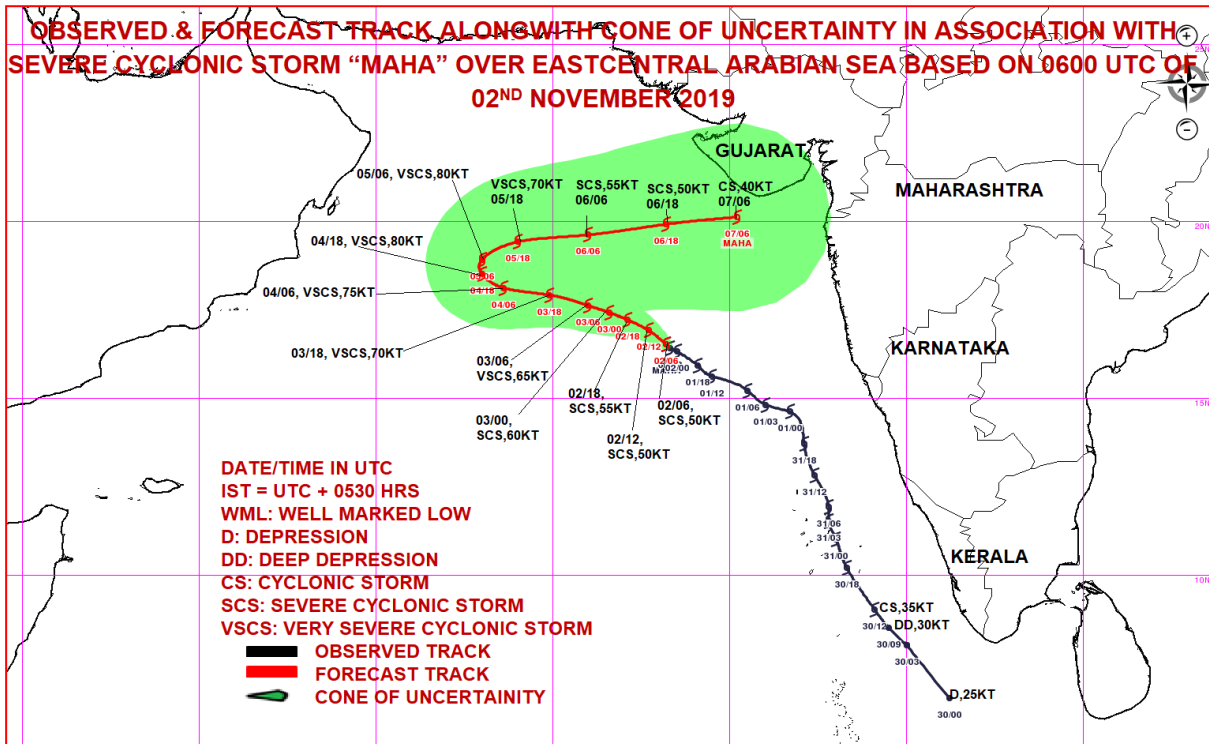
The next bulletin will be issued at 2030 hrs IST of 02nd November, 2019.

(RK JENAMANI)
Scientist-F, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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 (ARB/04/2019) and BULLETIN NO. : 73 (ARB/03/2019)

TIME OF ISSUE: 2015 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral and adjoining southwest Arabian Sea.**

BULLETIN NO. : 28 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The **Severe Cyclonic storm MAHA (Pronounced as M'maha)** over eastcentral Arabian Sea moved northwestwards with a speed of 14 kmph during past 06 hours, and lay centered at 1730 hrs IST of today, the 02nd November, 2019 over eastcentral Arabian Sea near latitude 17.0°N and longitude 67.6°E, about 520 km south-southwest of Veraval (Gujarat) and 540 km south-southwest of Diu. It is very likely to move west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat and adjoining north Maharashtra coasts thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 12 hours. However, after the re-curvature, it is very likely to weaken gradually while moving east-northeastwards.

Forecast track and intensity are given in the following table:

(Continued on next page)

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.

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/1730	17.0/67.6	95-105 gusting to 115	Severe Cyclonic Storm
02.11.19/2330	17.2/67.1	105-115 gusting to 125	Severe Cyclonic Storm
03.11.19/0530	17.4/66.6	115-125 gusting to 140	Very Severe Cyclonic Storm
03.11.19/1130	17.6/66.0	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1730	17.8/65.5	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/0530	18.0/64.2	150-160 gusting to 175	Very Severe Cyclonic Storm
04.11.19/1730	18.3/63.3	160-170 gusting to 185	Very Severe Cyclonic Storm
05.11.19/0530	18.7/62.7	160-170 gusting to 185	Very Severe Cyclonic Storm
05.11.19/1730	19.2/63.5	150-160 gusting to 175	Very Severe Cyclonic Storm
06.11.19/0530	19.5/64.9	130-140 gusting to 155	Severe Cyclonic Storm
06.11.19/1730	19.8/66.5	110-120 gusting to 135	Severe Cyclonic Storm
07.11.19/0530	20.0/68.3	95-105 gusting to 115	Severe Cyclonic Storm
07.11.19/1730	20.2/70.2	70-80 gusting to 90	Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with isolated heavy falls likely over Saurashtra, Gujarat region and north Madhya Maharashtra and north Konkan from 6th November evening to 8th November morning.

(ii) Wind warning

- Gale wind speed reaching 95-105 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 150-160 kmph gusting to 175 kmph by the morning of 4th November and 160-170 kmph gusting to 185 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by evening of 04th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra coast during next 12 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat and adjoining north Maharashtra coasts from 6th November morning for subsequent 48 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 12 hours and will become phenomenal from 03rd November morning for subsequent 03 days.
- Sea condition will be high to phenomenal over westcentral Arabian Sea during 3rd- 6th November and over northeast Arabian Sea during 3rd -7th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra coast during next 24 hours and into eastcentral Arabian Sea till 7th November and over westcentral and northeast Arabian Sea from 03rd to 07th November and along & off Gujarat coast and adjoining north Maharashtra coast from 5th – 7th November.

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.

BULLETIN NO. : 73 (ARB/03/2019)

(B) Depression over westcentral and adjoining southwest Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 23 kmph during past 06 hours and lay centred at 1730 hrs IST of today, the 02nd November, 2019 over westcentral and adjoining southwest Arabian Sea near latitude 12.5°N and longitude 53.0°E, around 100 km west of Socotra Island and 220 km east-northeast of Bereeda (Somalia). It is very likely to move west-southwestwards towards Somalia coast and weaken into a Well Marked Low Pressure Area during next 06 hours.

Warnings:

(i) Wind warning

- Squally wind speed reaching 35-45 kmph gusting to 55 kmph is prevailing around the system centre over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

(ii) Sea condition

- Sea condition is rough to very rough over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

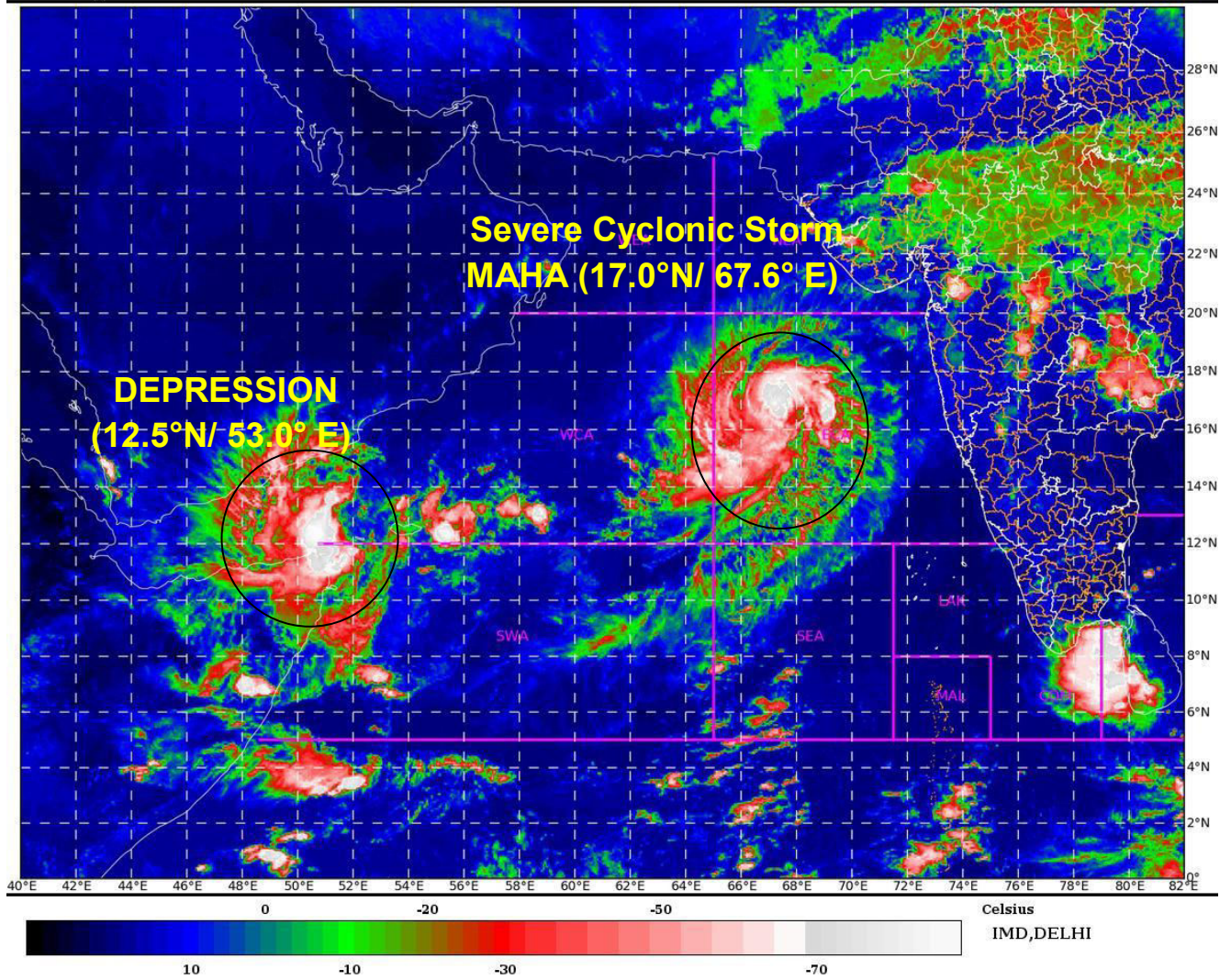
(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea around system centre, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

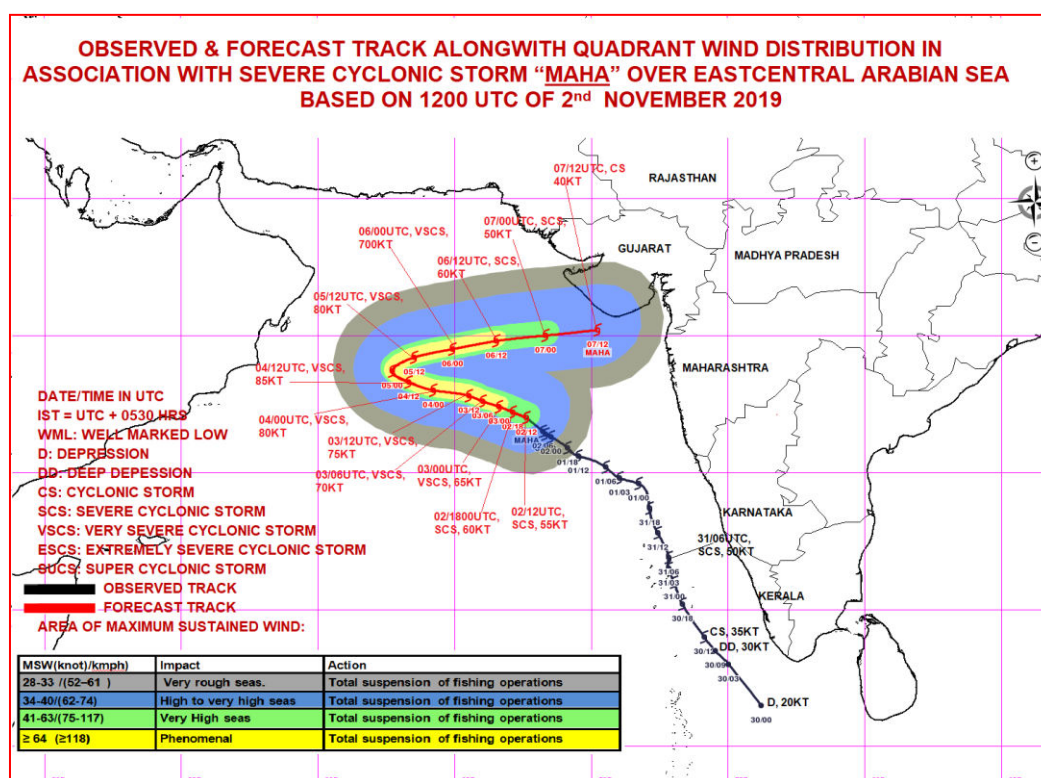
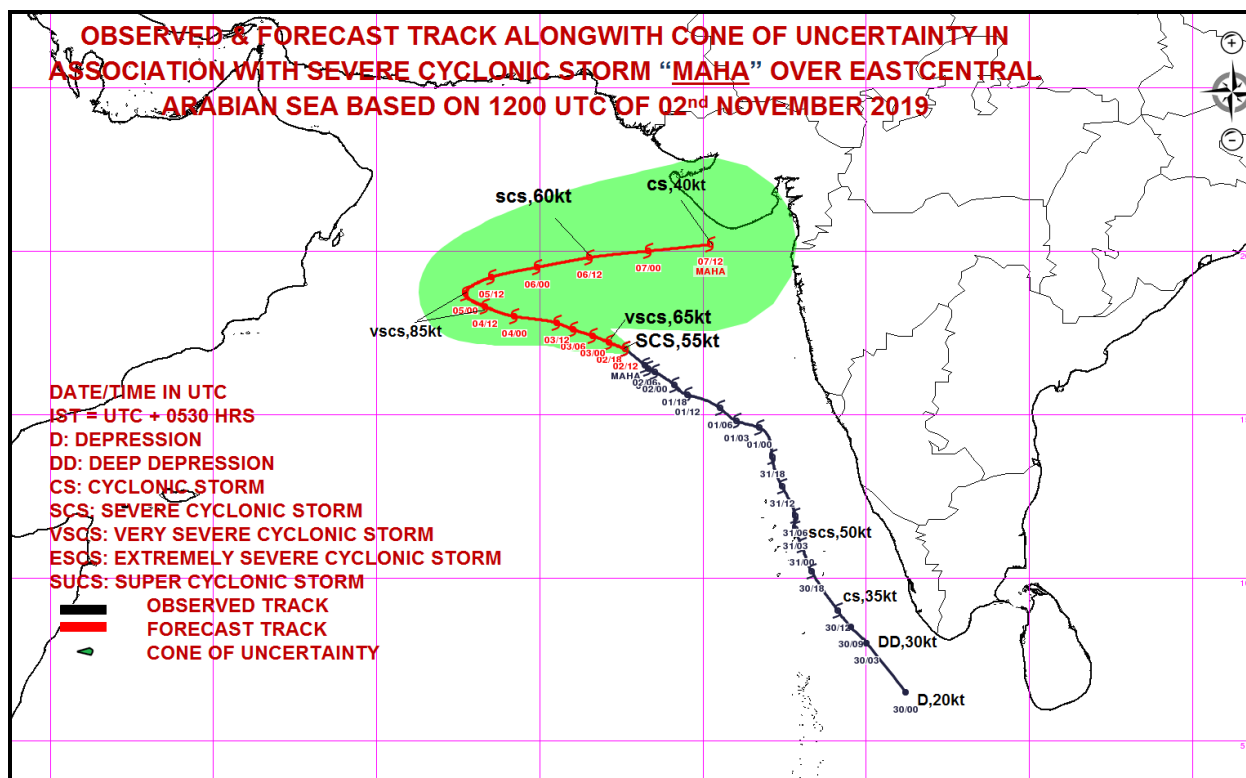
The next bulletin will be issued at 2330 hrs IST of 02nd November, 2019.

(RK JENAMANI)
Scientist-F, RSMC, New Delhi

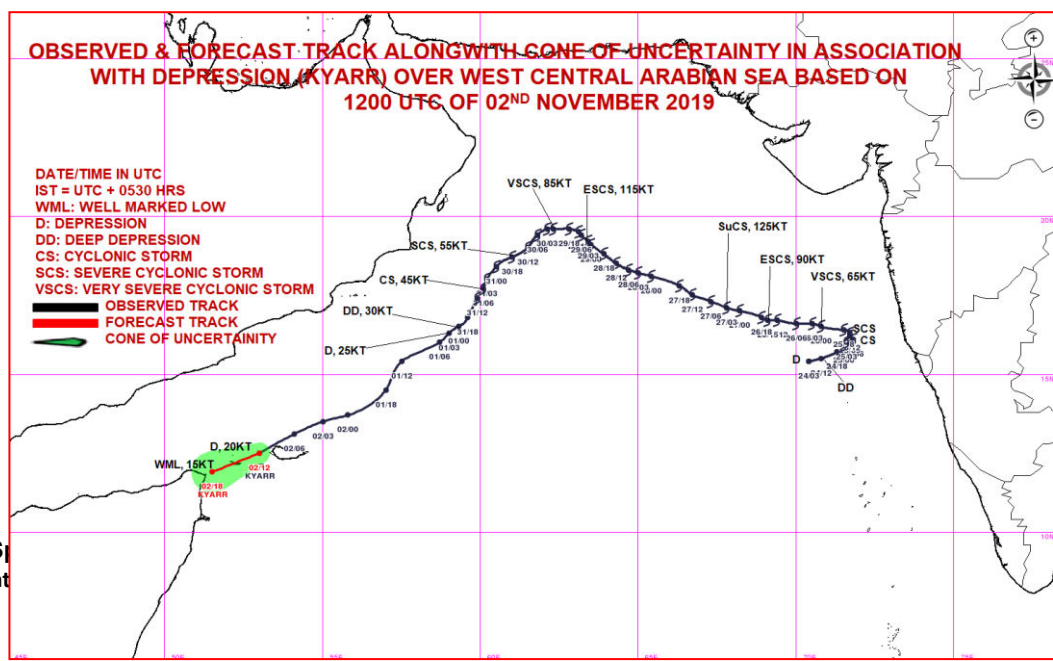
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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.



S
Rainfall amount

r more.



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

BULLETIN NO. : 29 (ARB/04/2019) and BULLETIN NO. : 74 (ARB/03/2019)

TIME OF ISSUE: 2215 HOURS IST

DATED: 02.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES, (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0489-6263180)

ADMINISTRATOR, UNION TERRITORY OF DAMAN & DIU (0260-2230775)

ADMINISTRATOR, UNION TERRITORY OF DADRA NAGAR HAVELI (0260-2230775)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, TAMILNADU (FAX NO.044-25672304)

CHIEF SECRETARY, KERALA (FAX NO.0471-2327176)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

**Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression over westcentral and adjoining southwest Arabian Sea.**

BULLETIN NO. : 29 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The **Severe Cyclonic storm MAHA (Pronounced as M'maha)** over eastcentral Arabian Sea moved west-northwestwards with a speed of 12 kmph during past 06 hours, and lay centered at 2030 hrs IST of today, the 02nd November, 2019 over eastcentral Arabian Sea near latitude 17.1°N and longitude 67.3°E, about 530 km south-southwest of Veraval (Gujarat) and 550 km southwest of Diu. It is very likely to move west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat and adjoining north Maharashtra coasts thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 12 hours. However, after the re-curvature, it is very likely to weaken gradually while moving east-northeastwards.

Forecast track and intensity are given in the following table:

(Continued on next page)

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.

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/2030	17.1/67.3	95-105 gusting to 115	Severe Cyclonic Storm
02.11.19/2330	17.2/67.1	105-115 gusting to 125	Severe Cyclonic Storm
03.11.19/0530	17.4/66.6	115-125 gusting to 140	Very Severe Cyclonic Storm
03.11.19/1130	17.6/66.0	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1730	17.8/65.5	140-150 gusting to 165	Very Severe Cyclonic Storm
04.11.19/0530	18.0/64.2	150-160 gusting to 175	Very Severe Cyclonic Storm
04.11.19/1730	18.3/63.3	160-170 gusting to 185	Very Severe Cyclonic Storm
05.11.19/0530	18.7/62.7	160-170 gusting to 185	Very Severe Cyclonic Storm
05.11.19/1730	19.2/63.5	150-160 gusting to 175	Very Severe Cyclonic Storm
06.11.19/0530	19.5/64.9	130-140 gusting to 155	Severe Cyclonic Storm
06.11.19/1730	19.8/66.5	110-120 gusting to 135	Severe Cyclonic Storm
07.11.19/0530	20.0/68.3	95-105 gusting to 115	Severe Cyclonic Storm
07.11.19/1730	20.2/70.2	70-80 gusting to 90	Cyclonic Storm

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with isolated heavy falls likely over Saurashtra, Gujarat region and north Madhya Maharashtra and north Konkan from 6th November evening to 8th November morning.

(ii) Wind warning

- Gale wind speed reaching 95-105 kmph gusting to 115 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 150-160 kmph gusting to 175 kmph by the morning of 4th November and 160-170 kmph gusting to 185 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by evening of 04th November.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra coast during next 12 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat and adjoining north Maharashtra coasts from 6th November morning for subsequent 48 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 12 hours and will become phenomenal from 03rd November morning for subsequent 03 days.
- Sea condition will be high to phenomenal over westcentral Arabian Sea during 3rd- 6th November and over northeast Arabian Sea during 3rd -7th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra coast during next 24 hours and into eastcentral Arabian Sea till 7th November and over westcentral and northeast Arabian Sea from 03rd to 07th November and along & off Gujarat coast and adjoining north Maharashtra coast from 5th – 7th November.

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.

BULLETIN NO. : 74 (ARB/03/2019)

(B) Depression over westcentral and adjoining southwest Arabian Sea

The Depression over westcentral Arabian Sea moved west-southwestwards with a speed of 25 kmph during past 06 hours and lay centred at 2030 hrs IST of today, the 02nd November, 2019 over westcentral and adjoining southwest Arabian Sea near latitude 12.0°N and longitude 52.5°E, around 170 km west-southwest of Socotra Island and 160 km east-northeast of Bereeda (Somalia). It is very likely to move west-southwestwards towards Somalia coast and weaken into a Well Marked Low Pressure Area during next 03 hours.

Warnings:

(i) Wind warning

- Squally wind speed reaching 30-40 kmph gusting to 50 kmph is prevailing around the system centre over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

(ii) Sea condition

- Sea condition is very likely to be rough over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

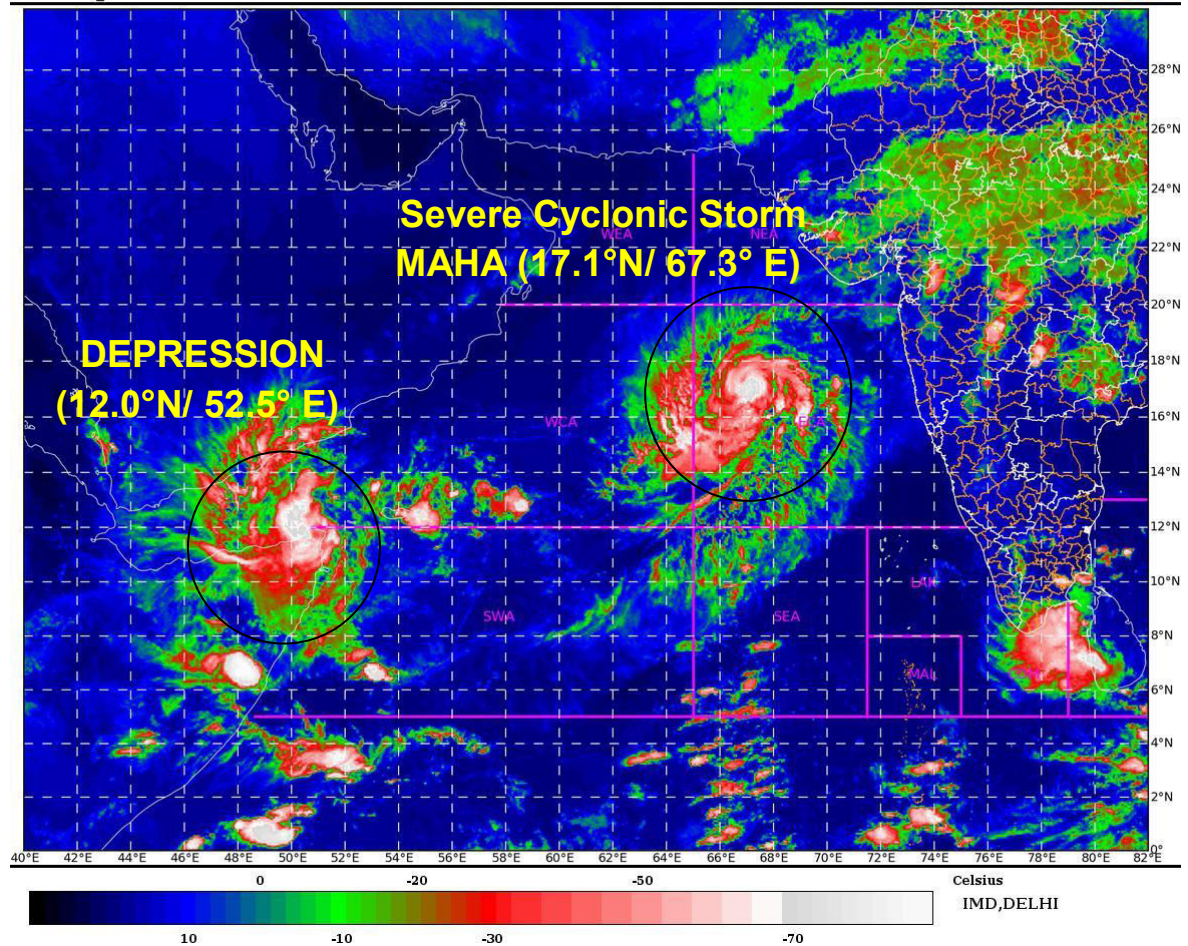
(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea around system centre, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

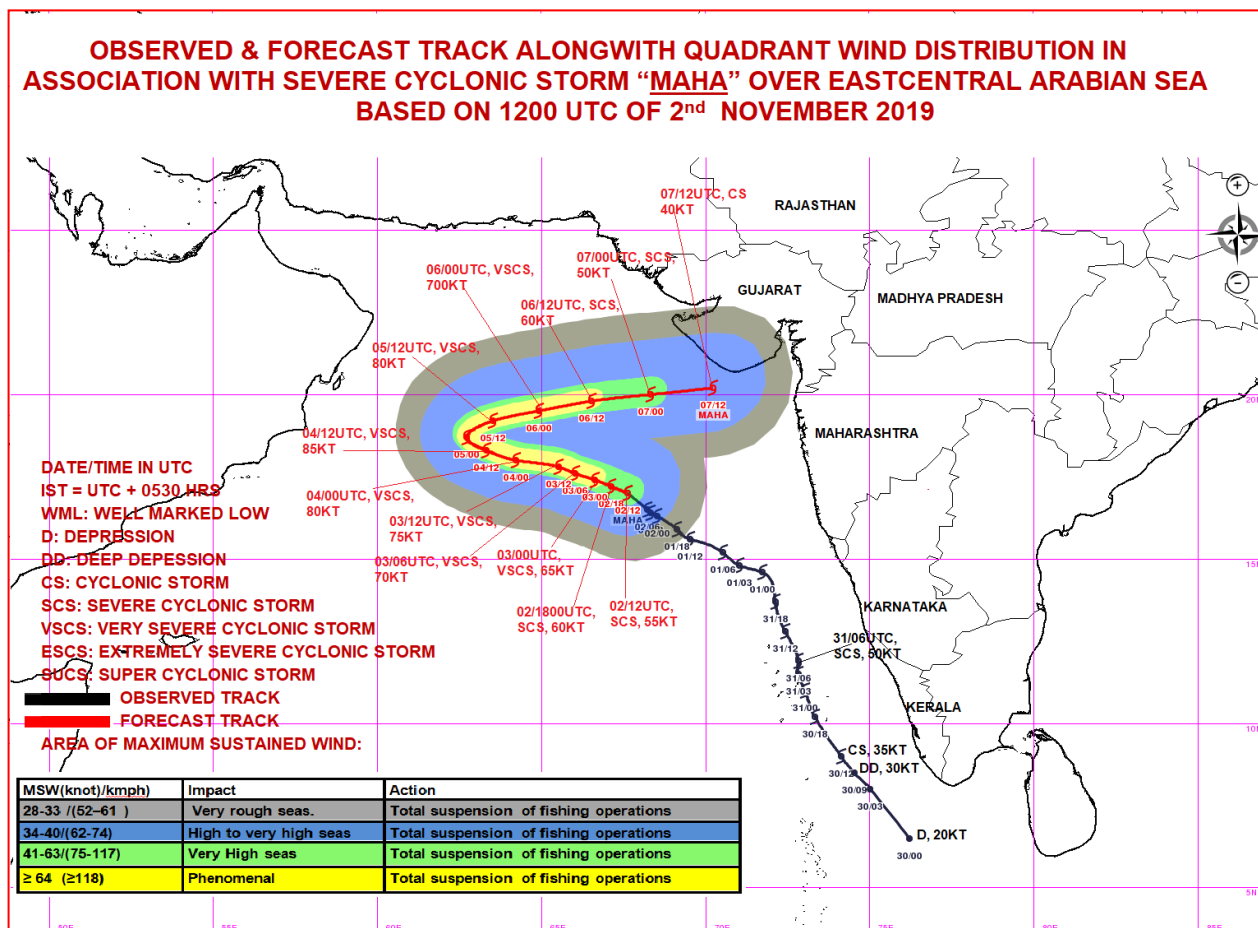
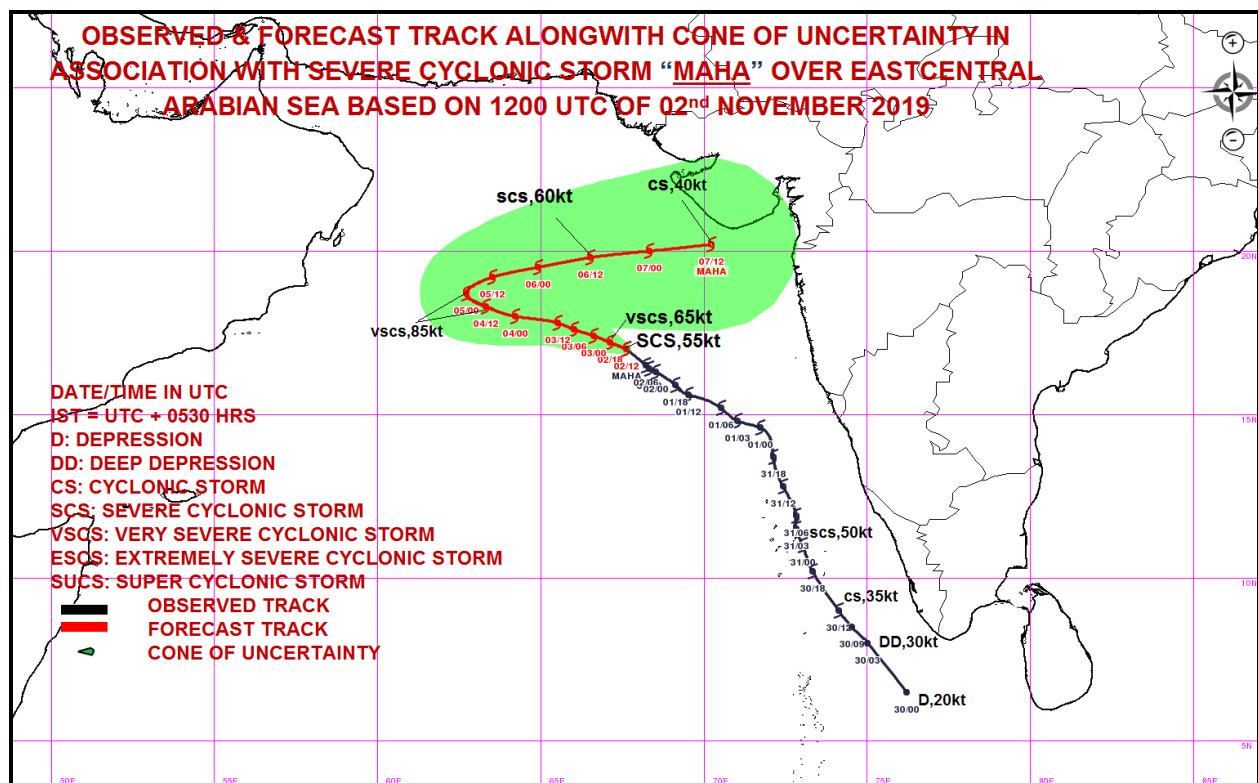
The next bulletin will be issued at 0230 hrs IST of 03rd November, 2019.

(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

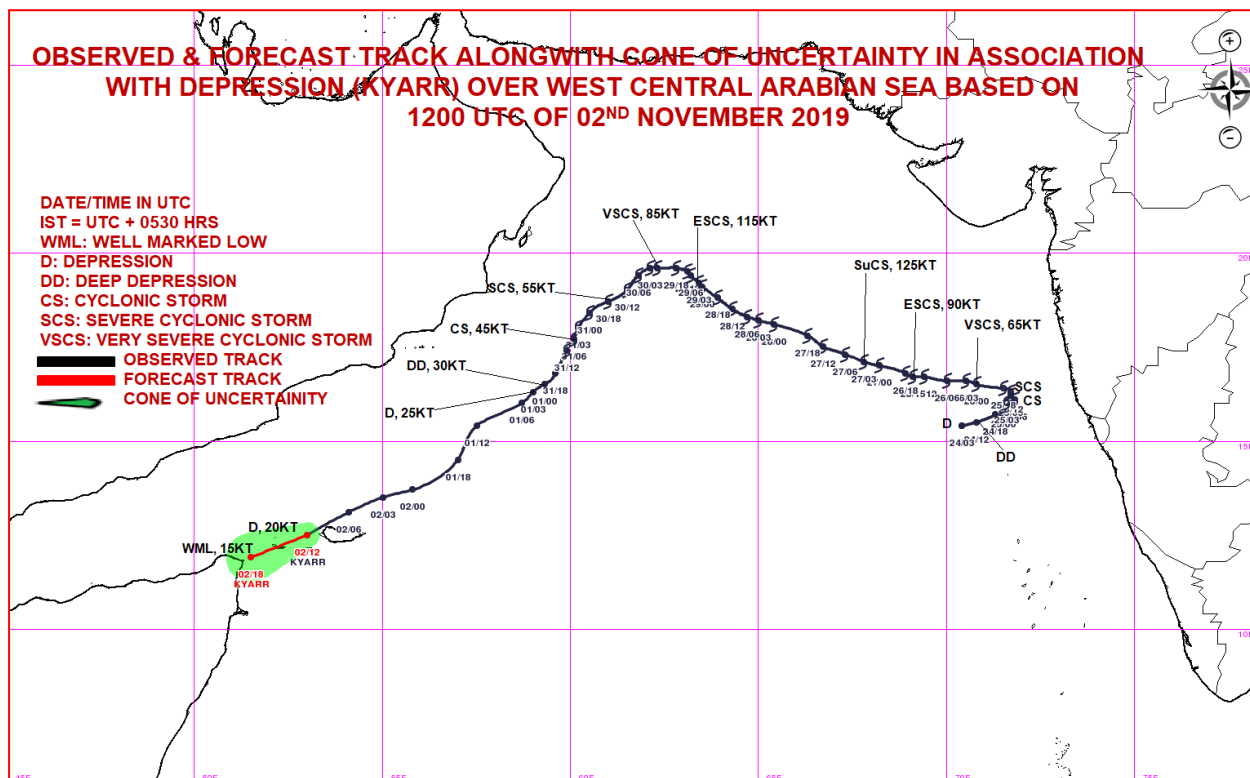
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.



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. : 30 (ARB/04/2019) and BULLETIN NO. : 75 (ARB/03/2019)

TIME OF ISSUE: 0200 HOURS IST

DATED: 03.11.2019

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)
CONTROL ROOM NDMA (FAX.NO. 26701729)
CABINET SECRETARIAT (FAX.NO.23012284, 23018638)
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)
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CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)
CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)
CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

Sub: (A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea
(B) Depression weakened into a Well Marked Low Pressure Area over westcentral and adjoining southwest Arabian Sea.

BULLETIN NO. : 30 (ARB/04/2019)

(A) Severe Cyclonic Storm MAHA (Pronounced as M'maha) over eastcentral Arabian Sea

The **Severe Cyclonic storm MAHA (Pronounced as M'maha)** over eastcentral Arabian Sea moved west-northwestwards with a speed of 11 kmph during past 06 hours, and lay centered at 2330 hrs IST of 02nd November, 2019 over eastcentral Arabian Sea near latitude 17.2°N and longitude 67.0°E, about 540 km south-southwest of Veraval (Gujarat) and 570 km south-southwest of Diu. It is very likely to move west-northwestwards till 04th November and recurve east-northeastwards towards south Gujarat and adjoining north Maharashtra coasts thereafter. It is very likely to intensify into a Very Severe Cyclonic Storm over eastcentral Arabian Sea during next 06 hours. However, after the re-curvature, it is very likely to weaken gradually while moving east-northeastwards.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.11.19/2330	17.2/67.0	105-115 gusting to 125	Severe Cyclonic Storm
03.11.19/0530	17.4/66.6	120-130 gusting to 145	Very Severe Cyclonic Storm
03.11.19/1130	17.6/66.0	130-140 gusting to 155	Very Severe Cyclonic Storm
03.11.19/1730	17.8/65.5	140-150 gusting to 165	Very Severe Cyclonic Storm
03.11.19/2330	17.9/64.9	150-160 gusting to 175	Very Severe Cyclonic Storm
04.11.19/1130	18.2/63.9	160-170 gusting to 185	Very Severe Cyclonic Storm
04.11.19/2330	18.6/63.0	160-170 gusting to 185	Very Severe Cyclonic Storm
05.11.19/1130	19.1/63.1	150-160 gusting to 175	Very Severe Cyclonic Storm
05.11.19/2330	19.5/64.3	130-140 gusting to 155	Very Severe Cyclonic Storm
06.11.19/1130	19.7/65.7	120-130 gusting to 145	Very Severe Cyclonic Storm
06.11.19/2330	19.9/67.1	110-120 gusting to 135	Severe Cyclonic Storm
07.11.19/1130	20.1/68.7	90-100 gusting to 110	Severe Cyclonic Storm
07.11.19/2330	20.3/70.2	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.

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with isolated heavy falls likely over Saurashtra, Gujarat region and north Madhya Maharashtra and north Konkan from 6th November evening to 8th November morning.

(ii) Wind warning

- Gale wind speed reaching 105-115 kmph gusting to 125 kmph is prevailing over eastcentral Arabian Sea around the system centre.
- Gale wind speed is very likely to increase gradually over east-central Arabian Sea becoming 160-170 kmph gusting to 185 kmph over eastcentral & adjoining westcentral and northeast Arabian Sea by 4th November.
- Squally wind speed reaching 30-40 kmph gusting to 50 kmph likely along & off Maharashtra coast during next 12 hours.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off South Gujarat and adjoining north Maharashtra coasts from 6th November morning for subsequent 48 hours.

(iii) Sea condition

- Sea condition will be very high over eastcentral Arabian Sea for the next 06 hours and will become phenomenal from 03rd November for subsequent 03 days.
- Sea condition will be high to phenomenal over westcentral Arabian Sea during 3rd- 6th November and over northeast Arabian Sea during 3rd -7th November.

(iv) Fishermen Warning

- The fishermen are advised not to venture into the Sea along & off Maharashtra coast during next 24 hours and into eastcentral Arabian Sea till 7th November and over westcentral and northeast Arabian Sea from 04th to 07th November and along & off Gujarat coast and adjoining north Maharashtra coast from 5th – 7th November.

BULLETIN NO. : 75 (ARB/03/2019)

(B) Depression weakened into a Well Marked Low Pressure Area over westcentral and adjoining southwest Arabian Sea.

The Depression over westcentral Arabian Sea moved west-southwestwards during past 06 hours, weakened into a Well Marked Low Pressure area and lay centred at 2330 hrs IST 02nd November, 2019 over westcentral and adjoining southwest Arabian Sea off north Somalia coast. It is very likely to move further west-southwestwards along and off Somalia coast.

Warnings:

(i) Wind warning

- Squally wind speed reaching 25-35 kmph gusting to 45 kmph around the system centre over westcentral Arabian Sea, along and off north Somalia coast, adjoining areas of Gulf of Aden and southwest Arabian Sea is very likely to prevail during next 12 hours.

(ii) Sea condition

- Sea condition is very likely to be rough over westcentral Arabian Sea, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

(iii) Fishermen Warning

- The fishermen are advised not to venture into westcentral Arabian Sea around system centre, along and off north Somalia coast and adjoining areas of Gulf of Aden and southwest Arabian Sea during next 12 hours.

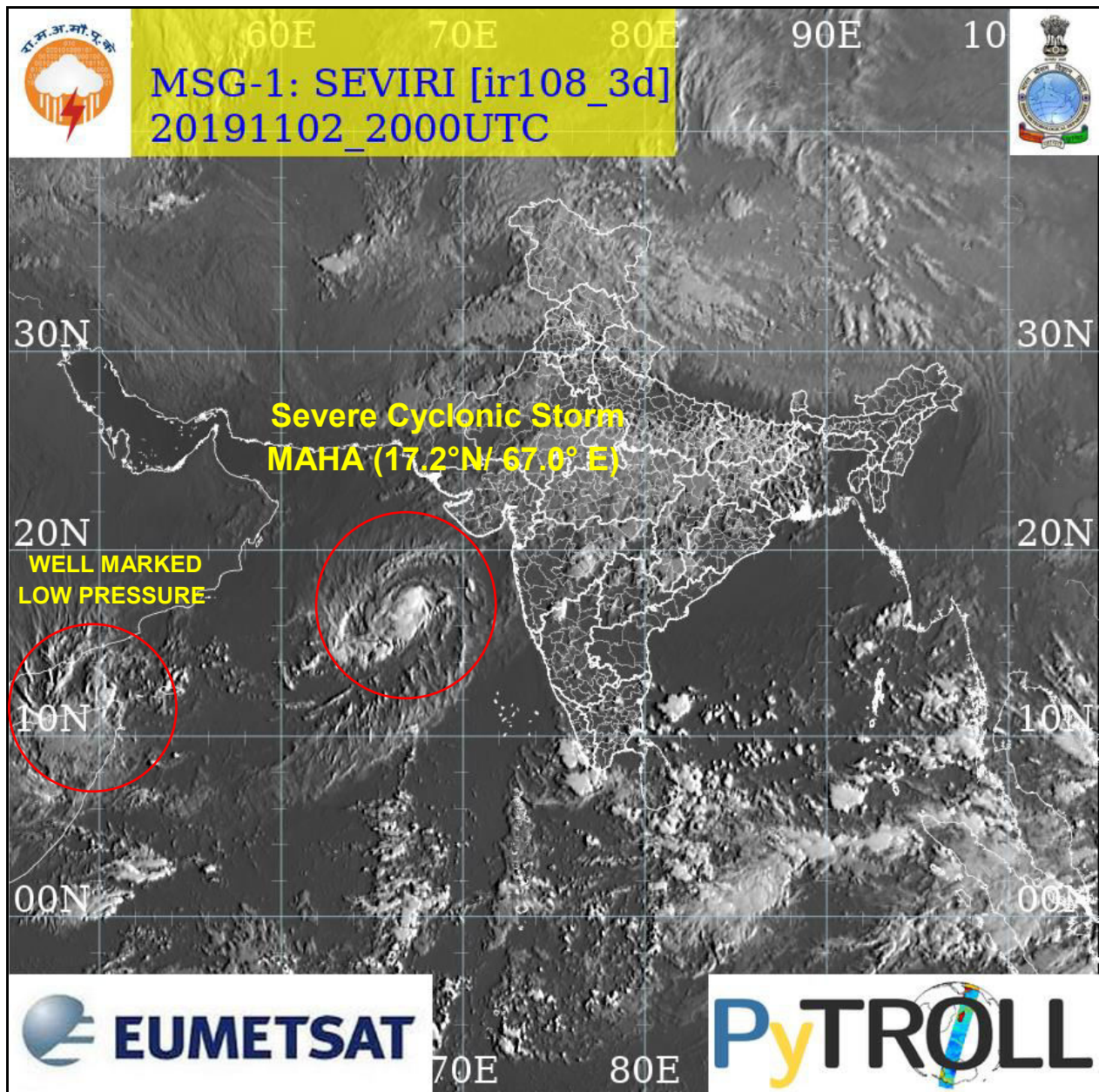
This is the last Bulletin pertaining to this system.

The next bulletin will be issued at 0530 hrs IST of 03rd November, 2019.

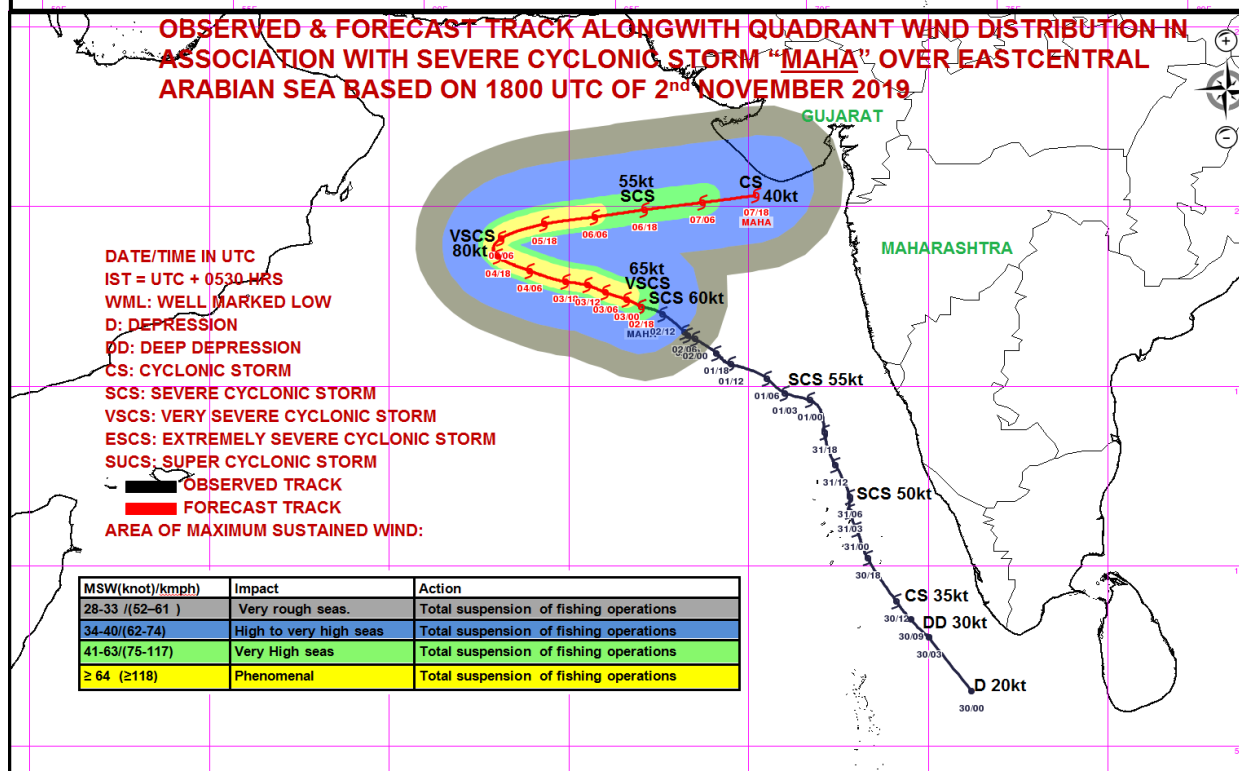
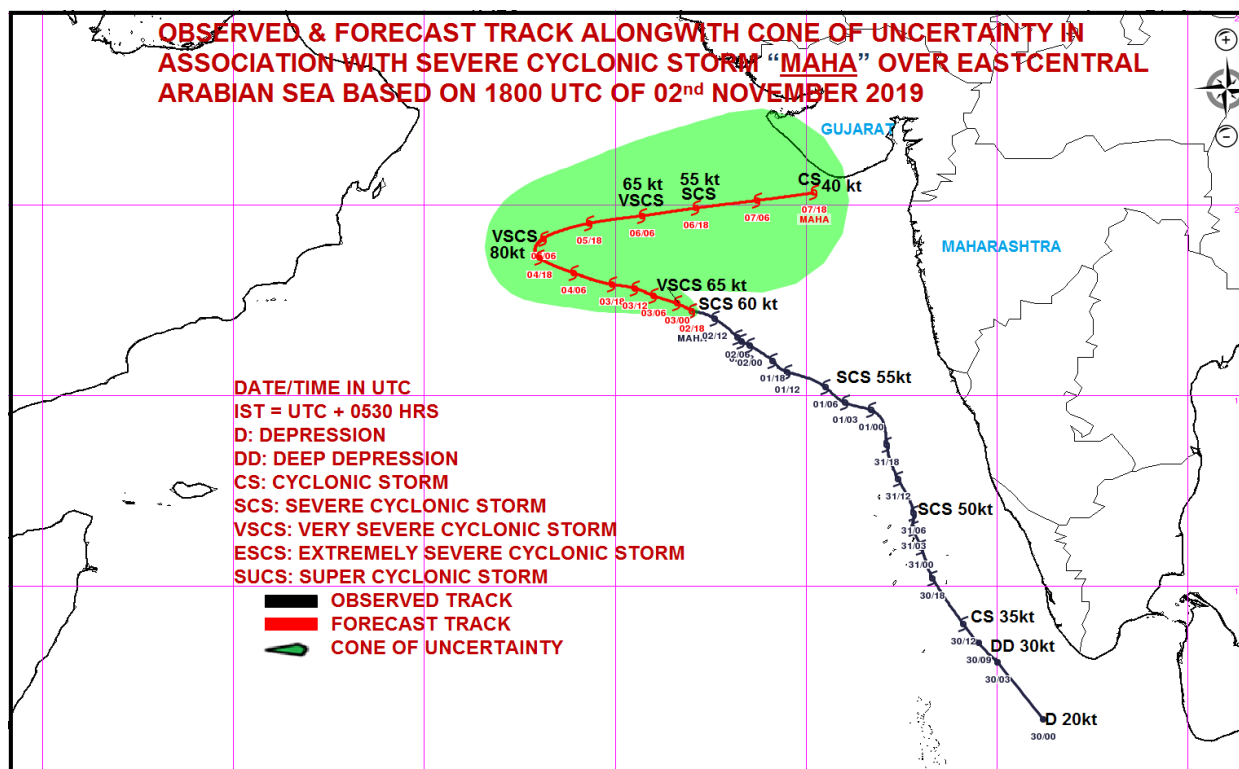
(Ananda Kumar Das)
Scientist-E, RSMC, New Delhi

Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

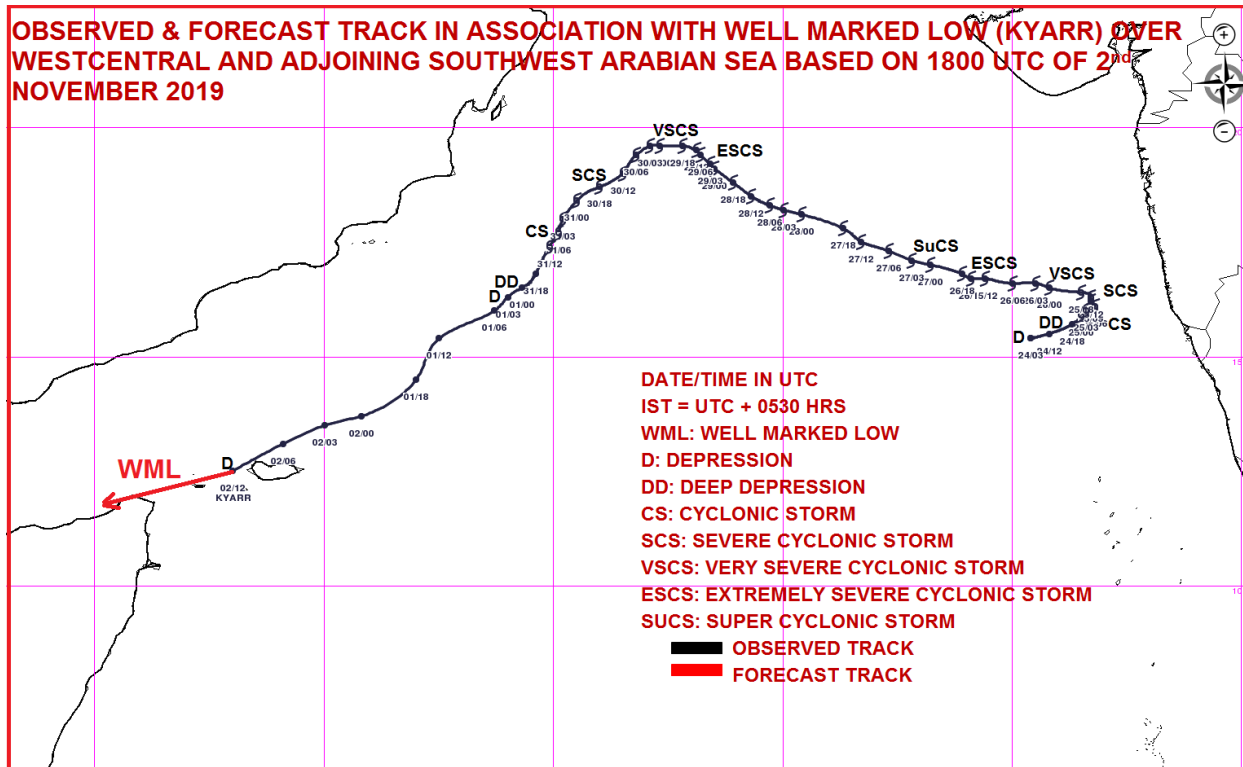
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



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