



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

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Sub: Cyclonic Storm 'NISARGA' over Eastcentral Arabian Sea: Cyclone Warning for north Maharashtra - south Gujarat coasts: Orange message

The Cyclonic Storm 'NISARGA' over Eastcentral Arabian Sea moved north-northeastwards with a speed of 13 kmph during past 06 hours, and lay centred at 1730 hours IST of today, the 02nd June, 2020 over Eastcentral Arabian Sea near latitude 16.3°N and longitude 71.3°E, about 280 km west-northwest of Panjim (Goa), 350 km south-southwest of Mumbai (Maharashtra), 300 km south-southwest of Alibagh (Maharashtra) and 560 km south-southwest of Surat (Gujarat).

It is very likely to intensify into a Severe Cyclonic Storm during next 12 hours. It is very likely to move north-northeastwards and cross north Maharashtra and adjoining south Gujarat coast between Harihareshwar and Daman, **close to Alibagh (Raigad District, Maharashtra) during the afternoon of 03rd June as a Severe Cyclonic Storm with a maximum sustained wind speed of 100-110 kmph gusting to 120 kmph.**

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum surface (Kmph)	sustained wind speed	Category of cyclonic disturbance
02.06.20/1730	16.3/71.3	70-80	gusting to 90	Cyclonic Storm
02.06.20/2330	17.0/71.5	80-90	gusting to 100	Cyclonic Storm
03.06.20/0530	17.7/72.0	90-100	gusting to 110	Severe Cyclonic Storm
03.06.20/1130	18.5/72.7	100-110	gusting to 120	Severe Cyclonic Storm
03.06.20/1730	19.2/73.3	90-100	gusting to 110	Severe Cyclonic Storm
04.06.20/0530	20.6/74.5	50-60	gusting to 70	Deep Depression
04.06.20/1730	22.0/75.7	30-40	gusting to 50	Depression

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

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

Warnings:

(i) Rainfall:

- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places very likely over Konkan & Goa during next 12 hours. Light to moderate rainfall at most places with isolated heavy falls very likely over Coastal Karnataka, Madhya Maharashtra and Marathwada during next 12 hours.
- Light to moderate rainfall at most places with heavy to very heavy falls at a few places and **extremely heavy falls (≥ 20 cm in 24 hours)** at isolated places very likely over north Konkan (Mumbai, Palghar, Thane, Raigad districts) and north Madhya Maharashtra on 3rd June.
- Light to moderate rainfall at most places with heavy to very heavy falls at isolated places over south Konkan (Ratnagiri & Sindhudurg districts) & Goa and south Gujarat region (Valsad, Navsari, Dang, Daman, Dadra & Nagar Haveli and Surat districts) on 3rd June.
- Light to moderate rainfall at most places with heavy falls at isolated places over west Madhya Pradesh on 03rd June.

(ii) Wind warning

- Gale wind, speed reaching 70-80 kmph gusting to 90 kmph, is prevailing over Eastcentral Arabian Sea. It will gradually increase becoming Gale wind, speed reaching 80-90 kmph gusting to 100 kmph, over eastcentral Arabian Sea off south Maharashtra & Goa coasts by tonight and further becoming 100-110 kmph gusting to 120 kmph over eastcentral Arabian Sea along & off Maharashtra (Raigad, Mumbai, Palghar, Thane) coast from 03rd June morning. Gale wind, speed reaching 80-90 kmph gusting to 100 kmph, likely along & off Valsad, Navsari districts of Gujarat, Daman, Dadra & Nagar Haveli and along & off northeast Arabian Sea, Ratnagiri, Sindhudurg districts of Maharashtra and 70-80 kmph gusting to 90 kmph along & off Surat & Bharuch districts of south Gujarat from 03rd June noon.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over northeast Arabian Sea along & off remaining districts of south Gujarat coast on 03rd June.
- Squally wind, speed reaching 50-60 kmph gusting to 70 kmph is likely prevail over eastcentral Arabian Sea along and off Karnataka-Goa coasts during next 24 hours.

(iii) Sea condition

The Sea condition will be High to Very High over eastcentral Arabian Sea and along & off Maharashtra & Goa coasts till tomorrow, the 3rd June evening. The Sea condition is very likely to be very rough to High over northeast Arabian Sea along & off south Gujarat coast on 03rd June.

(iv) Storm Surge Warning:

Storm surge of about 1-2 meters height above astronomical tide is very likely to inundate low lying areas of Mumbai, Thane and Raigad districts and 0.5-1 meter height above the astronomical tide likely to inundate low lying areas of Ratnagiri district during the time of landfall.

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

(v) Fishermen Warning

Fishermen are advised not to venture into Eastcentral and Northeast Arabian Sea and along & off Karnataka-Goa-Maharashtra-south Gujarat coasts till 03rd June.

(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 large avenue trees. Damage to banana and papaya trees. Large dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

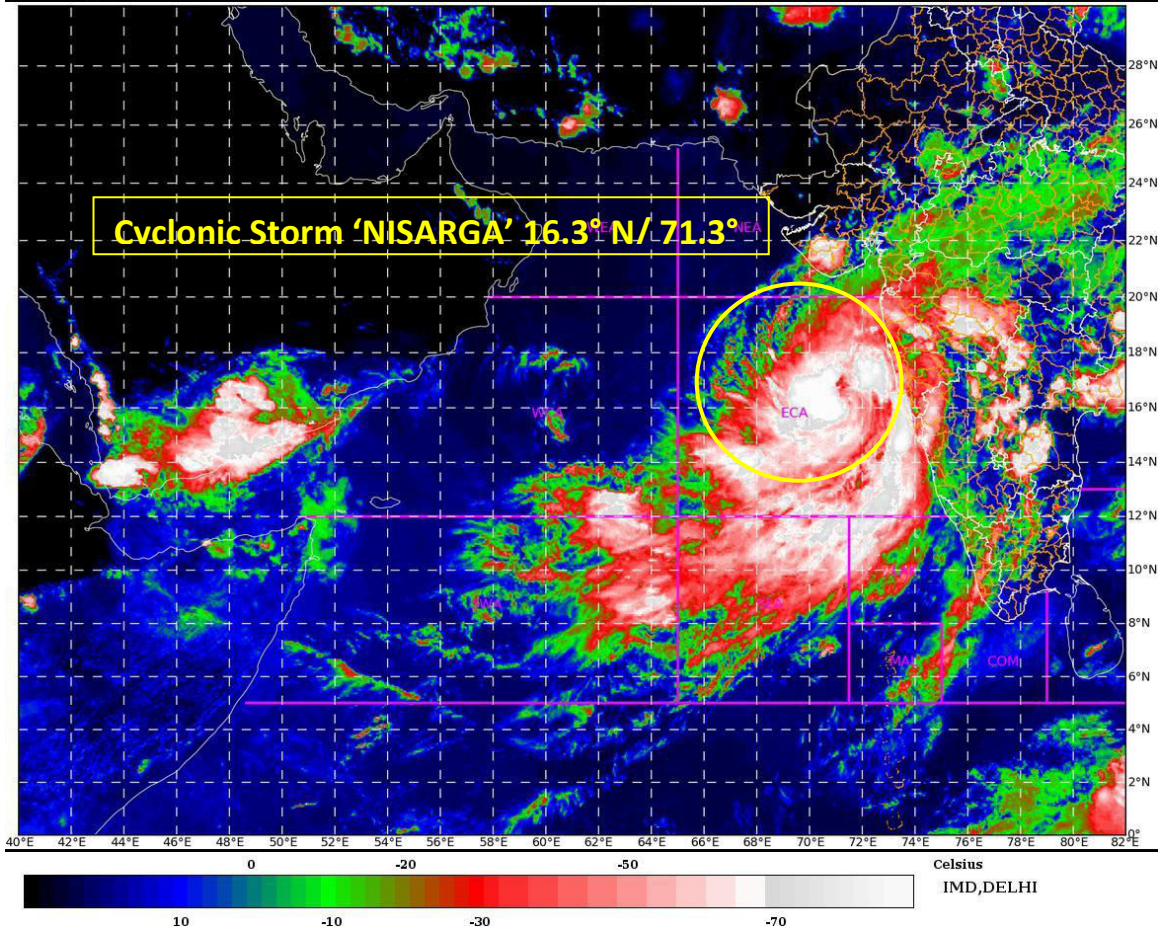
(vii) Fishermen Warning & Action Suggested:

- Total suspension of fishing operations.
- Mobilise evacuation from low lying areas.
- Judicious regulation of rail and road traffic.
- People in affected areas to remain indoors.
- Movement in motor boats and small ships unsafe.

The next bulletin will be issued at 2330 hrs IST of today, the 02nd June, 2020.

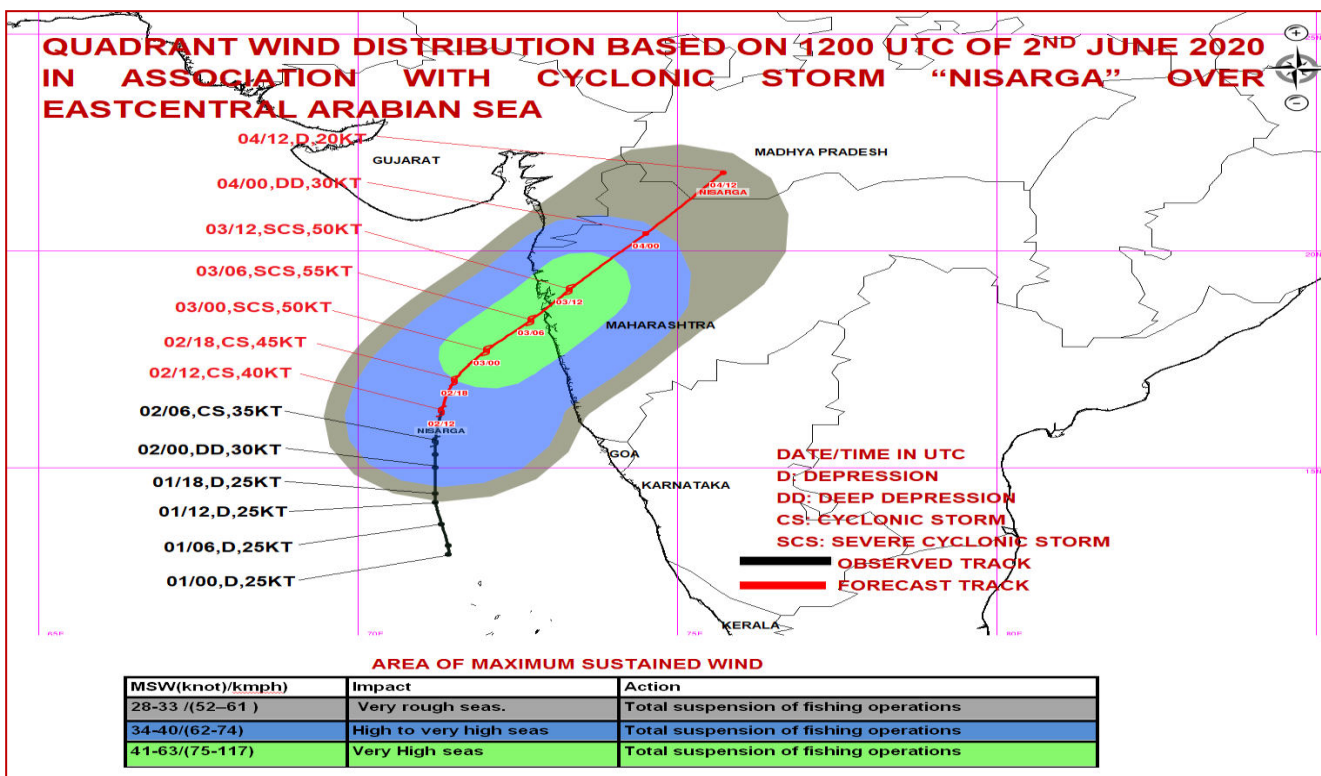
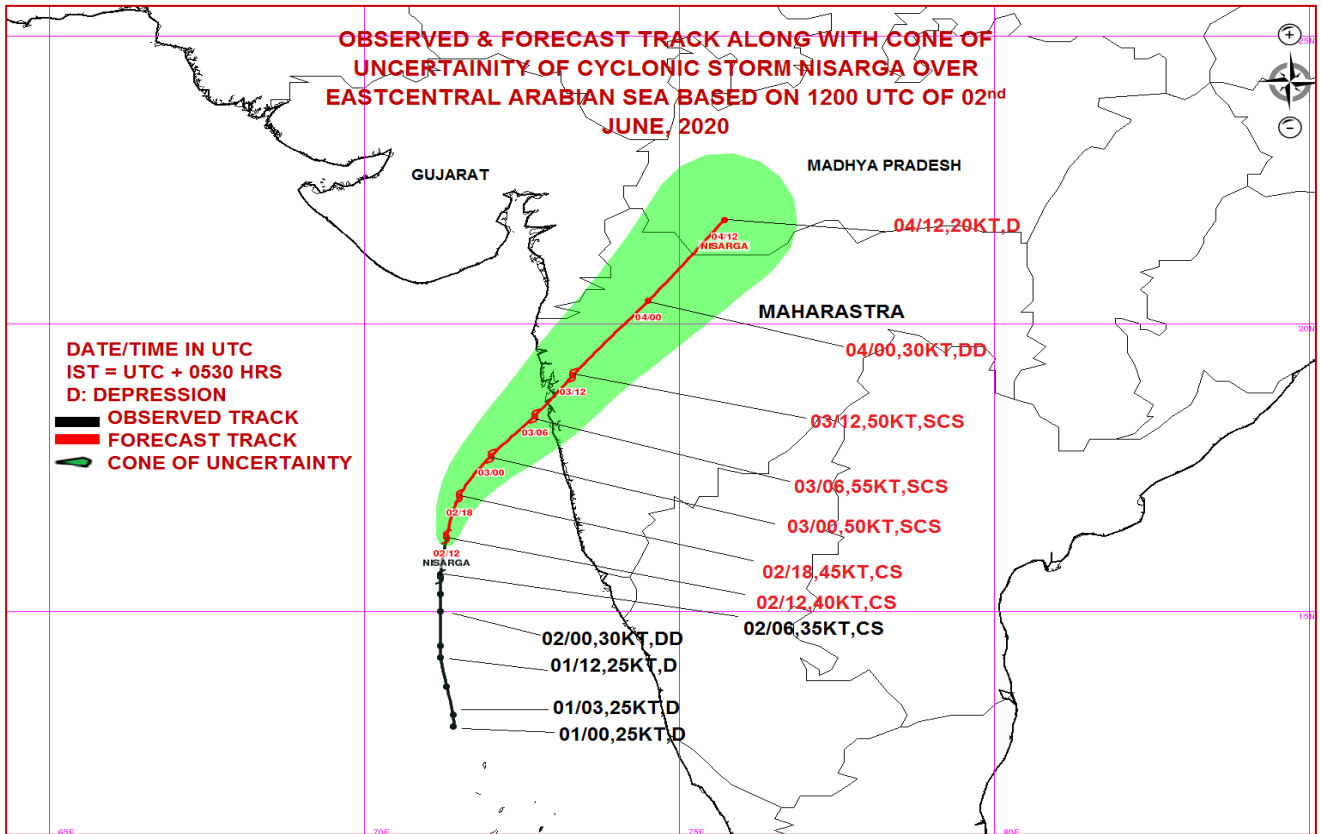
(Sunitha Devi. S)
Scientist-E, RSMC, New Delhi

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



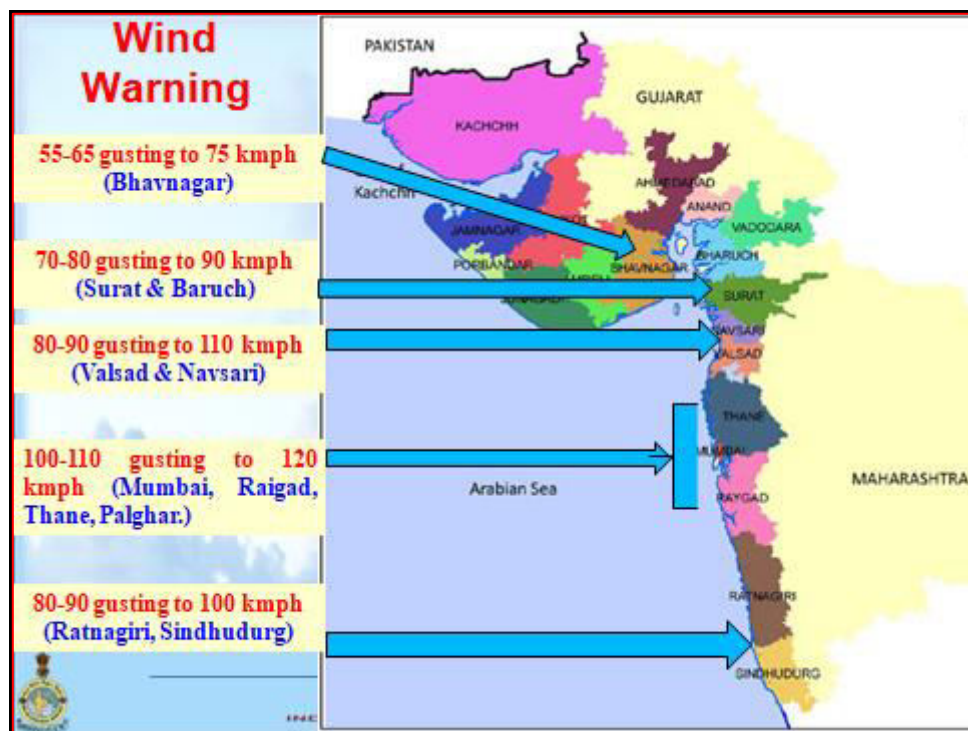
Legend: ECA- east-Central Arabian Sea

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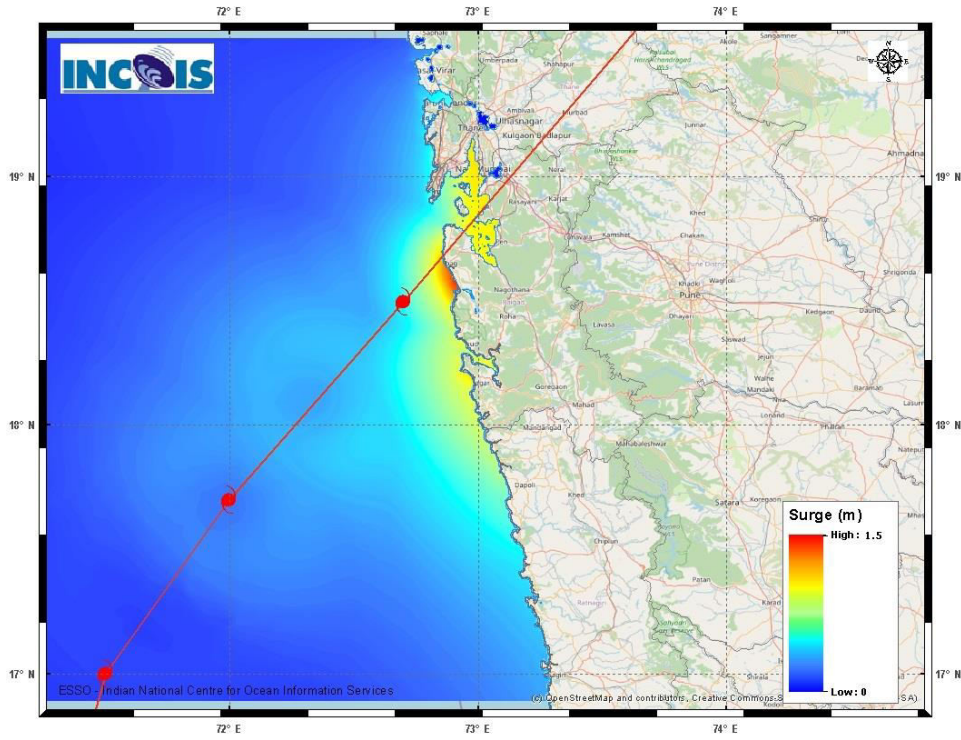
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District Level Wind Warning



Storm surge 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 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	RAIGARH	MAHARASHTRA	ALIBAG	0.5-1.5	Upto 1.4
PEN	RAIGARH	MAHARASHTRA	PEN	0.8-1.1	Upto 2.2
THANE	GREATER MUMBAI	MAHARASHTRA	THANE	0.5-1.1	Upto 0.34
DAPOLI	RATNAGIRI	MAHARASHTRA	DAPOLI	0.5-0.8	Upto 0.1
GUHAGAR	RATNAGIRI	MAHARASHTRA	GUHAGAR	0.5-0.6	Upto 0.22
VASAI	THANE	MAHARASHTRA	VASAI	0.5-0.6	Upto 1.11

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