MOST IMMEDIATE / BY FAX



F.2 (E)/2023-NDMA (MW/Advisory-II) Government of Pakistan Prime Minister's Office National Disaster Management Authority ISLAMABAD



Dated: 6 July 2023

Subject: Weather Advisory (As per Multiple Models) 6th- 11th July 2023

According to the latest meteorological analysis using models enclosed as **Annex A**, the deep trough of westerly wave, along with strong monsoon currents is approaching the upper air circulation. This is expected to result in heavy to very heavy rainfall, with extremely heavy rainfall forecasted over the upper catchments of rivers Sutlej, Ravi, and Chenab. As a result, there is a high risk of high flow particularly in the river Chenab. The flood levels in rivers Ravi and Sutlej will depend on the release of water from India. Additionally, high to very high flows are anticipated in the nullahs of river Ravi and Chenab.

2. Western Disturbance and Monsoon Surge on 7th - 8th July 2023

- a. Western Disturbance system extending southward, impacting areas beyond the western mountain ranges.
- b. Possibility of severe thunderstorms and heavy rainfall in Northern and Northeastern Punjab (including Lahore, Sialkot, Narowal) and Kashmir regions.
- c. Potential for urban flooding in Metropolitan cities and landslides in hilly regions.
- d. Monsoon surge entering the eastern and southeastern regions. Thunderstorms and showers expected in areas such as Tharparkar.

3. Extended Forecast from 8th- 11th July 2023

- a. Weather system influencing in Southern Punjab, Southeastern Punjab, and Eastern Punjab.
- b. Significant rainfall expected in these regions.
- c. Possibility of moderate to heavy rainfall in central and northern Sindh.
- d. Intermittent rainfall pattern until 11th July 2023.
- 4. <u>Hydrological Situation</u>. All major rivers are currently flowing within their normal levels. However, flash flooding is expected in the Hill Torrents of D.G. Khan Division and local Nullahs of North Balochistan during the next 48 hours.

5. <u>Meteorological Features</u>

- a. The deep trough of westerly wave observed over Northeast Afghanistan and adjoining areas continues to persist.
- The upper air cyclonic circulation previously present over Northwest Bay of Bengal is now located over West Bengal, India.
- c. Moderate to strong monsoon currents from the Bay of Bengal are penetrating the upper parts of the country, up to 5000 feet.

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- d. A seasonal low is situated over Balochistan, with its trough extending northwards.
- 6. Relevant stakeholders are requested to ensure the corresponding actions:
 - a. City / District Administrations to ensure contingency traffic plans for areas vulnerable to flooding in cities, (especially in Lahore, Gujranwala, Sialkot and Faisalabad) catering for prompt de-watering operations in flooded underpasses.
 - b. All District Administrations to ensure completion of stock taking and reconnaissance and public awareness / information in vulnerable areas, especially Marala Headworks on River Chenab and Jassar on River Ravi with respect to chances of flood flows until 20 July.
 - c. PMD being part technical expertise at NEOC NDMA will provide relevant input based on projections after which NDMA will issue regular consolidated updates.
 - d. Rescue Services and leading NGOs will ensure availability of personnel in the indicated areas.
 - e. All stakeholders to maintain proactive coordination in order to ensure prompt and streamlined response down to grassroots level.
- 7. <u>Press Information Department (PID) Only</u>. Please ensure dissemination of information on all mediums focusing on related debates by experts with GoP / NDMA data only.
- 8. Forwarded for information / further necessary action, please.

Muhammad Ali Khan)

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DD (ICT)

Based on the analysis conducted using the following meteorological models:-

- a. ECMWF (European Centre for Medium-Range Weather Forecasts).
- b. GLOFAS (Global Flood Awareness System).
- c. FEWS (Flood Early Warning System).
- d. IFAS (Integrated Flood Analysis System).
- e. UM (Unified Model).
- f. GEM (Global Ensemble Models).
- g. GEM (Global Environmental Multiscale Model).
- h. MoM (Models of Models).
- i. Darthmouth Flood Observatory.
- j. GFMS (Global Flood Monitoring System).

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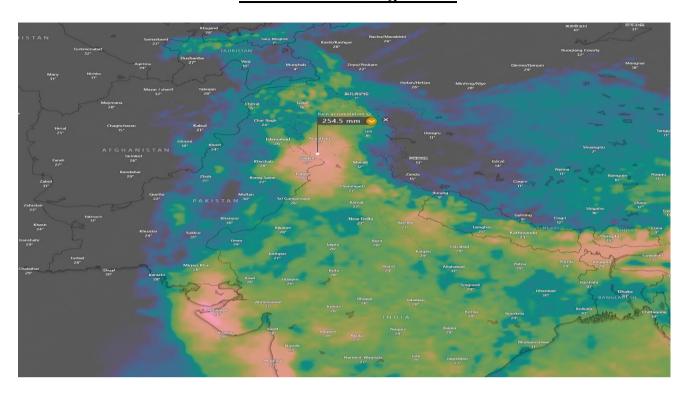
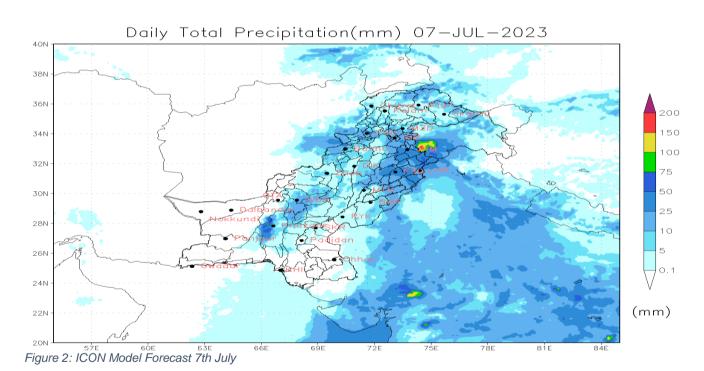


Figure 1 ECMWF Forecast Whole Spell



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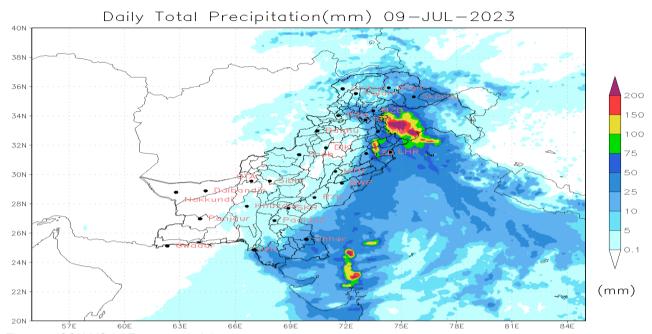


Figure 4: ICON MOdel Forecast 9th July

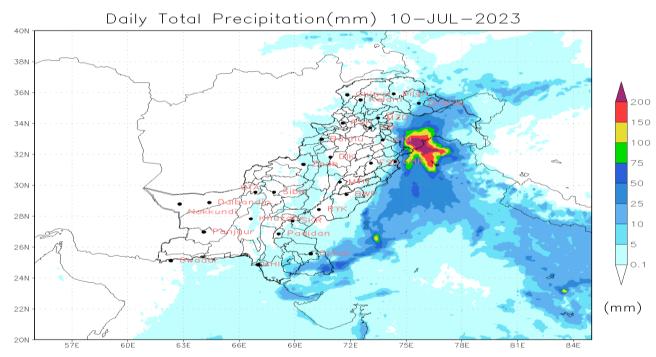


Figure 5: ICON Model 10th July

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CIS Forecast 07-July

Figure 6: GFS Model 8th July

48Hr GFS Issued: 12Z05JUL2023 Valid: 12Z Fri 07 JUL 2023

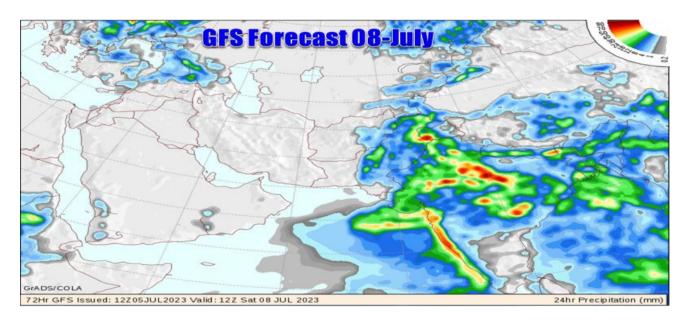


Figure 7 GFS Model Forecast 8th July

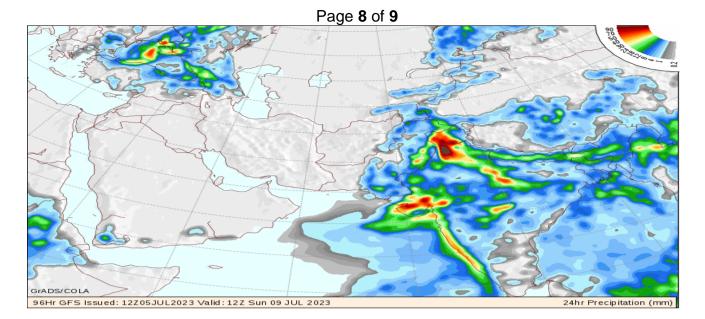


Figure 8: GFS Model Forecast 9th July

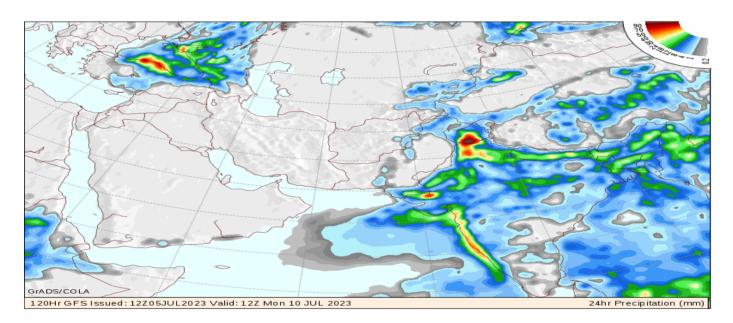


Figure 9: GFS Model Forecast 10th July

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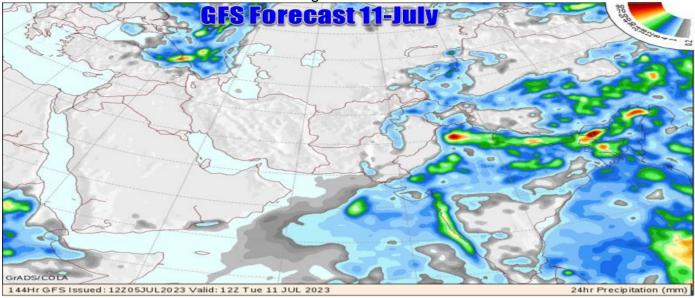


Figure 10: GFS Model Forecast 11th July