



Government of India  
Ministry of Earth Sciences  
Earth System Science Organisation



Earth System Science Organisation  
India Meteorological Department

## PRESS RELEASE-6

Time of issue: 1300 hours IST

Dated: 29-10-2019

**Sub: (a) Super Cyclonic Storm “KYARR” weakened into an Extremely Severe Cyclonic Storm over westcentral and adjoining eastcentral & north Arabian Sea, (b) Well marked low pressure area over Comorin area & adjoining Equatorial Indian Ocean and (c) Some characteristics of super cyclonic storms over north Indian Ocean**

**(a) Super Cyclonic Storm weakened into an Extremely Severe Cyclonic Storm over westcentral and adjoining eastcentral & north Arabian Sea**

Yesterday’s Super Cyclonic Storm “KYARR” (pronounced as KYARR) over eastcentral Arabian Sea moved west-northwestwards, weakened into an extremely severe cyclonic storm and lay centered over westcentral and adjoining eastcentral & north Arabian Sea at 0830 hrs IST of 29<sup>th</sup> 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 30<sup>th</sup> 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 30<sup>th</sup> October and further into a severe cyclonic storm by the evening of 31<sup>st</sup> October.

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) Heavy rainfall warning:**

No warning

**(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 30<sup>th</sup> October and 120-130 gusting to 140 kmph by the morning of 31<sup>st</sup> October and decrease thereafter.

Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences.

Phone: (91) 11-24652484, FAX: (91) 11-24643128, 24623220, E-mail: [cwdhq2008@gmail.com](mailto:cwdhq2008@gmail.com), Website: [rsmcnewdelhi.imd.gov.in](http://rsmcnewdelhi.imd.gov.in)

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

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

### **(iii) Sea condition**

Sea condition will be phenomenal over westcentral and adjoining eastcentral & north Arabian Sea around the system centre till the morning of 31<sup>st</sup> October and will improve gradually thereafter becoming very rough to high by 01<sup>st</sup> 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 2<sup>nd</sup> November 2019.

### **(b) Well Marked Low pressure area over Comorin area & adjoining Equatorial Indian Ocean**

Yesterday's low pressure over Equatorial Indian Ocean to the south of Sri Lanka lay as a Well Marked Low Pressure Area over Comorin Area & adjoining Equatorial Indian Ocean at 0830 hours IST of today, the 29<sup>th</sup> October.

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 30<sup>th</sup> and 31<sup>st</sup> October.
- Light to moderate rainfall at many places with heavy falls at isolated places is also likely over Coastal Karnataka on 30<sup>th</sup> and 31<sup>st</sup> 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, 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 30<sup>th</sup> 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 31<sup>st</sup> October, 2019.

#### **(iii) Sea condition**

- Sea condition will be rough to very rough over Comorin area & adjoining Equatorial Indian Ocean and Maldives area on 29<sup>th</sup> and southeast Arabian Sea & adjoining Lakshadweep - Maldives areas and along & off Kerala, south Karnataka coasts on 30<sup>th</sup> and 31<sup>st</sup> 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.

---

Contact: Cyclone Warning Division, Office of the Director General of Meteorology,  
India Meteorological Department, Ministry of Earth Sciences.

Phone: (91) 11-24652484, FAX: (91) 11-24643128, 24623220, E-mail: [cwdhq2008@gmail.com](mailto:cwdhq2008@gmail.com), Website: [rsmcnewdelhi.imd.gov.in](http://rsmcnewdelhi.imd.gov.in)

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

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

INSAT 3D imagery based on 0300 UTC of 29<sup>th</sup> October is presented in Fig.1. Observed and forecast track based on 0300 UTC of 29<sup>th</sup> October alongwith cone of uncertainty and wind distribution around the system centre are presented in Fig.2.

Both the systems are under continuous surveillance and concerned state governments are being informed regularly.

Kindly visit [www.imd.gov.in](http://www.imd.gov.in), [www.rsmcnewdelhi.imd.gov.in](http://www.rsmcnewdelhi.imd.gov.in) and [www.mausam.imd.gov.in](http://www.mausam.imd.gov.in) for updates on the system.

**(c) Some characteristics of Super Cyclonic Storms over north Indian Ocean during the period 1965-2019**

1. During satellite era (1965-2018), there were 6 super cyclonic storms (maximum sustained wind speed  $\geq 120$  knots) over the north Indian Ocean including Bay of Bengal (BoB) and Arabian Sea (AS). Tracks of these super cyclonic storms are presented in Fig. 3.
2. Out of these 6 super cyclonic storms, 5 developed over BoB and 1 over AS. Out of these 5 over BoB, two crossed coast with the intensity of super cyclonic storm (MSW  $\geq 120$  knots) namely 1991 Bangladesh cyclone and 1999 Odisha Super Cyclone. The only super cyclonic storm over AS in 2007 namely Gonu weakened over sea and crossed Oman coast as a very severe cyclonic storm (MSW = 77 knots).
3. Considering the maximum life period intensity, Odisha Super Cyclone in the year 1999 was the most intense cyclone during the period with peak maximum sustained wind speed (MSW) of 140 knots (260 kmph).
4. Thus, the cyclone “KYARR” is the **7<sup>th</sup> Super Cyclonic Storm over north Indian Ocean and 2<sup>nd</sup> over Arabian Sea** during the period 1965—2019.
5. Some characteristics features of the super cyclonic storms over north Indian Ocean are given in table presented below:

S.No	Basin of occurrence	Duration (Popular name of Super Cyclonic Storm)	Maximum intensity in knots	Intensity at the time of landfall in knots	Place of landfall	Date/time of landfall in UTC (IST=UTC+05:30)
1.	BoB	14-20 November, 1977 (Chirala cyclone of 1977)	135 knots	95 knots	Nizamapatnam/Chirala, <b>Andhra Pradesh</b>	19 <sup>th</sup> November/1100 UTC
2.	BoB	01-09 November, 1989 (*Kavali Cyclone of 1989)	125 knots	115 knots	Kavali, <b>Andhra Pradesh</b>	8 <sup>th</sup> November/1900 UTC
3.	BoB	4-10 May, 1990 (Machilipatnam Cyclone of 1990)	130 knots	90 knots	Machilipatnam, <b>Andhra Pradesh</b>	9 <sup>th</sup> May/1200 UTC
4.	BoB	24-30 April, 1991 (Bangladesh Cyclone of 1991)	130 knots	130 knots	Chittagong, <b>Bangladesh</b>	29 <sup>th</sup> April/1800 UTC
5.	BoB	25-31 October, 1999 (1999 Odisha Super Cyclone)	140 knots	140 knots	Paradeep, <b>Odisha</b>	29 <sup>th</sup> October/0500 UTC
6.	AS	1-7 June, 2007 (Gonu)	127 knots	1 <sup>st</sup> landfall: 77 knots 2 <sup>nd</sup> landfall: 45 knots	1 <sup>st</sup> landfall: Muscat, <b>Oman</b> & 2 <sup>nd</sup> landfall: Makaran Coast, <b>Iran</b>	1 <sup>st</sup> landfall: 6 <sup>th</sup> June/0230 UTC 2 <sup>nd</sup> landfall: 7 <sup>th</sup> June/0330 UTC

\* Remnant of Typhoon Gay from Pacific Ocean

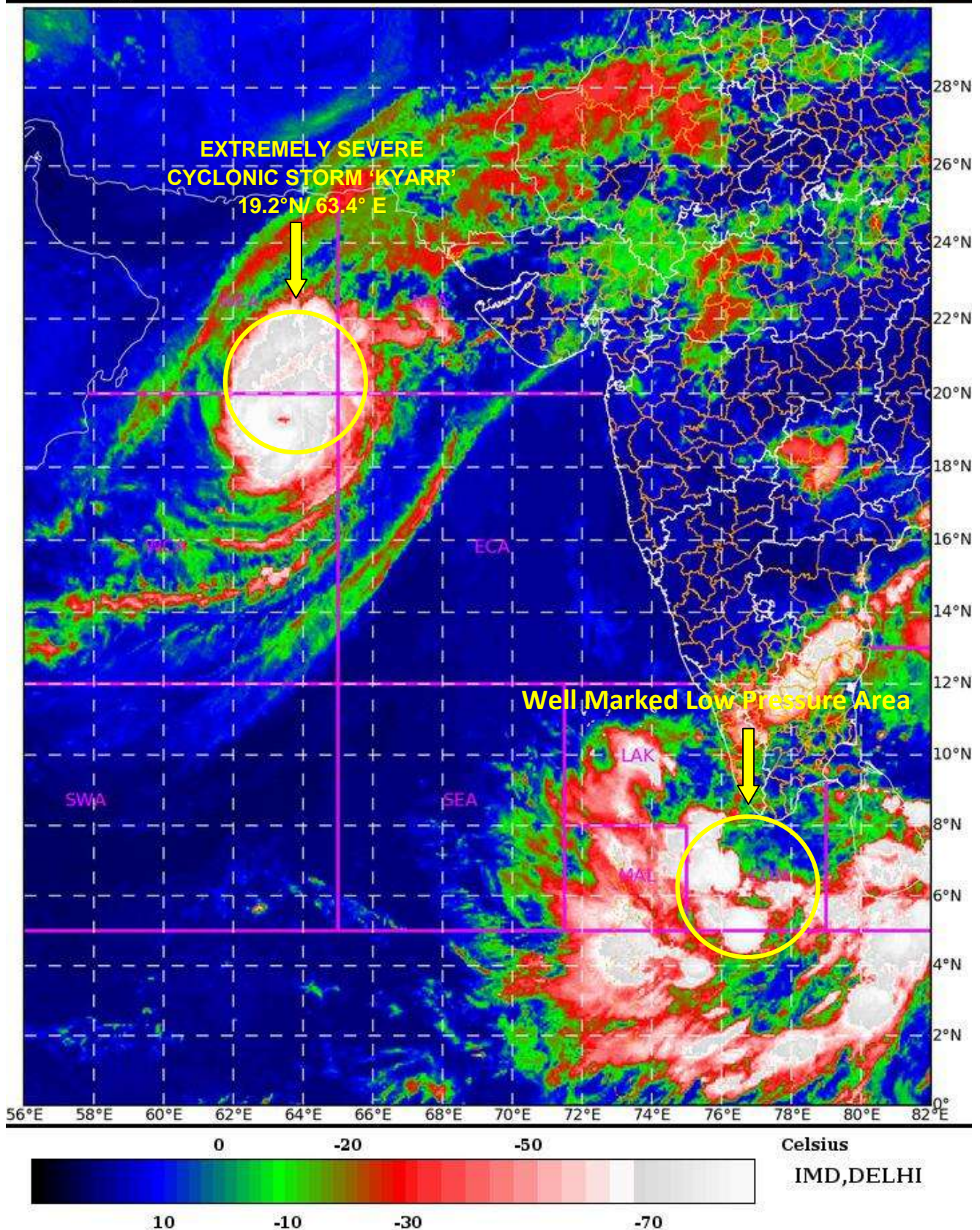


Fig.1: INSAT 3D imagery based on 0300 UTC of 29<sup>th</sup> October

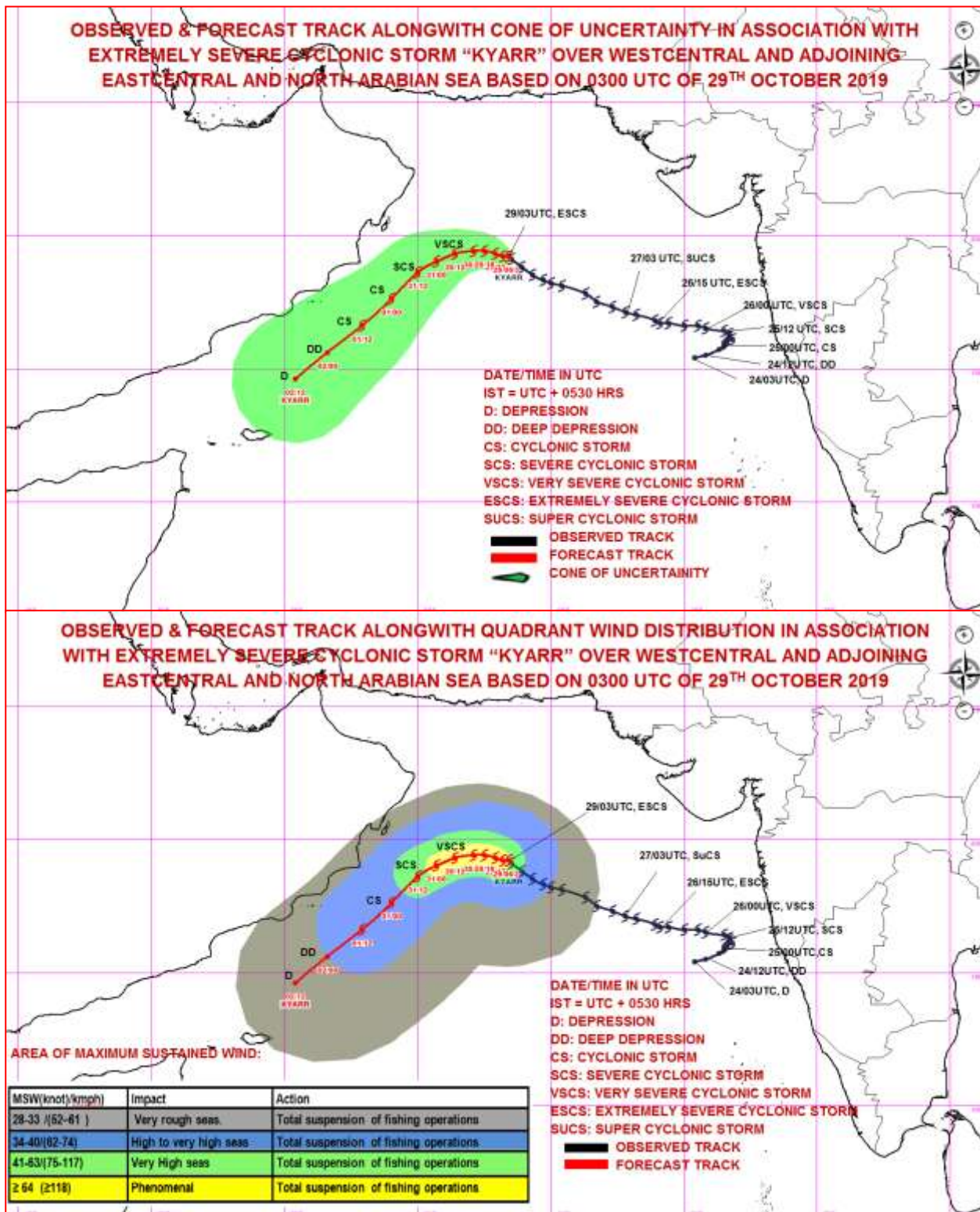


Fig.2: Observed and forecast track based on 0300 UTC of 29<sup>th</sup> October alongwith cone of uncertainty and quadrant wind distribution around the system centre

Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences.

Phone: (91) 11-24652484, FAX: (91) 11-24643128, 24623220, E-mail: cwdhq2008@gmail.com, Website: [rsmcnewdelhi.imd.gov.in](http://rsmcnewdelhi.imd.gov.in)

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

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

