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

No. FC-I (23)/ 2023

6-Ataturk Avenue, G-5/1,
Islamabad, the December 26, 2023

Sub: **MINUTES OF POST MONSOON MEETING OF FEDERAL FLOOD COMMISSION HELD ON 27TH NOVEMBER 2023 IN THE OFFICE OF THE CHIEF ENGINEERING ADVISER/ CHAIRMAN, FEDERAL FLOOD COMMISSION, ISLAMABAD**

Kindly find enclosed herewith a copy of minutes of the subject meeting held on 27th November 2023 in the Committee Room of Office of the Chief Engineering Adviser/ Chairman, Federal Flood Commission, Islamabad. All concerned organizations are requested to take action on the related decisions reflected in the minutes and furnish compliance report to this office at the earliest.

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

Encl: As above


(M. Hanif Chachar)
Principal River Engineer
Ph: 051-9212371

Distribution:

1. Director General, Pakistan Meteorological Department, H-8, Islamabad.
2. Member (Water), WAPDA, WAPDA House, Lahore.
3. Member (Infrastructure), PD&SI Division, Planning Commission of Pakistan, Islamabad.
4. Chairman, Indus River System Authority, 35- Mauve Area, G-10/4, Islamabad.
5. Chief Executive Officer, Pakistan Railways, Pakistan Railway Headquarter, Lahore.
6. Pakistan Commissioner for Indus Waters (PCIW), G-7/1, Islamabad.
7. Chairman, National Highway Authority, Islamabad.
8. Director General (Engineer), Engineers Directorate, GHQ, Rawalpindi.
9. Member (Operations), National Disaster Management Authority, ERRA Complex, Murree Rd, opposite Margallah Town, Shakar Parian, Islamabad.
10. Chief (Water Resources Section), Ministry of Planning, Development & Special Initiatives, Islamabad.
11. Deputy Secretary (Water), Ministry of Water Resources, Islamabad.
12. Secretary, Irrigation Department, Government of the Punjab, Lahore.
13. Secretary, Irrigation Department, Government of Sindh, Karachi.
14. Secretary, Irrigation Department, Government of Khyber Pakhtunkhwa, Peshawar.
15. Secretary, Irrigation Department, Government of Balochistan, Quetta.
16. Secretary, Water Management & Irrigation Department, Near MP Check Post, Helipad Road, Sonikot, Gilgit.
17. Secretary, Irrigation & Agriculture Department, Government of AJ&K, Muzaffarabad.

18. Director General, Provincial Disaster Management Authority, Govt. of the Punjab, Lahore.
19. Director General, Provincial Disaster Management Authority, Govt. of Sindh, Karachi.
20. Director General, Provincial Disaster Management Authority, Govt. of KP, Peshawar.
21. Director General, Provincial Disaster Management Authority, Govt. of Balochistan, Quetta.
22. Director General, Gilgit-Baltistan Disaster Management Authority, Gilgit.
23. Director General, State Disaster Management Authority, Govt. of AJ&K, Muzaffarabad.
24. General Manager (SUPARCO), Pakistan Space & Upper Atmosphere Research Commission SPARCENT, Near CDA Toll Plaza, Rawat, Islamabad.
25. Chief Meteorologist, Flood Forecasting Division, 46-Jail Road, Lahore.
26. General Manager (HRM), WAPDA House, Lahore.
27. General Manager, Tarbela Dam Project, Tarbela.
28. Chief Engineer, Mangla Dam Project, Mangla, Jhelum.
29. Chief Engineer, (H&WM) WAPDA, WAPDA House, Lahore.
30. Director General, Irrigation & Small Dams Organization, Government of AJ&K, Muzaffarabad.
31. Chief Engineer, Merged Area, Irrigation Department, Peshawar.
32. Managing Director, WASA, Liaqat Bagh, Rawalpindi.
33. Deputy Director Forecast based Financing, PRCS, Islamabad.

Copy for information to:

1. Director to the Federal Minister, Ministry of Water Resources, Islamabad.
2. PS to Secretary, Ministry of Water Resources, Islamabad.
3. P.S to Secretary, Aviation Division Islamabad (for PMD).
4. P.S to Secretary PD & SI Division, Islamabad.
5. P.S to Secretary, M/o Communication, Islamabad. (For NHA).
6. P.S to Secretary, M/o Railway, Islamabad.
7. PS to CEA & CFFC, Islamabad.
8. P.S to Chairman, WAPDA, Lahore.
9. P.S to Chairman SUPARCO, Islamabad.

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

Sub: **MINUTES OF POST MONSOON 2023 MEETING OF FEDERAL FLOOD COMMISSION HELD ON 27th NOVEMBER 2023**

The Post Monsoon 2023 meeting of Federal Flood Commission (FFC) was held on 27th November 2023 at 1030 hours in the Committee Room of Office of the Chief Engineering Advisor & Chairman Federal Flood Commission (O/o CEA/CFFC), Islamabad. CEA/ CFFC chaired the meeting. List of participants is attached as **Annex-I**. Ministry of Water Resources and NHA were not represented in the meeting.

2. The meeting started with recitation from the Holy Quran. The Chair welcomed the participants. In his opening remarks, the Chair recounted that during the Monsoon 2023, High to Exceptionally High Flood Situation was observed in River Sutlej. Due to cumulative outflows from India's Pong Dam (which controls River Beas) and Bhakra Dam (which controls River Sutlej), River Sutlej attained Exceptionally High Flood at Ganda Singh Wala with peak discharge of 278,297 cusecs on 19th August 2023 and Very High Flood at Sulemanki with peak discharge of 191,053 cusecs on 22nd August 2023, causing inundation of low lying areas, villages on both sides of the river. High flood reportedly damaged standing crops and houses on both sides of River Sutlej in Kasur district besides washing away of embankments, settlements, etc. Also High Flood at Islam Headworks (d/s Sulemanki) with 151,904 cusecs peak flows was experienced on 25th August 2023.

3. CEA/ CFFC continued that River Chenab also attained High Flood at Khanki on 20th July 2023 and attained a peak discharge of 204,041 cusecs. The Flood situation in other main rivers (i.e. Indus, Kabul & Ravi) remained in Low to Medium Range. Normal Flows were observed in River Jhelum during the Monsoon Season 2023. Apart from that, Tarbela Dam attained its Maximum Conservation Level (MCL) of 1550 feet on 11th August and 17th August 2023 (02 days). After some respite, it again retained its MCL from 28th August to 8th September 2023 (i.e. Tarbela remained in its MCL stage for 14 days during Monsoon 2023). Mangla Dam also achieved its full level of 1242.00 on 17th August and remained at its MCL till 21st August 2023 (5 days). Overall, effective coordination was witnessed among all the federal as well as the provincial departments concerned during monsoon 2023, said the Chair.

4. The Chair then gave the floor to Principal River Engineer (PRE), Office of CEA/ CFFC, who gave presentation on the agenda items. He then requested the representatives of Respective Organizations for discussion on the agenda items.

5. The representative of **Pakistan Meteorological Department (PMD)** presented an overview of the overall weather situation during Monsoon Season 2023 including predications for the current winter season. He informed the House that PMD had predicted 'Normal' Monsoon Rainfall from July to September 2023 in Pakistan. Upper Punjab, Khyber Pakhtunkhwa and Azad Jammu & Kashmir were expected to receive 'Slightly Above-Normal' rainfall but within 5% departure from the 'Normal'. Sindh and south-western parts of Balochistan were expected to receive 'Normal' to 'Slightly Below Normal' rainfall during the season. He said that near Normal Rainfall (4% above normal) was recorded during Monsoon 2023. He continued that in July 2023, 70% above normal rains were observed in the country. However, in August & September, rainfall recorded was below "Normal".

6. He intimated that PMD during Monsoon 2023 had issued 123 Bulletins & Weekly Forecasts and three (03) Flood Warnings. He stated that on 18th August 2023, PMD had forecasted Exceptionally High Flood in Sutlej River.

7. With regards to Winter Projection (November-December 2023- January 2024), PMD's representative informed that rains may occur in January 2024. He predicted normal snowfall during Winter 2023-24 and added that as per seasonal forecast Normal to Slightly Above Normal rainfall is expected in western and north-western parts of the country (i.e., Khyber Pakhtunkhwa and Balochistan along with upper Punjab and adjoining Kashmir), due to prevailing western weather systems. Moreover, temperatures are predicted to remain above normal nationwide. The southwestern parts of Balochistan, upper Khyber Pakhtunkhwa and Gilgit-Baltistan would experience slightly above-normal temperatures.

8. The representative of **Global Change Impact Studies Centre (GCISC)** informed the House that during 2023 Monsoon, 0.5 °C to 1 °C above normal temperature was observed, which was an anomaly. He said that as per future projections, 1.5 °C to 2 °C rise in temperature might take place during 21st Century and the rise in temperatures in Northern parts of Pakistan would be higher as compared to Southern parts. He continued that during Monsoon 2023, above normal rains were observed in Sindh & Balochistan with higher temperatures in future, higher cloud formation would take place due to higher evaporation resulting into more rains.

9. He highlighted that based on last 60 years' rainfall analysis, reduction in rainfall in Kashmir had been noted. He stated that Monsoon 2023 had penetrated more towards Southern parts of the country due to change in atmospheric conditions. As a result, Southern parts received more rains, contrary to the upper parts. He was of the opinion that high temperatures would cause more glacial melting & subsequent glacial depletion in future, besides, due to climate change, not only floods, but also droughts would occur frequently. He continued that in the year 2022, floods due to rains occurred in southern parts with less rainfall in the upper parts of the country.

10. The representative of **WASA, Rawalpindi** informed that even though 205 mm of rain had occurred in Rawalpindi, but no major flood event took place. The representative of WASA Rawalpindi was asked to share their project's PC-I related to urban flood protection for consideration under FPSP-III.

11. The Superintending Engineer **Tarbela Dam Project, WAPDA** informed the House that during Monsoon-2023, peak discharge of 398,000 Cs was observed at Tarbela. He highlighted that PMD's forecasts during the Monsoon were very helpful for the entire dam operation. He suggested further improvements in PMD's forecast.

12. Advisor WAPDA, highlighted that one slight deviation was observed in filling the Tarbela Reservoir during Monsoon 2023, i.e. the reservoir was filled on 11th August 2023 instead of 20th August and this early filling resulted in exhausting flood depletion cushion hence that aspect need to be taken into account in future reservoir operation.

13. Deputy Commissioner, Office of PCIW apprised the participants that during 2023 Monsoon, better data sharing mechanism with India had been observed and informed that as per provisions of 1960 Indus Water Treaty, India had to share extraordinary discharges only. He assured the house that efforts would be made in future to get advance information from India for the Eastern Rivers.

14. Chief Engineer (D&F) **Punjab Irrigation Department** informed the House that in Punjab flooding had mainly occurred in Sutlej River during the Monsoon 2023, which caused minor damages to Irrigation, Drainage & Flood Protection Infrastructure. Superintending Engineer (Floods) FFC, highlighted that as per media reports, a bund had breached during Monsoon 2023, which was a private bund and considered as encroachment in the river bed. He stated that those

encroachments needed to be removed from river bed, in order to avoid any flood eventuality. On a query by the Chair, PID Punjab's representative replied that few encroachments/ private bunds had been removed whereas some were yet to be removed.

15. Engineering Adviser (Civil) with reference to Punjab River Act 2016 enquired about the department responsible for the removal of encroachments from the river bed. PID Punjab's representative responded that a committee used to get formed every monsoon, headed by District Administration, whose responsibility was to monitor removal of encroachments. The representative of FFC highlighted that the issue of Shahdara Breaching section of Ravi River had been discussed in Army's Post Flood meeting held in Lahore this year. In that meeting, widening of bridges was considered. He suggested that contingency planning be made as adhoc arrangements.

16. The representative of **Pak Army** stated that keeping in view the settlements/ encroachments on both sides of Ravi River, it was not possible to operate breaching section. He added that the number of settlements/ population has increased manifold hence it was not possible to evacuate large number of people in short time. He stressed upon the need of an early resolution of Shahdara Bridge issue. He suggested a well thought-out solution of the issue by PID Punjab before 2024 Monsoon Season.

17. **Chief Engineer, PID Sindh** informed that Medium Flood was observed at Guddu & Sukkur Barrages with Low Flood at Kotri Barrage during Monsoon-2023. It was intimated that on 29th July 2023, River Indus directly hit the newly constructed T-Head Spur at S.L Bund Mile 40/4+460, which damaged and reduced the length of T-Head of spur at upstream side to 45 feet (from 100 feet). Due to this, River Indus enlarged its curvature in U/S of T-Head Spur towards S.L Bund Mile 0/3. Looking at the critical and alarming situation, hectic efforts were made including deployment of heavy earth moving machinery, dumping of stone boulders at the damaged portion of "T" as well as at the U/S reach of S.L Bund, besides vigilance was also kept round the clock to protect the bund from any major mishap.

18. Moreover, on 25th August 2023, the River Indus attacked the Shank of 0/5 T-Head Spur along Ruk Loop Bund and eroded in the length of 350 feet. Irrigation Department took immediate steps of flood fighting works by deployment of heavy earth moving machinery and dumping huge quantity of stone boulders in order to control the critical situation. He further informed that work on Construction of New T-Head Spur and Stone Apron along Ruk Loop Bund is on-going under Sindh Flood Emergency Rehabilitation Project (SFERP).

19. PID Sindh's representative stated that work on one PSDP scheme under Normal Emergent Flood Program was in progress and it was 80% physically completed. Also, 14 flood protection schemes under Provincial Annual Development Program (ADP) 2023-24 were being executed. The Chair asked all the PIDs/ FLAs to share details/ lists of their foreign funded projects with FFC, alongwith progress for submission to EAD. The Representative of PID Sindh was also asked about any project on capacity enhancement of Hamal and Manchar Lakes was being undertaken by PID Sindh under foreign loans. The Representative of PID Sindh responded that Rehabilitation of Manchar Lake project is ongoing under World Bank Assisted Sindh Flood Emergency Reconstruction Project.

20. The representative of **PID Khyber Pakhtunkhwa** informed that no major flood event was reported during Monsoon 2023, and flows in the rivers remained normal. He told that some damages at Spur No. 33 in D.I. Khan area were reported and repair on the same would be done soon.

21. The representative of **PID Balochistan** informed the meeting that 2023 Monsoon had generally passed safely and no damages were reported. It was informed that PID Balochistan was in

the process of implementing two foreign funded projects relating to flood damages restoration. He added that one project was being funded by the ADB, for which procurement has been done, while the second project was being financed by the World Bank, for which procurement was in process. He added that NDRMF funded flood related projects were also being executed. Also, WAPDA had been requested for restoration of last year's damages occurred to Kacchi Canal.

22. The representative of **Irrigation & Small Dams, Govt. of AJ&K** informed that no damages were reported to Irrigation & Flood Protection infrastructure during Monsoon 2023. However, damages had occurred to structures at Brarkot & Mandhor during 2022 floods. He continued that request for release of funds had been sent to Finance Department, but no funds had been received yet. As soon as funds are received, progress would be shared.

23. There was no participation from NHA in such an important meeting. The Chair expressed serious reservations on the absence of NHA's representative. He stated that NHA either remained absent or deputed junior officers in past many meetings who were even not aware of the issues and were unable to share progress/ information when asked.

24. Deputy Chief (Water), Water Resources Section, **Planning Commission** shaded light on foreign funded flood projects. He stated that Foreign Funded projects had been approved on Fast Track Basis during December 2022 – January 2023 period of which four (04) foreign funded projects were approved for Sindh Province. (Three projects related to World Bank and one was funded by Asian Development Bank). He said Post Flood Rehabilitation project was also being implemented in Balochistan with the assistance of the World Bank. Another project i.e. Reconstruction and Rehabilitation of Flood Affected Irrigation Infrastructure under ADB funding was being executed in Balochistan.

25. He added that ADB funded Emergency Flood Assistance Project costing Rs 15 billion was being executed in Khyber Pakhtunkhwa, besides, several projects under Chinese Grant-Aid had been proposed including Hill Torrents Management Projects, RBOD restoration in Balochistan, two in Charsada (KP) on Kabul River. It was shared that Planning Commission was trying to get US\$ 200 million funding from AIIB for implementation of FPSP-III. Moreover, efforts were on to get US\$ 200 million from Saudi Development Fund for FPSP-III implementation.

26. Deputy Chief (Water) further opined that interventions such as storages, dispersion structures could be considered for dispersal of Hill Torrents flows in desert areas. Reference to the 13 Hill Torrents in Southern Punjab, which generated more water / discharge than Ravi River, he opined that their water could be utilized for irrigation, if managed properly. He informed that Kacchi Canal had been remained non-operational due to silting and a PC-I, costing Rs 8.7 billion, have been approved for restoration of its damages. Work on the same was expected to start soon so that irrigation benefits could be accrued. Representative of Planning Commission was requested to share progress on foreign funded flood projects with FFC.

27. The representative of **IRSA** informed that 13.8 MAF of water had been discharged downstream Kotri during Monsoon 2023, out of 38 MAF in Monsoon 2022. He stated that one of the reasons of early filling of Tarbela Reservoir was Tarbela-V constraints. He said due to filling of reservoirs, requirements of the provinces were met. He informed that 15% shortfall was expected for Rabi Season 2023-24, however no shortage had been witnessed so far and the provinces were getting their full share of water.

28. The representative of **NDMA** informed that effective coordination was witnessed among stakeholders during Monsoon 2023 and Coordination Meetings were held with all concerned stakeholders on daily basis in NEOC and 24/7 monitoring of weather and flood situation through NEOC was ensured besides timely issuance of Advisories, Alerts, Updates & SITREPs throughout the Monsoon 2023 based on data received from relevant departments. Also, Evacuation Camps

were established where needed, stocked with required medicines and relief items. He added that there was threat of Cyclone BIPARJOY along coastal areas of Pakistan, however, fortunately no casualty took place. He informed that around 400,000 people were evacuated due to floods in Sutlej River and during Monsoon 2023, most of the human casualties took place due to roof collapse of mud houses because of rains.

29. The representative of Pak Army highlighted an important issue of Shahdara Railway Bridge on Ravi River. He informed that the data received from PID Punjab varied from the one recorded by the Army personnel. He opined that the gauging system needed corrections and suggested its improvement. He informed that there were certain critical issues which were lingering on for quite some time for want of action by the relevant provincial department. He stressed upon their early resolution.

30. The representative of Pak Railways informed that there were three major issues that pertained to Pak Railways i.e; (i) Sher Shah Bridge issue at Chenab River in Multan wherein 6 bays of the bridge were chocked / closed. In that regard, IRI Nandipur has proposed construction of Elliptical Guide Bunds for which PC-I has been approved and work on the project is in progress. Pak Railways was asked to share progress with FFC, (ii) Issue pertaining to Kotri Bridge for which model study has been conducted recommending stone pitching dumping as a short term measure on which work is in progress whereas recommendations for long-term measures are still to be submitted, (iii) The discharge carrying capacity of Shahdara Railway Bridge on River Ravi needs to be enhanced to pass discharge/ flow of 585,000 cusecs. It was informed that there are encroachment/ settlements on both sides of the River. He further said that there are 15 bays of the Railway Bridge and in order to pass flood discharge from the bridge, new/ additional bays are required which is not possible due to settlements. He said under the CPEC Project, new bridge with capacity of 585,000cs has been proposed.

31. Regarding the flood protection of metropolitans/ mega cities, Superintending Engineer (Floods-II), FFC demonstrated a short video clip about the 'Movable Flood Defense Wall' being used in Hungary. He explained that instead of using the costly reinforced concrete walls, Hungarian Water Management Directorate is using the aforementioned mobile flood protection wall for protecting their Szeged city against flooding. He explained that this innovative system is time efficient and involves manual assembling of around 4,000 reusable elements upto height of 8 meters on a concrete base/ platform lines. He stated that color coding of the elements helps to assemble elements early in 6-12 hours, as a replacement to earlier traditionally used sang bags which involve more effort and time and relatively less water tightness.

32. Regarding the above, Superintending Engineer (Floods-II), FFC urged Irrigation Departments of the four Provinces, G-B and AJ&K including other stakeholder departments at federal and provincial level (WASAs & City Development Authorities including CDA etc.) to share their needs/ interest for transfer for this technology to Pakistan and identify potential areas where feasibility for its replication could be assessed. He stated that adopting this technique would also be an important innovative **anticipatory action** to reduce significantly the extent of flood damages in Pakistan.

33. The Chair urged PIDs and PDMA's to incorporate in their Division/ District-wise Contingency Plans, the anticipatory actions which are required well ahead of the predicted flood disasters, before they fully unfold, in order to reduce the extent of damages and mitigate acute humanitarian impact, like one faced during 2022 floods. He stated that Pakistan Red Crescent Society (PRCS) in close collaboration with the Federal Flood Commission (FFC) has piloted a flagship Forecast-Based-Financing (FbF) project to strengthen capacities and processes for **anticipatory actions** planning and implementation in two highly vulnerable districts i.e. Nowshera & Charsadda in Khyber Pakhtunkhwa.

34. The Chair further explained that FFC supported PRCS in selection of river basin (i.e. Kabul basin) and provided related technical details which enabled the PRCS team to formulate trigger statement and develop an Early Action Protocol (EAP) document. He added that the document has been structured on three pillars: (1) risk information, forecasting and early warning systems; (2) planning, operations and delivery; and (3) pre-arranged finance. He endorsed this initiative of PRCS and strongly recommended upscaling the piloted interventions to other vulnerable areas of the country which will augment FFC's efforts to ensure Integrated Flood Management across the country. He also desired that the project details are presented by the PCRS during the forthcoming pre-flood conferences/ meetings of the FFC.

35. After detailed discussion, following decisions were taken;

- (i) For future meetings of FFC, all the members of FFC especially NHA are requested to ensure participation of senior level officers (Officers not below BS-20).
- (ii) **Provincial Irrigation Departments & Federal Line Agencies (PIDs & FLAs)** to ensure completion of all approved and ongoing flood protection schemes taken up under Provincial ADP and Normal/ Emergent Flood Programme, besides, rehabilitation and Flood Damages Restoration Works including O&M works related to Barrages/ Head Works/ Bridges, Irrigation, Drainage and Flood Protection Infrastructure well before the start of 2024 Monsoon Season. Details of all those projects be shared with FFC by the respective PID & FLA at the earliest.
- (iii) **Irrigation Departments of the Sindh & Balochistan, Gilgit-Baltistan and AJ&K** to ensure early approval of River Act from their respective Cabinets and subsequently promulgate the same on priority basis. Being a long standing issue requiring attention of above departments, the onus of any untoward situation, if encountered on ground due to non-approval and implementation of Act, shall be on the department at fault.
- (iv) **PIDs & FLAs** to ensure removal of encroachments from Flood Plains/ High Flood Risk Zones, waterways of major, secondary and tertiary rivers including hill torrents/ flood flow generating nullahs, which are under the threat of flood waters and causing hindrance in flood flows. The progress on the job be submitted to FFC on monthly basis till completion of the task. The entire exercise be completed well before the start of Monsoon Season 2024.
- (v) **PIDs & FLAs** to ensure rehabilitations of breaches and damaged flood protection infrastructure well before the Monsoon-2024.
- (vi) **PID Punjab and PDMA Punjab** to share with FFC details of the contingency measures planned as an alternative to non-functionality of Shahdara Bridge Breaching Section at the earliest.
- (vii) **Punjab Government and RUDA** alongwith other stakeholders to chalk out well before Monsoon 2024, a well considered & thought-out plan/ solution to the long outstanding issue of non-functionality of Shahdara Bridge Breaching Section.
- (viii) **PIDs & FLAs** to share details of their respective foreign funded projects with FFC, alongwith present progress & likely completion time for onward submission to EAD.
- (ix) **PID Sindh** to share progress on all the projects being implemented under foreign loans alongwith coloured maps with FFC
- (x) **PMD & GCISE** to continue monitoring of variations in temperatures & projections regarding near future weather scenarios in Pakistan.
- (xi) **WASA Rawalpindi** to submit PC-Is/ PC-IIs of its urban flood protection projects with FFC under FPSP-III for consideration by the Scrutinizing Committee of Federal Flood Commission.

- (xii) **WAPDA** to complete at the earliest the 2022 flood damages restoration works of CRBC Canal and share status with FFC and other stakeholders on regular basis till completion of the task.
- (xiii) **WAPDA** to share progress on Kachhi Canal Restoration Project with FFC and other stakeholders on regular basis till completion of the task.
- (xiv) **Planning Commission** to share details and progress on foreign funded (proposed and ongoing) flood projects with FFC.
- (xv) **Pak Railways** to ensure the execution of Left Guide Bund of Shershah Railway Bridge along River Chenab in District Multan at the earliest and share status with FFC on regular basis till completion of the task.
- (xvi) **Pak Railways** to share long term measures/ recommendations of the Model study with respect to Kotri Bridge with FFC.
- (xvii) **PCIW** to ensure necessary alternate arrangements for obtaining reservoir/ rivers flows data and other information of Chenab and Eastern Rivers from India, in case ICIW does not provide the same during Monsoon Season 2024.
- (xviii) **Irrigation Departments of the four Provinces, GB and AJ&K** including the other stakeholder departments at federal and provincial level (WASAs & City Development Authorities including CDA etc.) will share their needs for transfer for '*Movable Flood Defense Wall*' technology to Pakistan and identify potential areas where feasibility for its replication could be assessed.
- (xix) **Irrigation Departments of the four Provinces, GB and AJ&K** as well as the respective PDMA/GB-DMA/AJ&K's SDMA to identify and incorporate in their Divisional/ District-wise Monsoon Contingency Plans, the early actions required in anticipation of flood disasters, in order to reduce the likely loss & damages and mitigate humanitarian impact on ground. In this respect, representatives from Pakistan Red Crescent Society (PRCS) would be invited in the forthcoming pre-flood conferences/ meetings of the FFC in order to provide necessary guidance to the stakeholder departments.

36. The meeting ended with a vote of thanks by the Chair.

POST MONSOON 2023 MEETING OF FFC HELD ON 27th NOVEMBER 2023

List of participants

Federal Flood Commission, M/o Water Resources, Islamabad

1. Engr. Ahmed Kamal
Chief Engineering Advisor /
Chairman Federal Flood Commission In Chair
2. Engr. Ather Hameed
Engineering Adviser (Civil)
3. Dr. Ejaz Tanveer
Deputy Engineering advisor (Civil)
4. Engr. Muhammad Hanif Chachar
Principal River Engineer
5. Engr. Zafar Iqbal
Superintending Engineer (Floods)
6. Engr. Sibte Hassan
Assistant Engineer (Floods)

Ministry of Planning, Development & Special Initiatives, Islamabad

7. Mr. Shahzad Ali Khan
Deputy Chief (Water Resources) On Line

Pakistan Meteorological Department, Islamabad

8. Ch. Muhammad Aslam
Chief Meteorologist

Engineers Directorate, GHQ, Rawalpindi

9. Major Abdul Haseeb

Indus River System Authority, Islamabad

10. Mr. Muhammad Azam Khan
Assistant Research Officer

Office of Pakistan Commissioner for Indus Waters, Islamabad

11. Mr. Adnan Muhammad
Deputy Commissioner for Indus Waters

Water & Power Development Authority (WAPDA)

12. Mr. Hazrat Umar
Advisor
13. Syed Ali Haider
Superintending Engineer (SRH)
Tarbela Dam Project, Tarbela
14. Syed Faizan Hyder Shah
Superintending Engineer (Hydrology)
Mangla Dam Organization, Mangla, Jhelum
15. Mr. Kelash Kumar
AXEN (Hydrology)
16. Mr. Tanveer Sheikh (On Line)
PD (H&R)

Pakistan Railways, Lahore

17. Mr. Rizwan Javed (On Line)
Deputy Chief Engineer (Bridges)

Pakistan Space & Upper Atmosphere Research Commission (SUPARCO), Islamabad

18. Mr. Muhammad Ibrahim
General Manager

Global Change Impact Studies Centre (GCISC), Islamabad

19. Mr. Shahbaz Mehmood
Head of Climate & Environment

National Disaster Management Authority, Islamabad

20. Mr. Kazim Rahim
Manager (Operations)

Irrigation Department, Government of the Punjab, Lahore

21. Mr. Sultan Mahmood
Chief Engineer (D&F)
Drainage & Flood Zone

Irrigation Department, Government of Sindh, Karachi

22. Mr. Junaid Hashim Talpur
Chief Engineer

Irrigation Department, Government of Khyber Pakhtunkhwa, Peshawar

23. Mr. Khalid Khattak
Superintending Engineer (HQ South)

Irrigation Department, Government of Balochistan, Quetta

24. Mr. Sami Baloch
Provincial Coordinator (On Line)

Irrigation & Small Dams, Government of AJ&K, Muzaffarabad

25. Mr. Tahir Mumtaz
Director General (On Line)

Provincial Disaster Management Authority (Punjab), Lahore

26. Mr. Shahryar
Deputy Director (On Line)

Provincial Disaster Management Authority (Sindh), Karachi

27. Mr. Shayan Shah
Deputy Director (On Line)

Provincial Disaster Management Authority (KP), Peshawar

28. Mr. Shakeel Iqbal
Programme Manager (RRU)

Provincial Disaster Management Authority (Balochistan), Quetta

29. Mr. Asghar Ali Jamali
Deputy Director (On Line)

Gilgit Baltistan Disaster Management Authority, Gilgit

30. Mr. Zaheer-uddin Babar
Deputy Director

WASA RAWALPINDI

31. Mr. Muhammad Sadoon Basra
Director (Sewerage)