

**MOST IMMEDIATE**

*F2.(E)/2024-NDMA (MW/Weather-Outlook)*  
**Government of Pakistan**  
**Prime Minister's Office**  
**National Disaster Management Authority (HQ)**  
 Main Murree Road, Near ITP Office, Islamabad

Dated: **22 June 2024**Subject: **MONSOON WEATHER PROJECTION - JULY 2024**

Reference: a. *NDMA National Disaster Response Plan 2024/25.*  
 b. *NDMA National Monsoon Contingency Plan 2024.*

1. NDMA National Emergencies Operation Centre (NEOC) technical analysis of **weather projections** for **Monsoon Season** for the month of **July 2024** has been prepared after in-depth analysis of multiple weather models; details are covered in ensuing paras. Detailed preparatory and anticipatory actions for response by individuals, communities and all DM responders to heavy rains, torrential rains, flooding etc have already been enumerated in NDMA **National Disaster Response Plan 2024/25** and NDMA **National Monsoon Contingency Plan 2024**. Some of the actions are being covered in this advisory for due emphasis.

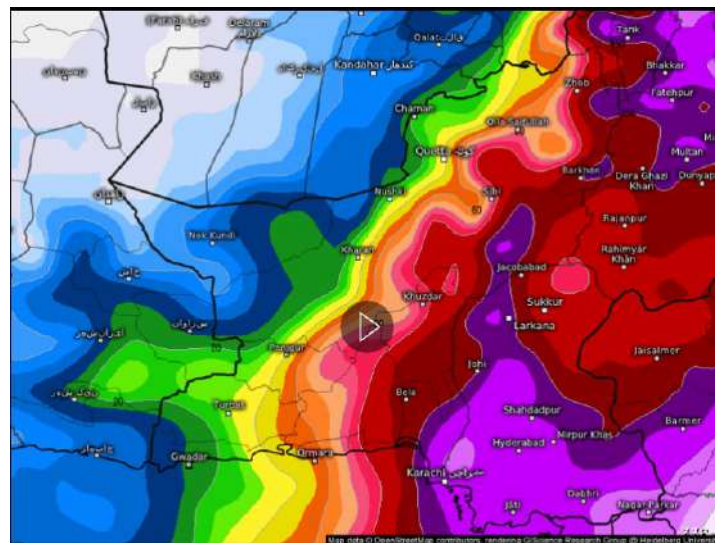
2. **Rains Projections.** Province-wise details of projected weather conditions for the entire month of July 2024 on weekly basis are as under:-

a. **Balochistan**

- (1) **1<sup>st</sup> Week (approx 15-35 mm rainfall in areas).** Monsoon rains likely to start in **Eastern Balochistan** i.e. **Zhob, Barkhan, Loralai** Divisions with **scattered rains** in **Sibbi & Naseerabad** Divisions; **isolated rains** in **Kalat & Quetta**

Division and **heavier rains** in **Lasbela, Makran & Rakshan** divisions are expected to **receive less rains**.

- (2) **2<sup>nd</sup> Week (approx 25-50 mm rainfall in areas).** **Heavy monsoon rains** expected in parts of **Loralai & Zhob** Divisions with **flood inducing rains** in **Suleman & Kirthar Ranges. Sibbi & Naseerabad** Divisions expected to receive **moderate to heavy rains** with



**Accumulated total precipitation (mm)**  
 From Thu 06/20/2024, 05:00am PKT to Sat 08/03/2024, 11:00pm PKT

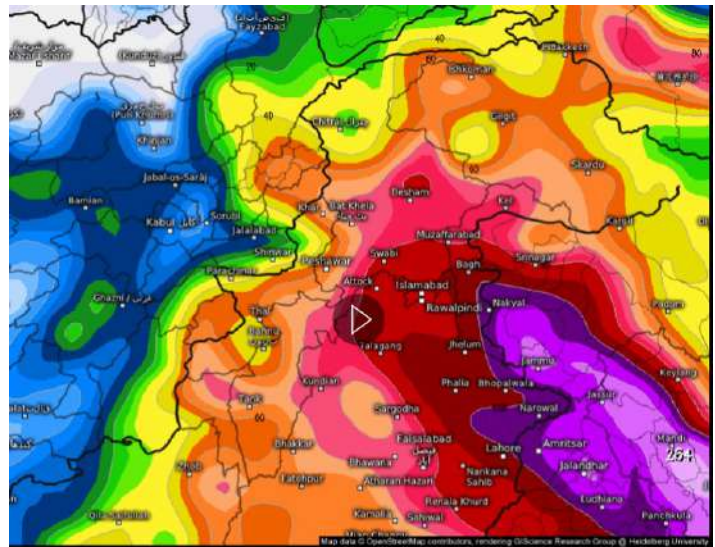
Map data © OpenStreetMap contributors, rendering © Garmin Research Group © Here/DeLorme/United

**isolated rains** in **Kalat** & **Quetta** Divisions. **Scattered rains** are expected in **Makran** Division and **isolated rains** in **Rakhshan** Division.

- (3) **3<sup>rd</sup> Week (approx 15-25 mm rainfall in areas)**. **Monsoon system** will **remain weak** in most parts with **light rains** in **Zhob**, **Barkhan** & **Khuzdar** regions. There are **less chances** of **rains** in **Makran**, **Kalat**, **Quetta** & **Rakshan** Divisions.
- (4) **4<sup>th</sup> Week (approx 25-50 mm rainfall in areas)**. **Heavy rains** in **Kalat**, **Makran**, **Quetta**, **Naseerabad**, **Zhob** & **Sibbi** Divisions.

b. **Khyber Pakhtunkhwa**

- (1) **1<sup>st</sup> Week (approx 15-50 mm rainfall in areas)**. Monsoon is expected in all parts with **heavy rains** in **Malakand**, **Hazara** & **Mardan** Division, **moderate to heavy rains** in **Peshawar**, **Kohat**, **Bannu** & **DI Khan** areas.



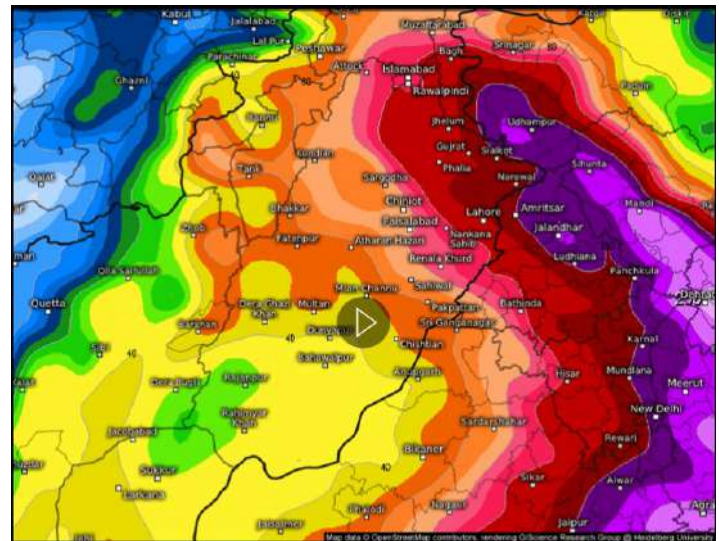
- (2) **2<sup>nd</sup> Week (approx. 25-35 mm rainfall in areas)**. Monsoon will **remain active** in **Southern KP** including **Bannu** & **DI Khan** Divisions with **light rains** in **Peshawar** & **Kohat** Divisions and **lesser intensity** in **Mardan**, **Malakand** & **Hazara** Division.

- (3) **3<sup>rd</sup> Week (approx 15-25 mm rainfall in areas)**. Overall Monsoon will **remain weak** and **isolated rains** in **Malakand** & **Hazara** Divisions.
- (4) **4<sup>th</sup> Week (approx 50-70 mm rainfall in areas)**. An **active phase** of monsoon is expected with **heavy to very heavy rains** in **Malakand**, **Hazara** & **Mardan** Divisions and **moderate to heavy rains** in **Peshawar**, **Kohat**, **Bannu** & **DI Khan** Divisions.

c. **Punjab & ICT**

- (1) **1<sup>st</sup> Week (approx 15-50 mm rainfall in areas)**. **Heavy rain spells** are anticipated in **ICT**, **Rawalpindi**, **Lahore**, **Sargodha**, **Faisalabad** & **Gujranwala** Divisions. While **intensity** and **duration** of **rains** is expected to be **comparatively lower** in **Multan**, **DG Khan** & **Bahawalpur** Divisions.

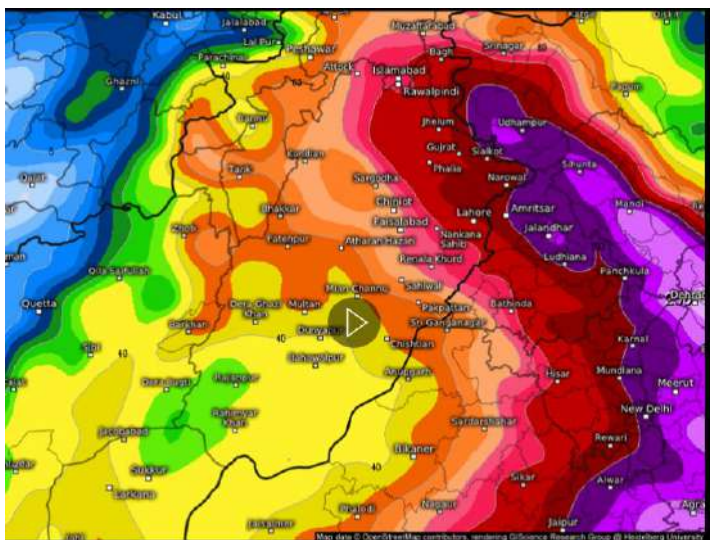
- (2) **2<sup>nd</sup> Week (approx 25-35 mm rainfall in areas).** **Monsoon** activity will **persist** in **ICT, Rawalpindi, Gujranwala, Sargodha, Lahore & Faisalabad** Divisions. **Isolated rains / showers** are expected in **Multan, DG Khan & Bahawalpur** Divisions.
- (3) **3<sup>rd</sup> Week (approx 15-25 mm rainfall in areas).** **Monsoon** activity will remain **significant** in **ICT & Upper Punjab**, while there will be **noticeable decrease** in **rains activity** in **Central & South Punjab** as **monsoon enters a weak phase**.
- (4) **4<sup>th</sup> Week (approx 50-70 mm rainfall in areas).** **Heavy rains may lead to flooding** in **ICT, Rawalpindi, Lahore, Sargodha, Gujranwala & Faisalabad** Divisions. **Hill torrents** in **DG Khan** Division are expected. **Moderate to heavy rains** are forecasted for the **Sahiwal, Multan & Bahawalpur** Divisions.



Accumulated total precipitation (mm) From Wed 06/19/2024, 07:00pm CDT to Fri 07/12/2024, 01:00am CDT

d. **Sindh**

- (1) **1<sup>st</sup> Week (approx 30-50 mm rainfall in areas).** **Highest intensity rains** in **Mirpurkhas** Division. **Heavy rains** are expected in **Karachi, Hyderabad & Nawabshah** Divisions. **Isolated to scattered rains** expected in **Larkana & Sukkur** regions.
- (2) **2<sup>nd</sup> Week (approx 35-75 mm rainfall in areas).** **Intense monsoon** activity is expected **across all parts of Sindh**. **Heavy to very heavy rains** are predicted in **Mirpurkhas, Karachi, Hyderabad, Larkana, Sukkur** and **Nawabshah** Divisions.

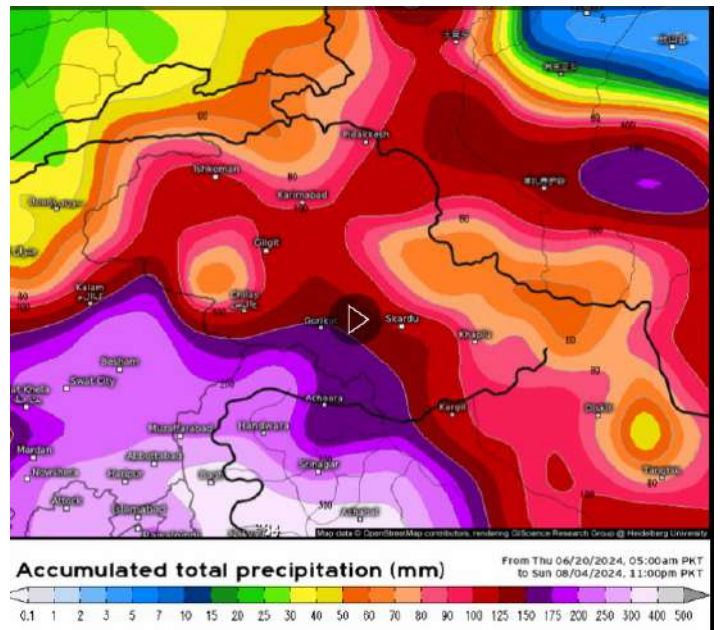


Accumulated total precipitation (mm) From Wed 06/19/2024, 07:00pm CDT to Fri 07/12/2024, 01:00am CDT

- (3) **3<sup>rd</sup> Week (approx 25-35 mm rainfall in areas).** Monsoon dynamics likely to weaken. Rains will be primarily concentrated in Mirpurkhas & Nawabshah Divisions, with isolated rains in Karachi, Hyderabad, Larkana & Sukkur Divisions.
- (4) **4<sup>th</sup> Week (approx 45-75 mm rainfall in areas).** Monsoon will remain active. Heavy to very heavy rains spells expected in Karachi & Mirpurkhas Divisions. Scattered rains spells anticipated in Nawabshah, Hyderabad, Sukkur & Larkana Divisions.

e. **Gilgit Baltistan**

- (1) **1<sup>st</sup> Week (approx 15-30 mm rainfall in areas).** Light to moderate rains expected in all valleys including Gilgit, Skardu, Ghanche, Ghizer, Astore & Gojal.



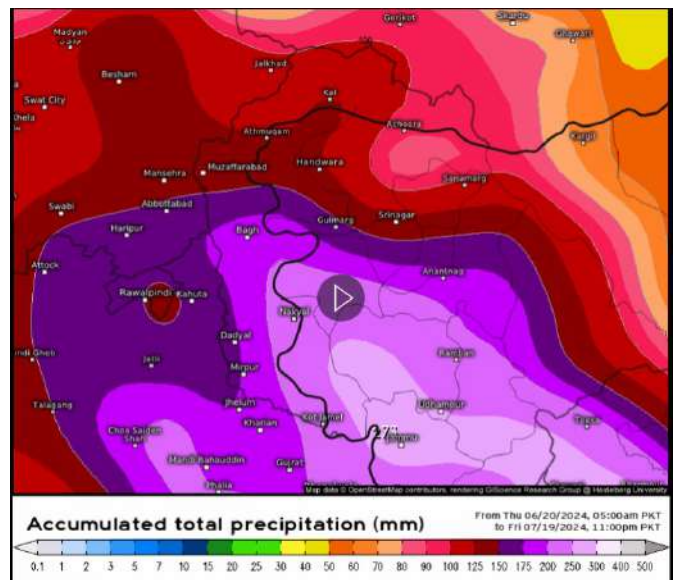
- (2) **2<sup>nd</sup> Week (approx 15-30 mm rainfall in areas).** Light to moderate rains expected in all valleys including Gilgit, Skardu, Ghanche, Ghizer, Astore & Gojal.

- (3) **3<sup>rd</sup> Week (approx 10-25 mm rainfall in areas).** Light to occasionally moderate showers in Gilgit, Skardu, Ghanche, Ghizer, Astore & Gojal.

- (4) **4<sup>th</sup> Week (approx 25-40 mm rainfall in areas).** Low to moderate rains expected in all valleys. Astore region will experience heavy to very heavy rains.

f. **AJ&K**

- (1) **1<sup>st</sup> Week (approx 30-55 mm rainfall in areas).** Monsoon rains expected across all parts. Heavy rains expected in Muzaffarabad, Poonch, Kotli & Mirpur regions, with moderate to heavy rains expected in Neelum region.



- (2) **2<sup>nd</sup> Week (approx 35-50 mm rainfall in areas)**. Monsoon rains **expected in all parts**. **Heavy rains** expected in **Muzaffarabad, Poonch, Kotli & Mirpur** regions with **moderate to heavy** in **Neelum**.
- (3) **3<sup>rd</sup> Week (approx 15-30 mm rainfall in areas)**. Monsoon expected to **remain subdued**, with some **rains** in **Muzaffarabad & Poonch** regions, and **isolated rains** in **Kotli, Mirpur & Neelum** regions.
- (4) **4<sup>th</sup> Week (approx 40-70 mm rainfall in areas)**. **Heavy to very heavy rains** across **complete AJ&K**, potentially leading to **severe flooding** in **nullahs and rivers**.

3. **Perceived Impacts**. In light of the projected weather conditions, following impacts are expected in aforesaid regions of Pakistan: -

- a. **Moderate to Very Heavy rains** may **increase** the **water flows** in local nullahs / streams / rivers **causing riverine / flash flooding** in vulnerable areas.
- b. **Moderate to Very Heavy rains** may trigger **Hill Torrents** in **vulnerable areas** of **DI Khan, DG Khan, Rajanpur** and along **Suleman** and **Kirthar Ranges**.
- c. **Moderate to Very Heavy Rains** may cause **urban flooding** in vulnerable **urban areas** across the country.
- d. **Moderate to Very Heavy Rains** may **trigger landslides** in the **vulnerable areas** of **Murree, Galiyat, AJ&K, Gilgit Baltistan** and hilly / mountainous areas of **Khyber Pakhtunkhwa** and **Balochistan**.
- e. In light of **increased temperatures** and **forecasted rains** spell in **Gilgit Baltistan** and **Khyber Pakhtunkhwa**, the **flows** of **rivers** and **streams** are **expected to increase** and there is a **higher probability** of **GLOF event triggering** in vulnerable / at-risk valleys.
- f. Dust **storm / wind-thunderstorms & heavy falls** may **cause damage** to loose structures such as electrical poles, solar panels, hoardings, tall trees and under construction buildings.

4. **Pre-cautionary Measures**. All concerned stakeholders / general public are advised to undertake measures to mitigate adverse effects of monsoon rains. **Following measures must be ensured** by all: -

a. **PMD / FFD / FFC / PCIW / SUPARCO**

- (1) **Proactive monitoring** of Eastern Rivers and sharing of 12 hourly water flows data with all stakeholders.

- (2) Ensure implementation of **elaborate coordination mechanism** for **preparedness** and **mitigation** through management/ regulation of water reservoirs/ barrages/ headworks and irrigation canals.
- b. **Provincial Irrigation Departments**. Take necessary measures to **manage waterflow** and mitigate **flood risks**, through following: -
- (1) Implementing **effective regulation strategies** at headworks / barrages to optimize the discharge of excess water through irrigation channels.
  - (2) **Proactive monitoring / maintenance / repairs** of canal systems to enhance their capacity to handle increased flows.
  - (3) Undertake **prompt repairs** of any breaches / breaks in flood protective works.
- c. **PDMA's / GBDMA / SDMA and Respective DDMA's**
- (1) Conduct **extensive public awareness campaigns** through multiple channels, including TV / broadcast / social / print media etc., to ensure that vulnerable communities are well-informed about the anticipated flood situation and necessary precautions.
  - (2) Enhance **deployment** of **required machinery, equipment, emergency supplies** and personnel in **at-risk areas**, considering on ground situation.
  - (3) Maintain **sufficient stocks** of **essential supplies**, including food, clean water, medical provisions, and sanitation supplies in case further emergent needs.
  - (4) **Strategically position flood fighting equipment** in areas prone to flooding, ensuring their availability for immediate deployment.
- d. **DM Responders (Local Administrations / Rescue 1122 / LEAs / Line Departments / Armed Forces)**
- (1) Ensure **timely cleaning / de-silting & maintenance** of **sewerage lines, storm water drains** and **nullahs**.
  - (2) Ensure **availability / functionality** of all essential **flood response equipment** in flood-prone areas.
  - (3) Ensure **full staffing / availability** of trained **emergency response personnel** and designate their duties / areas of deployment in case of emergency.
  - (4) Conduct thorough **reconnaissance** of **vulnerable locations, identifying critical infrastructure** / communities that may require additional support and protection.

- (5) Inform and **sensitize residents** of **low-lying areas** / **at-risk communities** of anticipated flood conditions, potential impacts, evacuation procedures and precautionary measures.
  - (6) Establish **temporary shelters** in **safe locations** for **displaced individuals** and ensure these are equipped with necessary supplies (food, clean drinking water, medical supplies and sanitation facilities).
  - (7) Ensure the **availability** of **trained medical staff** and ambulances in **strategic locations** to provide immediate medical assistance to those affected by floods.
- e. **NHA / FWO and Pak Railways**. Continuously **monitor** the **situation** and **implement** all **necessary safety measures** to ensure the **functionality** of **communication arteries** (roads / railway lines / bridges).
- f. **NH&MP**
- (1) Inform **travelers** / **tourists** in **timely manner** regarding anticipated weather / flood conditions, potential hazards, precautionary measures and recommended alternative routes to regulate their travel and ensuring safety.
  - (2) Provide **necessary assistance** and **support** to travelers / tourists affected by flood situation, including **facilitating evacuations** if required.
  - (3) **Coordinate** with Law Enforcement Agencies & Local Administrations to **manage** and **redirect traffic** in affected areas to prevent congestion and **facilitate emergency response** efforts.
- g. **MO / Engrs Dte**
- (1) Undertake **survey** of **inundated areas** and record keeping of **flood limits** for verification of data.
  - (2) **Serviceability** of **flood fighting equipment** for sustainability of response.
  - (3) **Coordinate** with **Rescue 1122** / **DDMAs** to ensure general public stays away from vulnerable / flooded areas.
- h. Proactively **maintain nullahs** / **stormwater drains** to ensure their proper functioning and prevent blockages that may exacerbate flooding.
- i. Ensure **immediate stocking** of **basic commodities**, including paramedics and medicine, especially in regions that are likely to get cut-off during flooding.
- j. Strengthen **coordination among all relevant departments** and **agencies** to facilitate the timely sharing of information and resources during emergency situations.

- k. Establish **reliable communication channels** with **local communities** to provide timely updates, instructions, and emergency contact information.
- l. Ensure **widespread circulation** of **alerts** and **advisories**, especially in local languages, to raise awareness and sensitize travelers/ tourists and local communities in at-risk / vulnerable areas.
- m. Ensure **round-the-clock monitoring** of the situation through EOCs with regular feedback to PEOCs and NEOC.
- n. Share **regular / frequent updates** with **NDMA** in case of any eventuality.