

No. F.2 (E)/2023-NDMA (TC Alert-IX) **Government of Pakistan Prime Minister's Office** National Disaster Management Authority Islamabad



Dated: 11 June 2023 1900 hours

Subject: Extremely Severe Cyclonic Storm "BIPARJOY" Over East-Central Arabian Sea NDMA TC-Advisory No.F.2(E)/2023-NDMA(TC-Alert-VIII) dated 10 Jun 23 Reference:

In continuation of above referred TC Advisory, PMD has informed (Annex A) that the Very Strong Cyclonic Storm (VSCS) "BIPARJOY" over east-central Arabian Sea has further intensified into an Extremely Severe Cyclonic Storm (ESCS). Updates on the development of BIPARJOY are as under: -

Location Latitude 18.1°N & Longitude 67.5°E a.

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- b. Distance from Karachi -
- Wind Speed C.

e.

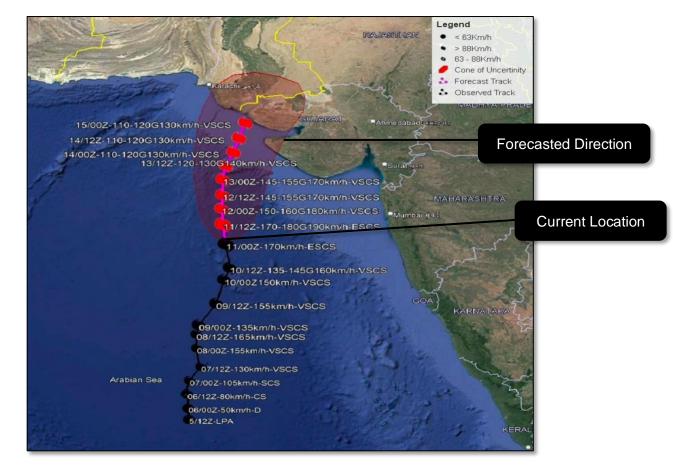
sustained 150-160 km/h, 180 km/h gusts 10.7-12.2 metres (35-40 feet)

760 km South of Karachi

d. Max. Wave Height

Forecasted direction

North (until morning of 14 June)



2. Currently, favourable conditions are supporting ESCS BIPARJOY to maintain its intensity. The system is likely to track further Northward until 14 June (morning), then

recurve Northeastward between Keti Bandar, Southeast Sindh and Indian Gujrat Coast on 16 June as a Very Severe Cyclonic Storm (VCSC).

3. Likely development path based on international weather forecasting models used by PMD is enclosed as **Annex B**, for proactive preparations against likely impacts. It must be highlighted that this is an evolving situation and its impact will only be certain with further development of the system.

- 4. Possible impacts under the current forecast are as under: -
 - a. Widespread wind-dust/thunderstorm/rain with very-extremely heavy falls & gusty winds (80-100 km/h) expected in Districts Thatta, Sujawal, Badin, Tharparkar & Umerkot from 13 17 June 2023.
 - Dust/thunderstorm/rain, with few heavy falls & gusty winds (60-80 km/h) likely in Districts Karachi, Hyderabad, Tando Muhammad Khan, Tando Allayar, Mirpurkhas from 13 16 June 2023.
 - c. Squally / highspeed-intensity winds may damage loose structures, *kacha* houses, under construction buildings, trees and billboards along coastal areas and surroundings.
 - d. **High risk of coastal flooding** in Districts **Badin and Thatta** as cyclone progresses / reaches coastline.
 - e. Sea conditions to get very high / phenomenal with max wave height of 10.7-12.2 metres (35-40 feet), accompanied by high tides along the coast.
 - f. Given anticipated sea conditions, fishermen will not be able venture out to open sea until 17 June 2023.
 - g. High risk of storm surge of 3-3.5 metres (8-12 feet) along coastline from Karachi to Indian Gujrat, especially at landfall point in Keti Bandar & surrounding area, which may be further exasperated twice daily by occurrence of high tide. Details of high tide times as provided by National Institute of Oceanography (NIO) are as below: -

Day	Keti Bandar		Sir Creek		Karachi		Gharo	
	1st High Tide	2nd High Tide						
Tue 13	7:31am	6:42pm	8:26am	7:37pm	7:31am	6:42pm	7:31am	6:42pm
	▲ 2.5 m	🔺 2.9 m	🔺 2.3 m	🔺 2.7 m	▲ 2.2 m	🔺 2.6 m	▲ 2.2 m	▲ 2.6 m
Wed 14	8:39am	7:30pm	9:34am	8:25pm	8:39am	7:30pm	8:39am	7:30pm
	🔺 2.7 m	🔺 2.9 m	▲ 2.5 m	🔺 2.7 m	▲ 2.4 m	🔺 2.6 m	▲ 2.4 m	▲ 2.6 m
Thu 15	9:32am	8:15pm	10:27am	9:10pm	9:32am	8:15pm	9:32am	8:15pm
	🔺 2.9 m	▲ 2.9 m	🔺 2.7 m	🔺 2.7 m	🔺 2.6 m	🔺 2.6 m	🔺 2.6 m	▲ 2.6 m
Fri 16	10:17am	8:56pm	11:12am	9:51pm	10:17am	8:56pm	10:17am	8:56pm
	🔺 3 m	▲ 2.8 m	🔺 2.8 m	🔺 2.6 m	🔺 2.7 m	▲ 2.5 m	🔺 2.7 m	▲ 2.5 m
Sat 17	10:56am	9:36pm	11:51am	10:31pm	10:56am	9:36pm	10:56am	9:36pm
	▲ 3.1 m	▲ 2.8 m	🔺 2.9 m	🔺 2.6 m	▲ 2.8 m	▲ 2.5 m	▲ 2.8 m	▲ 2.5 m

- 5. The guidelines for all concerned stakeholders are as under:
 - a. Disaster Management Stakeholders
 - i. Ensure vigilant monitoring of the tropical cyclone's development and ensure proactive coordination through respective emergency operation centres.
 - ii. Verify the functionality of early warning systems and ensure prompt dissemination of timely and accurate information to at-risk communities.
 - iii. Utilize multiple communication channels, such as television, radio, social media and SMS alerts, to conduct extensive and continuous awareness campaigns to effectively reach coastal communities, educate the public on the potential impacts of the cyclone, emergency evacuation procedures and safety measures.
 - iv. Respective PDMA's/DDMA's, Rescue Agencies (Rescue 1122, Civil Defence, Fire Departments, Paramedics), and concerned departments may identify high-risk / low lying areas prone to storm surges, coastal flooding, urban flooding, high speed winds and develop / enact evacuation plans accordingly.
 - v. Coordinate with relevant district and municipal administrations to ensure preparedness measures for thunderstorms/flash flooding, highspeed winds, storm surge and secure or remove billboards/hoardings.
 - vi. Ensure **immediate stocking of basic commodities** including **paramedics** & **medicine**, especially in regions that are likely to get cut-off during severe weather events.
 - vii. Collaborate with relevant authorities, including law enforcement agencies and transportation departments, to facilitate the safe evacuation of people from vulnerable coastal areas/low-lying areas.
 - viii. Advise individuals residing in unsecured mud ("kacha") houses and low-lying areas to seek shelter in sturdier / more secure buildings, higher ground for personal safety.
 - ix. Coordinate with relevant departments, including NHA/FWO/C&W and line departments, to assess and prepare for any potential damage to roads, bridges, and other critical infrastructure.
 - x. Ensure the availability of **necessary equipment and resources** for rapid response and recovery operations, including **road clearance** and

restoration of utility services.

- xi. Electric companies, i.e. K-Electric should ensure safety measures are in place to **prevent electrical hazards** during the cyclone and ensure rapid restoration of services in case of disruption.
- xii. Take all necessary measures to **address inundation issues** in Karachi, Hyderabad Divisions and surrounding regions, caused by heavy rainfall, coastal floods and storm surges.
- xiii. Implement **dewatering plans for underpasses in Karachi** to prevent urban flooding.
- xiv. Verify the functionality of nullahs/sewerage systems and ensure their proper maintenance on emergency basis to prevent waterlogging and drainage issues.
- xv. Coordinate with hospitals to place them on alert status and arrange alternate energy sources, such as generators, in case of power outages to ensure uninterrupted medical services.
- xvi. Advise relevant District Administrations to take precautionary measures in low lying areas against effects from storm surge activity.
- xvii. NEOC at NDMA has been made functional round the clock for TC BIPARJOY monitoring and coordination. All concerned to timely and proactively update NDMA and other stakeholders on the cyclone's progress, potential impacts, and response measures.

b. Local Communities

- i. Engage local communities at traditionally / historically hazard-prone sites to enable **round-the-clock monitoring**.
- ii. Advise local communities to adhere to directives of Local Administration on emergency evacuation procedures.
- iii. Advise **fishermen to exercise appropriate caution** while in coastal areas.
- iv. Fishermen to NOT VENTURE into the open sea until 17 June 2023.
- v. Establish a reliable communication system to deliver **real-time weather updates and guidance to fishing communities**.
- vi. Farmers / cattle herders to be advised to take all necessary mitigative and precautionary measures to safeguard their crops and livestock, i.e. timely harvesting, safe storage, safe sheltering or any precaution from adverse effects of dust-wind-thunderstorms.

vii. Stay away from electric poles and wires during the cyclone to avoid electrical hazards.

6. Three hourly updates on developing weather system will be uploaded on NDMA's website and social media handles for reference of all stakeholders. All concerned are requested to ensure continuous monitoring and proactive preparations against likely impacts.

7. Forwarded for your further necessary action, please.

(Muhammad Ali Khan) Director (Response) Tel No: 051-9030924 Fax No: 051-9030729

(Distribution List Below)

Distribution List

- To: Chief Secretary, Government of Balochistan, Quetta Chief Secretary, Government of Sindh, Karachi Secretary, Ministry of Interior, Islamabad Secretary, Ministry of Communications, Islamabad Secretary, Ministry of Maritime Affairs, Islamabad Director General, Pakistan Meteorological Department, Islamabad Directorate General Ports & Shipping, Karachi Chairman, National Highway Authority, Islamabad Inspector General, National Highways & Motorway Police, Islamabad Chairman, Pakistan Telecommunications Authority, Islamabad Principal Information Officer, Press Information Department, Islamabad Headquarters, Pakistan Maritime Security Agency, Karachi Staff Duties Directorate (SD Coord), COAS Sectt, GHQ, Rawalpindi Headquarters, Pakistan Coastguard, Karachi Director General, PDMA Balochistan, Quetta Director General, PDMA Sindh, Karachi Chairman, Karachi Port Trust Chairman, Port Qasim Trust Secretary, Department of Fisheries, Karachi Secretary, Department of Fisheries, Quetta Director General, Rescue 1122 Balochistan, Quetta Director General, Rescue 1122 Sindh, Karachi Headquarters, Frontier Works Organization (FWO), Rawalpindi **Commissioner Karachi Division Commissioner Hyderabad Division** Chief Meteorologist, Tropical Cyclone Warning Centre (PMD), Karachi Director, National Institute of Oceanography, Karachi Chairman, Balochistan Coastal Development Authority, Gwadar Chairman, Sindh Coastal Development Authority, Karachi Managing Director, K-Electric Karachi Country Coordinator, UNOCHA, Islamabad Coordinator, Welthungerhilfe (WHH), Islamabad Country Coordinator, Pakistan Humanitarian Forum, Islamabad Chairperson, National Humanitarian Network, Islamabad
- Cc: Secretary to Prime Minister, Prime Minister's Office, Islamabad Secretary, Cabinet Division, Islamabad Chairman, Federal Flood Commission, Islamabad Joint Crises Management Cell, Joint Staff Headquarters, Chaklala Cantt Military Operations Directorate (MO-4), General Headquarters, Rawalpindi Cantt ACNS (Operations), Naval Headquarters, Islamabad ACAS (Operations), Air Headquarters, Islamabad GSO-1, Inter-Services Public Relations, General Headquarters, Rawalpindi Cantt

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Annex A

PMD Press Release – TC Alert 11



Tel: 021-99261417 Fax: 021-99261405 TC- Alert 11 Government of Pakistan Ministry of Aviation Marine Meteorology and Tropical Cyclone Warning Centre Pakistan Meteorological Department University Road Karachi-75270

> Date: 11 June 2023 Time: 1030 PST

Extremely Severe Cyclonic Storm (BIPARJOY) over East-central Arabian Sea

The Very Severe Cyclonic Storm (VSCS) "BIPARJOY" over eastcentral Arabian Sea has further intensified into an Extremely Severe Cyclonic Storm (ESCS), moved northward during last 12 hours and now lies near Latitude 18.1°N & Longitude 67.5°E at a distance of about 760km south of Karachi, 740km south of Thatta & 840km southeast of Ormara. Maximum sustained surface winds are 150-160 Km/hour gusts 180 Km/hour around the system center with and sea conditions being phenomenal around the system canter with maximum wave height 35-40 feet. The favorable environmental conditions (sea surface temperature of 30-32°C, low vertical wind shear & upper-level divergence) are supporting the system to maintain its intensity.

Under the existing upper-level steering winds, the ESCS "*BIPARJOY*" is most likely to track further Northward until 14 June morning, then recurve Northeastward and cross between Keti Bandar (Southeast Sindh) and Indian Gujarat coast on 15 June afternoon as a Very Severe Cyclonic Storm (VSCS). PMD's cyclone warning center, Karachi is continuously monitoring the system and will issue update accordingly.

Possible Impacts:

- With its probable approach to the southeast Sindh coast, widespread wind-dust/thunderstorm rain with some very heavy/extremely heavy falls accompanied with squally winds of 80-100Km/hour likely in Thatta, Sujawal, Badin, Tharparker & Umerkot districts during 13-17 June.
- Dust/thunderstorm-rain with few heavy falls & accompanied with squally winds of 60-80 Km/hour likely in Karachi, Hyderabad, Tando Muhammad Khan, Tando Allayar, Mirpurkhas districts from 13/14 June -16 June.
- Squally (high intensity) winds may cause damage to loose & vulnerable structures (Kutcha houses).
- Storm surge of 3-3.5 meters (8-12 feet) expected at the land falling point (Keti Bandar and around).
- Fishermen are advised not to venture in open sea till the system is over by 17 June, as the Arabian Sea conditions may get very rough/high accompanied with high tides along coast.

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Annex B

Forecasted Path of TC BIPARJOY by PMD

