

Government of Pakistan
Ministry of Water Resources
Office of the Chief Engineering Adviser/
Chairman, Federal Flood Commission

No. FC-1(1)NDMA/23

6-Ataturk Avenue, G-5/1
Islamabad, the June 26, 2024

Additional Commissioner for Indus Waters
O/o PCIW,
Islamabad

Sub: Monsoon Weather Projection – July 2024

I have been directed to enclose herewith a copy of NDMA letter No. F.2 (E)/2024-NDMA (MW/Weather-Outlook) dated 22nd June 2024 regarding the subject cited above.

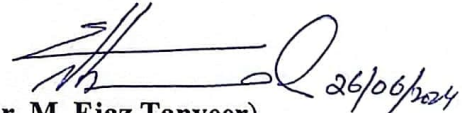
2. NDMA vide its letter referred above has shared details of rainfall expected during month of July 2024, based on the technical analysis Weather Projections for Monsoon Season 2024. According to precautionary measures (Section 4.a (1)), *there should be proactive monitoring of the Eastern Rivers and sharing of water flow data every 12 hours with all stakeholders.*

3. It is added that in anticipation of the Monsoon 2024, the Federal Flood Commission (FFC) convened two preparatory meetings on March 4th and April 26th 2024 respectively and further its Annual (59th) meeting on 10th June 2024. During the above meetings, O/o PCIW was requested for necessary coordination towards sharing of Eastern rivers data during the 2024-Monsoon Season based on its arrangements agreed with Indian Commission for Indus Waters (ICIW).

4. In view of above, it is requested to kindly ensure proactive monitoring of Eastern Rivers and share twelve (12) hourly water flow data with all related stakeholders for ensuring necessary precautionary measures in case of unusual flows.

5. This issues with the approval of Chief Engineering Adviser/Chairman Federal Flood Commission, Islamabad.

Encl: (As Above)


(Dr. M. Ejaz Tanveer)
Superintending Engineer (Floods)

Copy to:

1. Director to Federal Minister for Water Resources, Ministry of Water Resources, Islamabad.
2. Pakistan Commissioner for Indus Water, O/o PCIW, Islamabad.
3. Director (Response), NDMA, Islamabad.
4. PS to Secretary, Ministry of Water Resources, Islamabad.
5. PS to CEA/CFFC, Islamabad.
6. PS to Chairman IRSA, Islamabad.
7. PS to DG Engineers, Engineers Directorate, GHQ, Rawalpindi.
8. PS to Member (Infrastructure), Planning Development & Special Initiatives Division, Islamabad.

MOST IMMEDIATE

F2.(E)/2024-NDMA (MWWWeather-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.

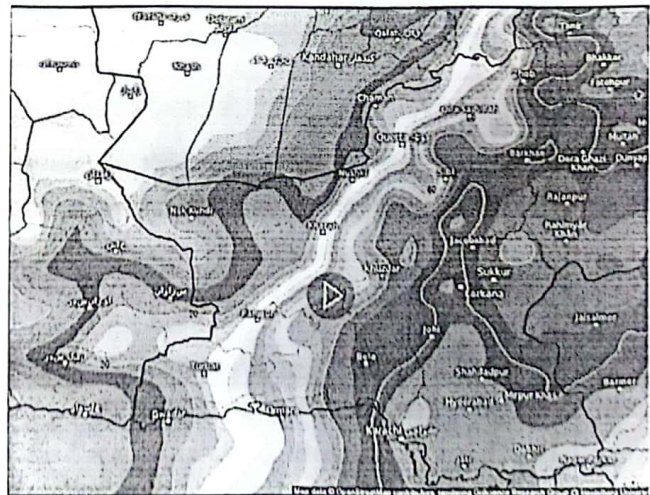
2. **Rains Projections.** Province-wise details of projected weather conditions for the entire month of July 2024 on weekly basis are as under:-

a. **Balochistan**

- (1) **1st 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) **2nd 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



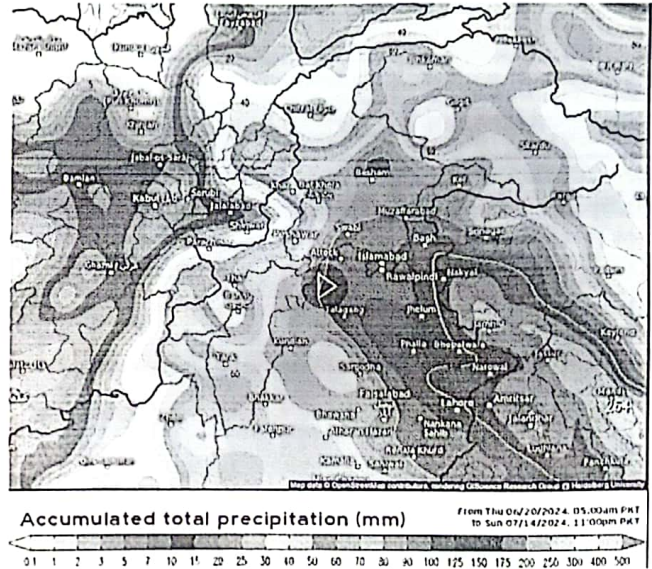
Accumulated total precipitation (mm)
 FROM Thu 06/20/2024, 05:00:00 PM
 TO Sat 06/22/2024, 11:00:00 PM
 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

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

- (3) 3rd 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) 4th Week (approx 25-50 mm rainfall in areas). Heavy rains in Kalat, Makran, Quetta, Naseerabad, Zhob & Sibbi Divisions.

b. Khyber Pakhtunkhwa

- (1) 1st 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.



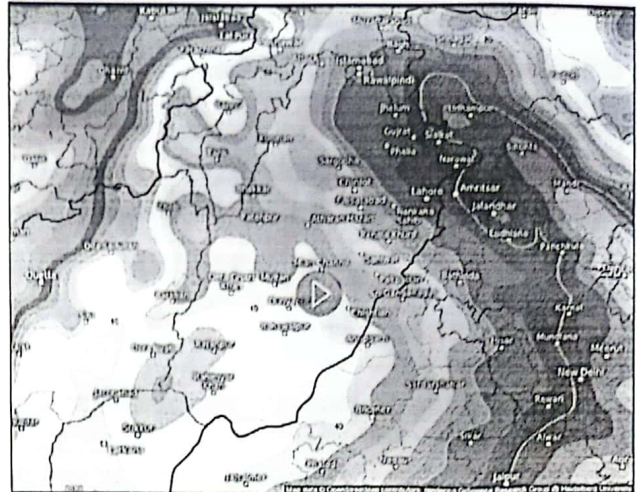
- (2) 2nd Week (approx. 25-35 mm rainfall in areas). Monsoon will remain active in Southern KP including Bannu & DI Khan Divisions with light rains in Peshawar & Kohat Divisions and lesser intensity in Mardan, Malakand & Hazara Division.

- (3) 3rd Week (approx 15-25 mm rainfall in areas). Overall Monsoon will remain weak and isolated rains in Malakand & Hazara Divisions.
- (4) 4th 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) 1st 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) 2nd 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.

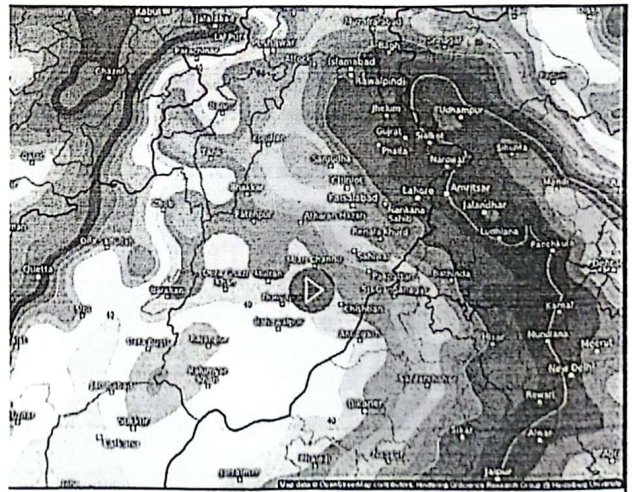


- (3) 3rd Week (approx 15-25 mm rainfall in areas). Monsoon activity will remain significant in ICT & Upper Punjab, while there will be noticeable decrease in rains activity in Central & South Punjab as monsoon enters a weak phase.

- (4) 4th 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.

d. Sindh

- (1) 1st 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.

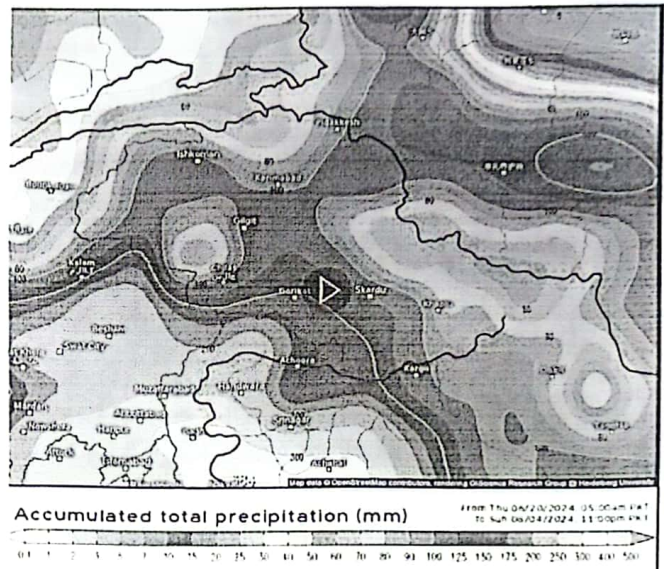


- (2) 2nd Week (approx 35-75 mm rainfall in areas). Intense monsoon activity is expected across all parts of Sindh. Heavy to very heavy rains are predicted in Mirpurkhas, Karachi, Hyderabad, Larkana, Sukkur and Nawabshah Divisions.

- (3) 3rd 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) 4th 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

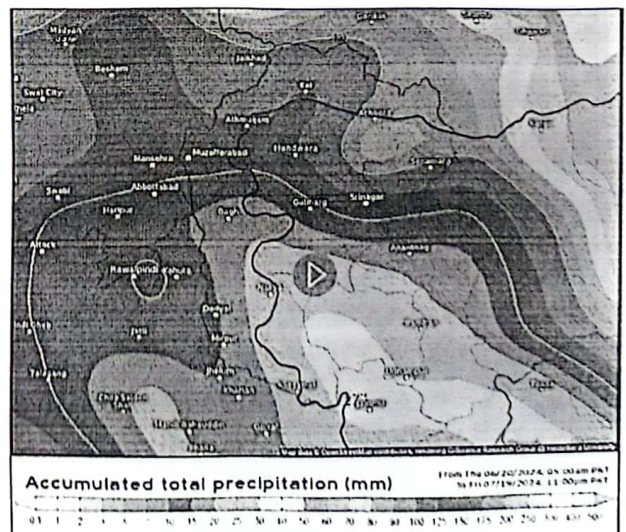
- (1) 1st Week (approx 15-30 mm rainfall in areas). Light to moderate rains expected in all valleys including Gilgit, Skardu, Ghanche, Ghizer, Astore & Gojal.
- (2) 2nd Week (approx 15-30 mm rainfall in areas). Light to moderate rains expected in all valleys including Gilgit, Skardu, Ghanche, Ghizer, Astor & Gojal.



- (3) 3rd Week (approx 10-25 mm rainfall in areas). Light to occasionally moderate showers in Gilgit, Skardu, Ghanche, Ghizer, Astor & Gojal.
- (4) 4th 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) 1st 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) **2nd 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) **3rd 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) **4th 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 / DDMA's 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.
5. **Press Information Department Only**. With the request to ensure wider circulation and public awareness.
6. Forwarded for information and necessary action, please.



(Hammad Sadiq Rana)
Director (Response) NDMA

(Distribution List Attached)

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