



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
TROPICAL CYCLONE ADVISORY BULLETIN NO. 10

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)  
STORM WARNING CENTRE, BANGKOK (THAILAND)  
STORM WARNING CENTRE, COLOMBO (SRILANKA)  
STORM WARNING CENTRE, DHAKA (BANGLADESH)  
STORM WARNING CENTRE, KARACHI (PAKISTAN)  
METEOROLOGICAL OFFICE, MALE (MALDIVES)  
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)  
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)  
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)  
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)  
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)  
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 10 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1030 UTC OF 03.06.2020 BASED ON 0900 UTC OF 03.06.2020.

SUB: SEVERE CYCLONIC STORM 'NISARGA' OVER COASTAL MAHRASHTRA

THE SEVERE CYCLONIC STORM 'NISARGA' OVER EASTCENTRAL ARABIAN SEA MOVED NORTHEASTWARDS WITH A SPEED OF ABOUT 23 KMPH DURING PAST 06 HOURS, CROSSED MAHARASHTRA COAST CLOSE TO SOUTH OF ALIBAGH WITH A MAXIMUM SUSTAINED WIND SPEED OF 100-110 KMPH GUSTING TO 120 KMPH BETWEEN 0700-0900 UTC OF TODAY, THE 03<sup>RD</sup> JUNE. IT LAY CENTRED AT 0900UTC OF TODAY THE 03<sup>RD</sup> JUNE, 2020 OVER COASTAL MAHARASHTRA, NEAR LATITUDE 18.5°N AND LONGITUDE 73.2°E, CLOSE TO EAST-SOUTHEAST OF ALIBAGH (43058), 75 KM SOUTHEAST OF MUMBAI (43003), AND AND 65 KM WEST OF PUNE (43063).

IT IS VERY LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY INTO A CYCLONIC STORM TILL 1500UTC

THE SYSTEM IS BEING CONTINUOUSLY TRACKED BY THE DOPPLER WEATHER RADARS (DWRS) AT MUMBAI (43003).

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
03.06.20/0900	18.5/73.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
03.06.20/1200	18.8/73.4	80-90 GUSTING TO 100	CYCLONIC STORM
03.06.20/1800	19.4/73.9	50-60 GUSTING TO 70	DEEP DEPRESSION
04.06.20/0000	20.2/74.6	40-50 GUSTING TO 60	DEPRESSION
04.06.20/0600	20.8/75.1	30-40 GUSTING TO 50	DEPRESSION

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 0900 UTC OF 03<sup>RD</sup> JUNE, THE SYSTEM HAVE ENTERED OVER THE LAND AND EYE HAS DISTORTED.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

INSAT 3D FURTHER SHOWS ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER EASTCENTRAL ARABIAN SEA BETWEEN LATITUDE 12.5<sup>0</sup>N TO 20.0<sup>0</sup>N AND LONGITUDE 70.0<sup>0</sup>E TO 75.0<sup>0</sup>E. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93°C.

AT 0900 UTC OF 02<sup>nd</sup> JUNE, ALIBAGH(43110) REPORTED MEAN SEA LEVEL PRESSURE OF 985.0 HPA AND SURFACE WIND SPEED OF 005°/10.2 KNOTS.

#### **STORM SURGE GUIDANCE**

STORM SURGE OF ABOUT 0.5 TO 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF MUMBAI, THANE AND RAIGAD DISTRICTS DURING NEXT 3 HOURS.

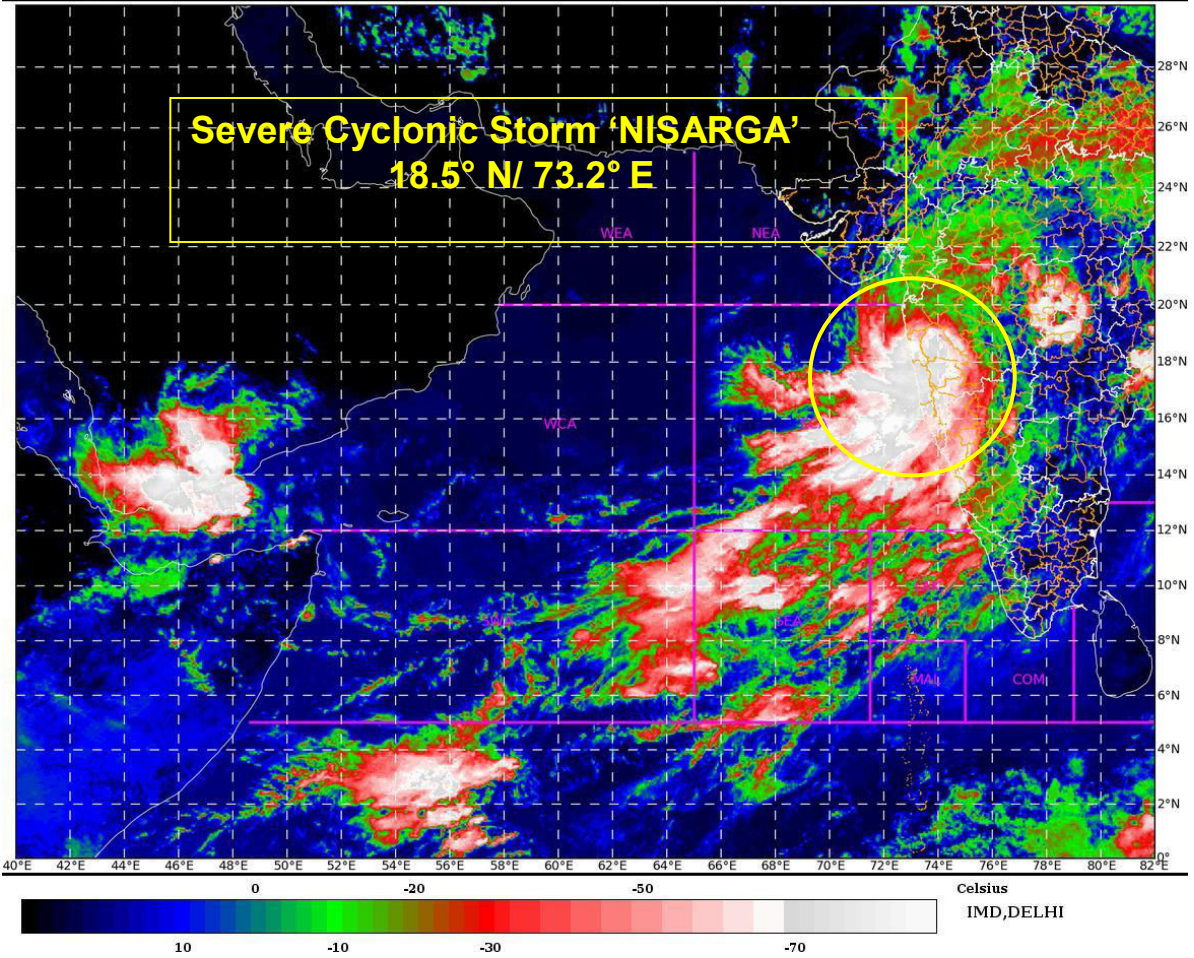
**(RK JENAMANI)  
SCIENTIST-F  
RSMC  
NEW DELHI**

*Legend: ECA- east-Central Arabian Sea*

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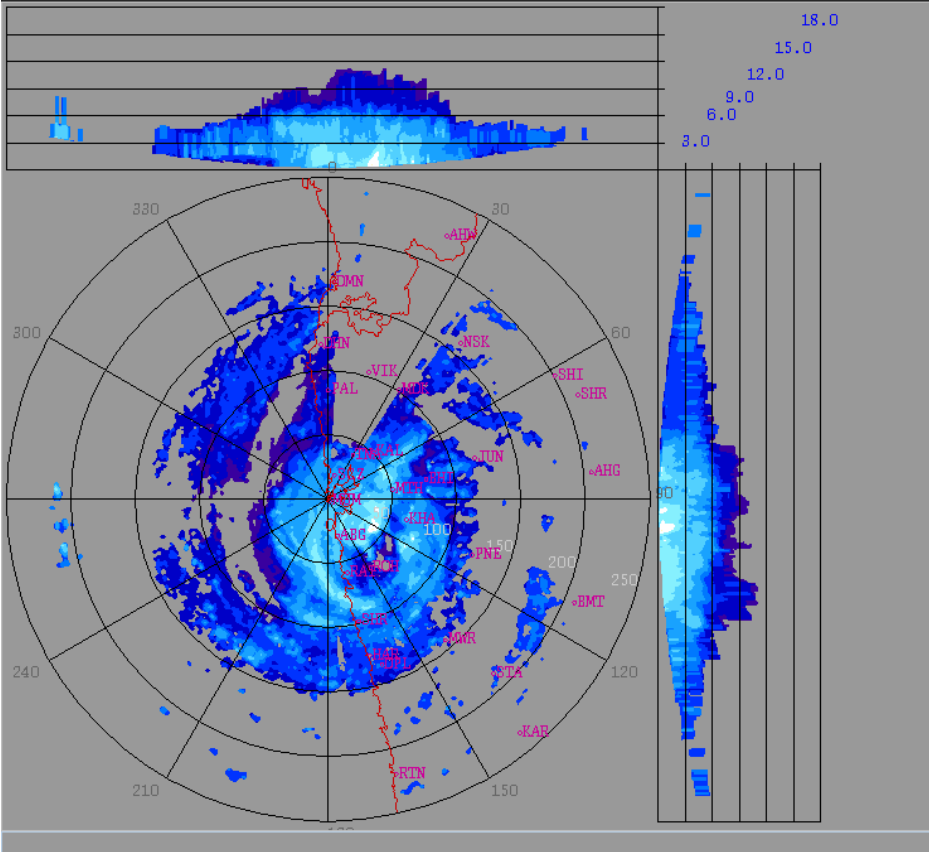
**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

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



Height	: 18.0 Km
Layer Spacing	: 0.100 Km
Z (Lo, Hi)	: -32.0, 95.0 dBZ
Grid size	: 1 Km
Display Range	: 250 Km
Display Res	: 1.0 Km/Pix
DDR Enable	: Yes
Scan Elev (Lo, Hi)	: 0.2, 21.0 Deg
PRF (Lo, Hi)	: 450, 600 Hz
Scan Res	: 150 mts
Scan RPM	: 2.0
Log Threshold	: 2 dB
DTP	: 42
Pulse Width	: 1.0
Notch Width	: 54.0 Hz
SQI	: 0.25
CSR	: 20
Scan Range	: 240 Km
Preprocessings	: NONE

dBZ	
No Data	
60.7: > 65.0	
56.4: 60.7	
52.1: 56.4	
47.8: 52.1	
43.5: 47.8	
39.2: 43.5	
34.9: 39.2	
30.7: 34.9	
26.4: 30.7	
22.1: 26.4	
17.8: 22.1	
13.5: 17.8	
9.2: 13.5	
4.9: 9.2	
0.6: 4.9	




DOPLER WEATHER RADAR MUMBAI AT 14:19 HOURS IST OF 03.06.2020

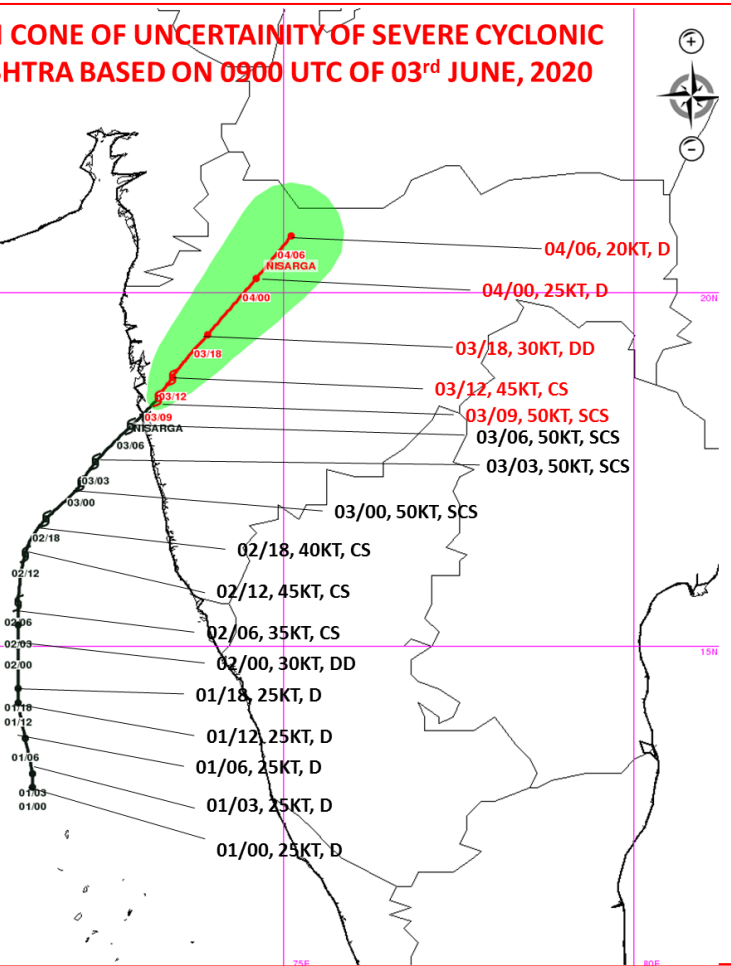
**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**OBSERVED & FORECAST TRACK ALONG WITH CONE OF UNCERTAINTY OF SEVERE CYCLONIC STORM NISARGA OVER COASTAL MAHARASHTRA BASED ON 0900 UTC OF 03<sup>rd</sup> JUNE, 2020**



DATE/TIME IN UTC  
 IST = UTC + 0530 HRS  
 D: DEPRESSION  
 DD: DEEP DEPRESSION  
 CS: CYCLONIC STORM  
 SCS: SEVERE CYCLONIC STORM

 OBSERVED TRACK  
 FORECAST TRACK  
 CONE OF UNCERTAINTY

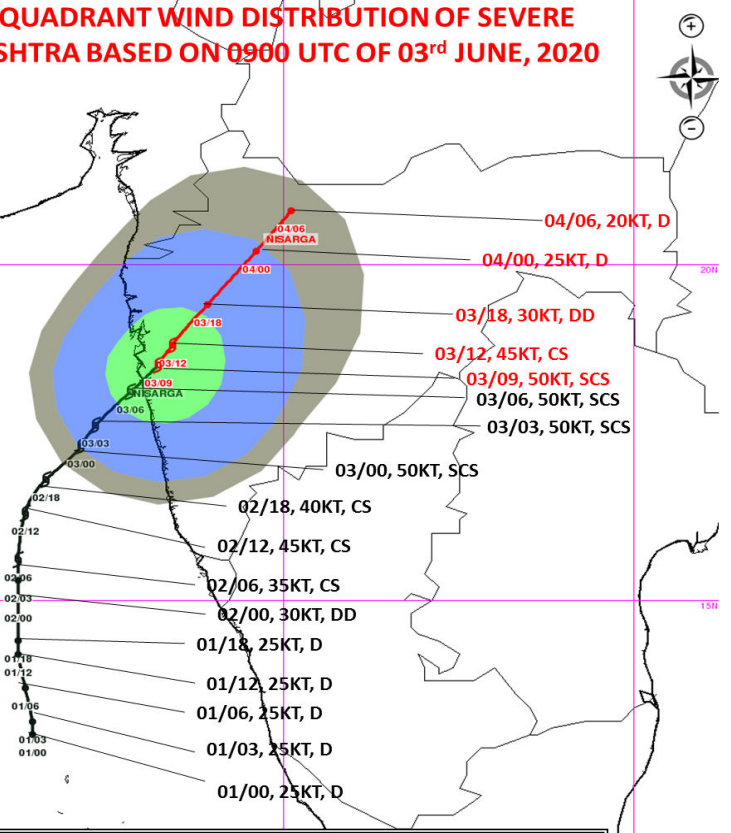


**OBSERVED & FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION OF SEVERE CYCLONIC STORM NISARGA COASTAL MAHARASHTRA BASED ON 0900 UTC OF 03<sup>rd</sup> JUNE, 2020**

DATE/TIME IN UTC  
 IST = UTC + 0530 HRS  
 WML: WELL MARKED LOW  
 D: DEPRESSION  
 DD: DEEP DEPRESSION  
 CS: CYCLONIC STORM  
 SCS: SEVERE CYCLONIC STORM

 OBSERVED TRACK  
 FORECAST TRACK

AREA OF MAXIMUM SUSTAINED WIND:

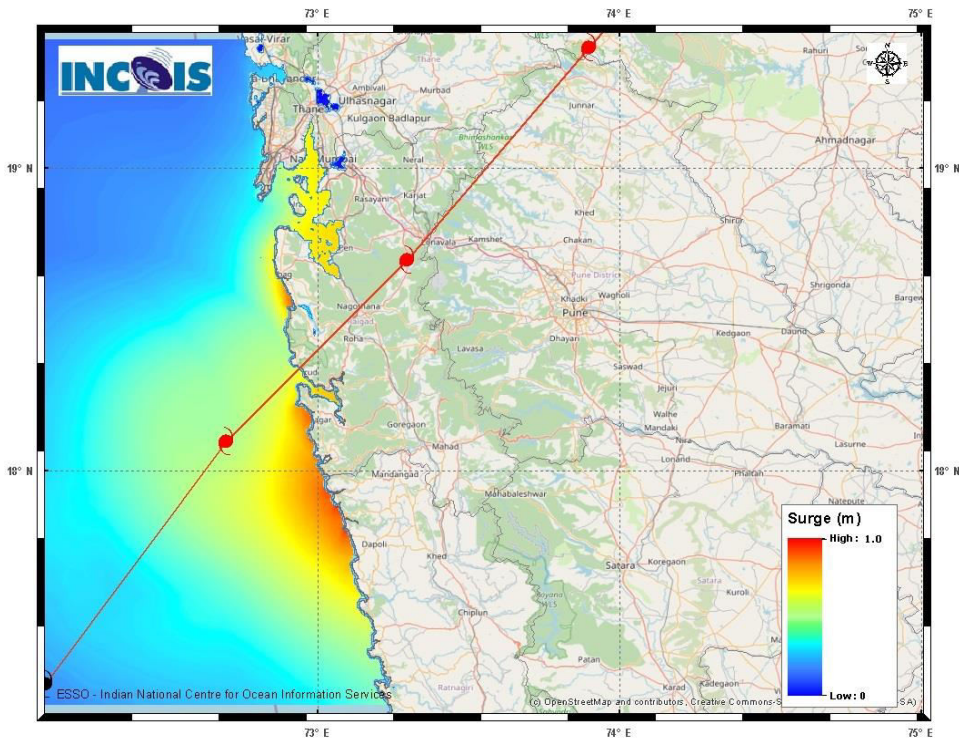


MSW(knot)/kmph)	Impact	Action
28-33 /(52-61 )	Very rough seas.	Total suspension of fishing operations
34-40/(62-74)	High to very high seas	Total suspension of fishing operations
41-63/(75-117)	Very High seas	Total suspension of fishing operations

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

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

# Storm surge Warning



The below listed surge heights over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	* STORM SURGE (m)	* EXPECTED INUNDATION EXTENT (km)
ALIBAG	RAIGAD	MAHARASHTRA	ALIBAG	0.5-1.3	Around 1.4
DAPOLI	RATNAGIRI	MAHARASHTRA	DAPOLI	0.6-0.9	Around 0.3
PEN	RAIGAD	MAHARASHTRA	PEN	0.7-0.9	Around 2.2
THANE	GREATER MUMBAI	MAHARASHTRA	THANE	0.7-0.9	Around 0.3

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## PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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