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JALANSH

The Monthly Newsletter of Central Water Commission

R. K. Jain
Chairman

Message

The new water year began with good rainfall. With IMD's forecast of normal monsoon, advanced onset of monsoon across the country and with good carry over storage in our reservoirs by June 2020 end, almost double of the storage available in the previous year, we expect improved water availability for all sectors during the coming year. Data from Ministry of Agriculture & Farmer's Welfare also show that area under sowing for Kharif Crop has shown tremendous improvement over the previous year.

At the same time, there is problem of floods in Assam, Bihar and Uttar Pradesh. These States are frequently affected by flood due to upstream heavy rainfall events and the need for constructing storage projects in the respective transboundary basins is becoming more and more important with each passing year. Damodar and Mahanadi basins are brilliant examples to demonstrate the role of storage projects in management of floods which need to be replicated in other flood prone basins also.

Pursuant to decision taken in the second meeting of Committee of NITI Aayog held on 27.05.2020, a Sub-Committee was constituted under the Chairmanship of Secretary, DoWR, RD & GR, Ministry of Jal Shakti to assist the Committee in formulation of the proposal/strategy of flood management in respect of three broad areas, viz., structural measures, non-structural measures and the scheme for financial assistance to states for taking up flood management works and river management activities/works in border areas. The meeting of the Sub-committee was held on 16.06.2020 under the Chairmanship of Secretary, DOWR, RD & GR. Water Resources Secretaries of selected States, myself and other members of the Sub-committee participated in the meeting through VC. The Sub-committee has finalized its report and submitted the same to NITI Aayog.

CSMRS and CWPRS are key research stations under DoWR, RD & GR. Technical Advisory Committee (TAC) meetings for both the institutes, which were chaired by Member (D&R) and myself respectively, were held during June 2020 to review and guide their works.

CWC officers were nominated as National Correspondents to the FAO's Global Information System on Water and Agriculture-AQUASTAT and attended FAO's Virtual Workshop on SDG indicators 6.4 on 18.06.2020.

In view of COVID-19 pandemic, virtual meetings are being held to continue and review the important works assigned to officers of CWC. I myself held a large number of video conferences and participated in many others which were attended by participants, not only from various parts of India but from all over the world.

Virtual monitoring visits of projects of national importance such as Majuli Island Flood protection work and Shahpurkandi National Project across river Ravi were undertaken by Member (D & R) and Member (WP&P) respectively.

The National Water Academy (NWA) of CWC is now conducting all training programmes in Distance Learning mode. NWA has been conducting training programmes for teachers since 2003 and 16 such programmes had been held in the past in which about 592 teachers participated in all these programmes together, mostly from Maharashtra only. However, this year alone, about 500 teachers from all over the country participated in the program which was held in different batches. I also delivered pre-recorded inaugural speech in the program. All this could become possible due to DL mode of conducting the training program, in this difficult time of covid-19 pandemic.

I hope that more such innovative ways will evolve to speed up the work with greater efficiency.

Shahpurkandi Dam

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Meeting of Sub-Committee of NITI Aayog taken by Secretary, DoWR, RD&GR

In order to formulate the strategy for flood management works in the entire country and river management activities and works in the border areas for period 2020-2023, a Committee has been constituted by NITI Aayog under the chairmanship of Vice Chairman, NITI Aayog. Officials from various Departments/ Ministries of Government of India, Experts from the field and Principal Secretaries from States of Jammu & Kashmir, Uttar Pradesh, Bihar, West Bengal, Punjab, Assam, Arunachal Pradesh, Tripura, Madhya Pradesh and Kerala have been included as the members of this Committee.

In pursuance to decision taken in the second meeting of Committee of NITI Aayog held on 27.05.2020, a Sub-Committee was constituted under the chairmanship of Secretary, DoWR, RD & GR, Ministry of Jal Shakti to assist the Committee in formulation of the proposal /strategy of flood management in respect of three broad areas, viz., structural measures, non-structural measure and the scheme for financial assistance to states for taking up flood management works and river management activities/ works in border areas. The meeting of the Sub-committee was held on 16-06-2020 under the chairman-ship of Secretary, DOWR,RD&GR. Chairman, CWC, Principle Secretary of selected states and other members of the Sub-committee participated in the meeting through VC. The Sub-committee has finalized its report and submitted to NITI Ayog.

Preparatory Meeting regarding Round Table on River Boards

MoJS has established a Research Chair at the Centre for Policy Research (CPR), New Delhi to pursue research in the field of water conflicts and governance. The Research Chair is working closely with the CWC to systematically engage with the experiences of interstate cooperation with an objective to draw lessons from the practice of cooperation for informing policy making.

It is planned to organize a series of conversations around the functioning of existing river boards to learn from their experiences under the CWC-CPR Dialogue Forum, coordinated and nurtured by the MoJS Research Chair in collaboration with the CWC. In this direction, a 'Roundtable of River Boards' is proposed to be held via videoconferencing in the coming days wherein experiences of the existing river boards would be brainstormed.

	Participating River Board/Authority
1st Preparatory Meeting 19.06.2020	•Bhakra and Beas Management Board(BBMB) •Damodar Valley Reservoirs Regulation Committee (DVRRC) •Upper Yamuna River Board (UYRB)
2nd Preparatory Meeting 25.06.2020	•Tungabhadra Board(TB) •Godavari River Management Board(GRMB) •Krishna River Management Board (KRMB) •Cauvery Water Management Authority(CWMA)
3rd Preparatory Meeting 30.06.2020	•Narmada Control Authority (NCA) •Brahmaputra Board(BB) •Betwa River Board (BRB) •Bansagar Control Board(BCB) •MP-Rajasthan Inter-State (I&P) Control Board

Preparatory Meetings during June 2020

It was decided to hold preparatory round of meetings with representatives of various River Boards before convening the 'Roundtable of River Boards'. Accordingly three meetings covering 12 functional River Boards/Basin Authorities were held under the Chairmanship of Chairman, CWC during June, 2020

Following questions were deliberated during the preparatory meetings

1. Based on the experience of the Board's functioning so far, what are its strengths and weaknesses in discharging its functions?
2. What are the factors or features of the Board that contributed to its effective functioning, within the particular context of the Board's mandate?
3. Can we consolidate your (the Board's) experiences to inform policy thinking about interstate river water coordination and cooperation?

Second meeting of Negotiation Committee regarding Tilaiya-Dhadhar Diversion Scheme

Second meeting of the Negotiation Committee to discuss water sharing dispute between Bihar and Jharkhand States regarding Tilaiya-Dhadhar Diversion Scheme was held on 23.06.2020 through VC under the chairmanship of Chairman, CWC.

Negotiation Committee w.r.t complaint made by Govt. of Bihar under Inter-State River Water Disputes(ISRWD) Act, 1956 was constituted by DoWR, RD& GR, MoJS on 06.01.2020. In the first meeting of the Negotiation Committee held on 13.02.2020, it was decided to arrive at the best optimal solution as per the needs of both States and as per latest water availability study of Tilaiya reservoir carried out by CWC. It was suggested to review proposed water utilization under the scheme by adopting micro-irrigation techniques instead of conventional irrigation. Party States were advised to review their positions so as to resolve the dispute mutually at the level of Negotiation Committee as adjudication by water disputes tribunal would take significantly long time.

It was decided in the second meeting held on 23.06.2020 that the State of Bihar would complete its study for reviewing and rationalizing proposed utilization of water under the scheme and submit the same within a period of one month. State of Jharkhand was also requested to review its position and rationalize its water demand from Tilaiya reservoir so that a negotiated settlement could be reached by the Committee.

TAC meetings for CSMRS and CWPRS

36th Meeting of Technical Advisory Committee (TAC) to Governing Council of Central Water and Power Research Station (CWPRS) was held on virtual platform on 24.06.2020 under the chairmanship of Shri R. K. Jain, Chairman, CWC and ex-officio Chairman, TAC to Governing Council of CWPRS, Pune. Dr (Mrs) V. V. Bhosekar (Director, CWPRS), Shri Gulshan Raj (Chief Engineer, DSO & Project Director DRIP II&III), Shri Pramod Narayan (Director, DSR Dte. & Project Director DRIP), Shri Amit Kumar Jha (Director, DSM Dte.), Scientists/Officers of CWPRS and other Organisations/PSUs were present in the meeting.

Similarly, the 35th Meeting of Standing Technical Advisory Committee (STAC) to Governing Council of Central Soil and Materials Research Station (CSMRS) was held on virtual platform on 18.06.2020 under the chairmanship of Dr. R. K. Gupta, Member (D&R), CWC. Shri S. L. Gupta (Director, CSMRS & Member Secretary, STAC), Shri A.B. Pandya (Former Chairman, CWC), Shri Amit Kumar Jha (Director, DSM Dte.), Scientist/Officers of CSMRS and other Organisations/PSUs were present in the meeting.


STAC Meeting for CSMRS

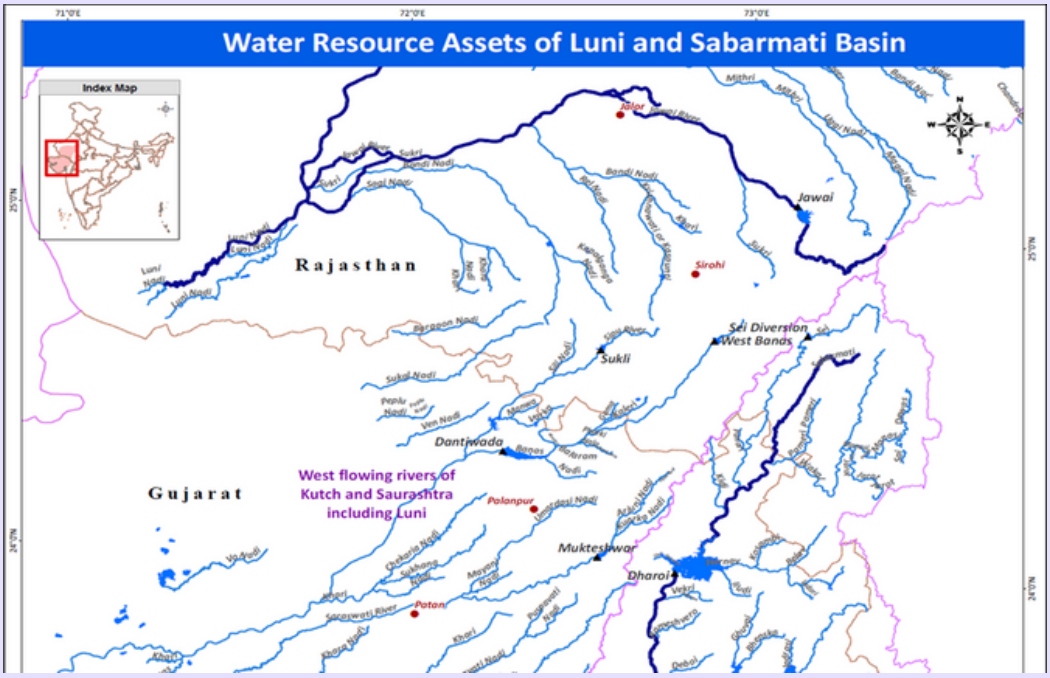
During the meeting, agenda points, follow-up actions on the previous meetings, providing overall perspective and technical guidance, Annual Plan and other expansion proposals, technical activities and achievements, training and manpower development and significant achievements etc. were discussed for the respective institute.

राजभाषा कार्यान्वयन समिति की 140 वीं बैठक

केंद्रीय जल आयोग (मुख्यालय) की राजभाषा कार्यान्वयन समिति की 140 वीं बैठक अध्यक्ष, के.ज.आ., की अध्यक्षता में दिनांक 29-06-2020 को आयोजित की गयी. बैठक में यह बताया गया कि इस तिमाही के दौरान केंद्रीय जल आयोग (मुख्यालय) में धारा 3(3) तथा नियम-5 का पूर्णतः अनुपालन किया जा रहा है और हिन्दी में टिप्पण में भी निरंतर वृद्धि हो रही है. बैठक में हिन्दी में कार्य करने में अधिकारियों/कर्मचारियों को काम करने में आ रही दिक्कतों को दूर करने, केंद्रीय जल आयोग के क्षेत्रीय कार्यालयों के 8 कनिष्ठ अनुवादकों के पदों के रिवाइवल/सृजन इत्यादि के मुद्दों पर चर्चा हुई और अधिक से अधिक कार्य हिन्दी में निष्पादित करने पर बल दिया गया.

Diversion of surplus water of Sabarmati Basin to Jawai Dam

In the new revised project submitted by Govt. of Rajasthan, it is proposed to augment water availability in Jawai Dam by utilizing surplus yield of Sabarmati Basin primarily from Sabarmati and Sei rivers in Rajasthan to cater to the increasing demand of drinking water in the districts of Pali and Sirohi. In earlier submitted proposal, it was proposed to augment water availability in Jawai Dam by utilising surplus yield of Sabarmati Basin from Wakal river also apart from Sabarmati and Sei subbasin rivers in Rajasthan to cater to the demand of drinking water of Jalore district alongwith Pali and Sirohi districts through Jawai Dam. But, Govt. of Gujrat has objected to Govt. of Rajasthan on the revised proposal and the same has been communicated to CWC.

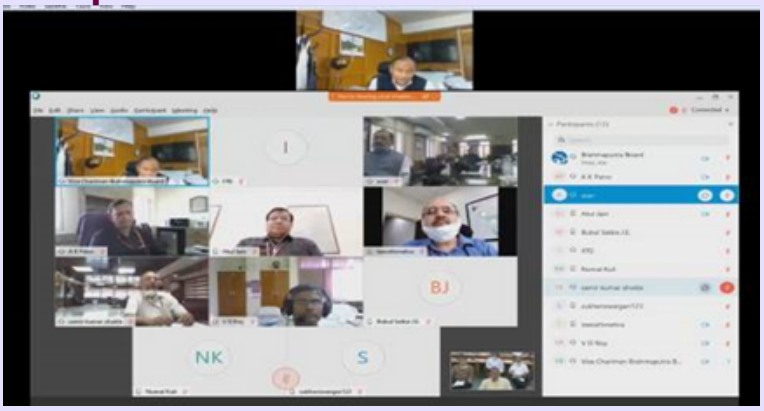


In order to sort out the pending issues of Hydrology and Inter-State matter, a meeting with officers of Govt. of Gujarat and Madhya Pradesh under the chairmanship of Chairman, CWC was held on 26.06.2020 through video conferencing.

In the meeting, it has been decided that full information/data related to original planning vis-à-vis present water utilization for different purposes (i.e. Irrigation, Drinking and Industrial, etc.), CCA, Annually Irrigated Area for Jawai and Dharoi dams may be mutually shared by Govt. of Rajasthan and Govt. of Gujarat respectively and with CWC. Further, details of all the utilizations in the Sabarmati basin in Rajasthan on 10-daily/monthly basis by Govt. of Rajasthan and data of all the utilizations upstream of Dharoi dam in Sabarmati basin in Gujarat on 10-daily/monthly basis by Govt. of Gujrat have to be exchanged by basin states among themselves and also shared with Central Water Commission within a month for further analysis and consideration for settlement of claims of both the states.

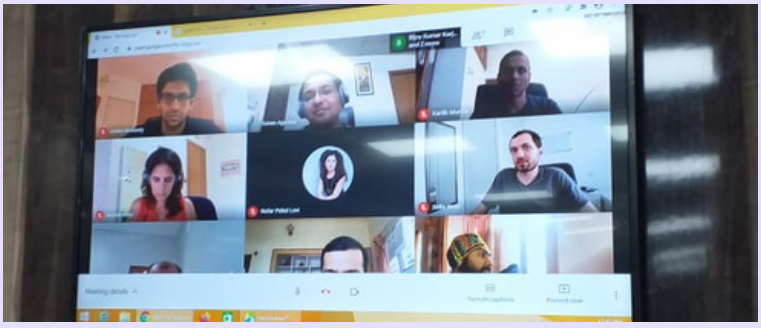
3rd Visit of the Committee on Monitoring of the Scheme –Protection of Majuli Island from floods and erosion of river Brahmaputra

The Members of the Monitoring Committee for the Scheme "Protection of Majuli Island from flood and erosion of river Brahmaputra" undertook a virtual visit to eleven work sites on 09.06.2020. The Presiding Officer of the Committee, Dr. R. K. Gupta, Member(D&R), Central Water Commission welcomed the members for the virtual visit to the various sites of flood protection work. The work is being carried out by Brahmaputra Board under the scheme "Protection of Majuli Island from flood and erosion of river Brahmaputra". A concern about slow progress of the work had been raised and discussions to expedite the works so as to complete them as per the schedule had taken place. Consultant (Technical), Brahmaputra Board briefed the committee with the various component of the scheme and the present status of each item of works through a power point presentation. The overall physical progress of the scheme was reported to be 85% with varying physical and financial progress against the different items.



Meeting with Google Representatives for Flood Forecasting Initiatives

A meeting on Flood Forecasting Initiatives under CWC-Google Collaboration under the Chairmanship of Member (RM), CWC was held on 25.06.2020 with the representatives of Google and CWC officials. Google team informed that inundation alerts have been scaled up from 7 sites covering an area of 11,600 sq. Km in the monsoon season of 2019 to 35 sites in all-over India covering an area of 37000 sq. Km in current Monsoon Season. Inundation maps as well as CAP (Common Alerting Protocols) are being provided for 35 out of 197 Flood forecasting sites of CWC and for the remaining FF sites, only CAP alerts are being generated. A total 4.4 Lakh flood alert notifications have been generated in this monsoon season. A partner notification system is also incorporated in the alert.



Meeting for Feasibility report on Dam Safety Measures of Gandhi Sagar Dam

A meeting was held on 12.06.2020 in CWC to discuss the feasibility report on Dam safety measures of Gandhi Sagar Dam prepared by CMDD (N&W), CWC. The Meeting was chaired by Dr. R. K. Gupta, Member(D&R), CWC.

The Gandhi Sagar Dam which is located in Madhya Pradesh and was commissioned in the year 1960, can pass a maximum discharge of 13705 cumecs (4.84 lakh cusec). The design flood was revised by CWC in the year 2000 and the finally recommended PMF contains a peak value of 54390 cumecs.

The following three options were exercised for flood moderation to accommodate recommended PMF:

- Pre-depleting the project reservoir
- Providing additional spillway capacity of 5000 cumecs by the construction of additional tunnels
- Raising the dam top by 2.0 m

Dam Rehabilitation and Improvement Project (DRIP)

Review Meetings to monitor the progress of preparatory activities for DRIP Phase II and Phase III

Virtual meetings were held during 4-10th June 2020 to review the Project Readiness of DRIP Phase II & Phase III with representatives from Karnataka WRD, Tamil Nadu WRD, TANGEDCO, Gujarat WRD, Meghalaya PGCL, Maharashtra WRD, Chhattisgarh WRD, KSEB & Kerala WRD and MPWRD) under the Chairmanship of Secretary, DoWR, RD & GR. Meetings were attended by Chairman, CWC, Additional Secretary, DoWR, RD&GR, Member(D&R), CWC, Principal Secretaries of the State, CPMU, SPMU and World Bank officials.

Virtual meetings to determine the strategies and way forward for starting postgraduate programmes in dam safety management and establishment of Centres of Excellence

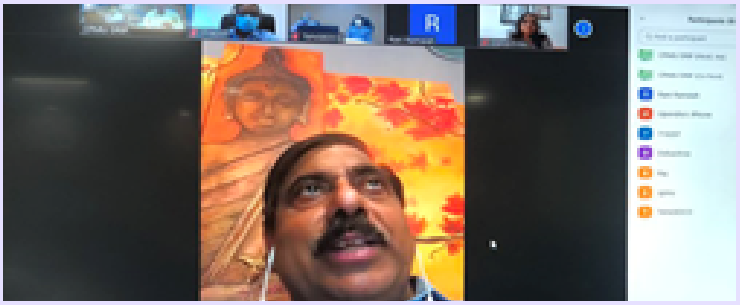
Online video meeting was held with IISc Bengaluru on 10.06.2020 under the Chairmanship of the Additional Secretary, DoWR, RD&GR, Ministry of Jal Shakti to determine the strategy for the introduction of Postgraduate Programme on Dam Safety Management and establishment of a Centre of Excellence in Dam Engineering. This is the 3rd meeting in the series after the meetings for this purpose held with IIT Roorkee and IIT Madras in May 2020.

Virtual Tripartite Portfolio Review Meeting of Projects assisted by the World Bank

A Virtual meeting organised by DEA, Ministry of Finance was held on 17.06.2020 to review the progress of ongoing DRIP and other externally aided projects. The meeting was attended by officials of DEA, CPMU and World Bank. Extension of ongoing DRIP and surrender of $79M was suggested during the meeting.

Training Programmes

IIT Roorkee organized two online training programmes on Sustainable Tourism Development in Existing Dams. Trainings on "Theoretical Understanding of Sustainable Tourism Development in Existing Dams" and "Sustainable Tourism Development in Existing Dams in India - Case studies" were held during 18-20th June 2020 and 22nd-23rd June 2020 respectively. IIT Roorkee also organized a virtual tour of the Virtual Reality Lab developed by IITR under DRIP. 17 no of participants from different states attended these training programs.

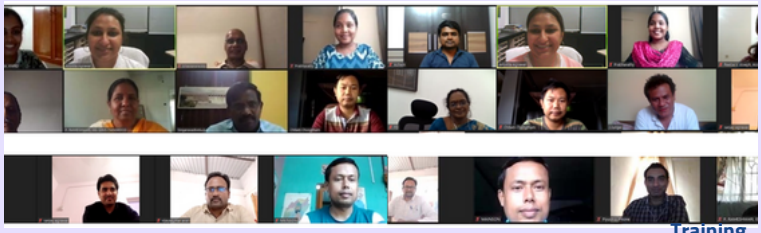


Virtual Tripartite Pipeline Review Meeting of DRIP Phase II & Phase III by DEA

A Virtual meeting organised by DEA, Ministry of Finance was held on 10.06.2020 to review the preparedness of DRIP Phase II & Phase III and other externally aided projects. The meeting was attended by officials of DEA, CPMU and World Bank. Deliberations were held on anticipated date of Loan Negotiation meeting for new DRIP Phase II & Phase III based on the status of various state agencies with regard to their fulfilment of Project Readiness Criteria as per DEA.

Virtual Pre-REOI Consultation Meeting for hiring of Engineering and Management Consultancy firm for DRIP Phase II and Phase III

Virtual Pre-REOI Consultation Meeting for hiring of Engineering and Management Consultancy firm for DRIP Phase II and Phase III was held on 29.06.2020 with prospective bidders under the chairmanship of CE, DSO & Project Director, DRIP Phase II & Phase III. The meeting was attended by representatives of 25 consultancy firms and CPMU officials. Deliberation was done on clarifications desired by prospective bidders in respect of EoI published on 22.05.2020.



Training

IMCT Visit in WB/Odisha in view of Amphan

Extremely severe cyclonic storm 'AMPHAN' crossed West Bengal-Bangladesh coasts between Digha (West Bengal) and Hatiya (Bangladesh) near Sundarbans on 20.05.2020 with a wind speed of 155-165 kmph. It caused considerable damage in the coastal states.

Seven Member Inter-Ministerial Central Team (IMCT) lead by Sh. Anuj Sharma, JS, MHA visited affected areas on 05.06.2020 for on spot damage assessment in the State of West Bengal. IMCT also visited breaches in earthen embankment in Sunderban area. Shri Sidhartha Mitra, Director, CWC, Kolkata was one of the members of this Team.

Similarly, IMCT to assess the damage caused by Cyclone Amphan in Odisha visited the affected areas viz. coastal districts Kendrapara, Jagattsingpur, Bhadraka & Balasore of Odisha during 4-5th June, 2020. Shri Amrish Pal Singh, SE(Coordination),CWC, Bhubaneswar was a member of Central Team.

Review of projects in Krishna & Godavari Basins

A meeting was held on 23.06.2020 under the Chairmanship of Hon'ble Minister of Jal Shakti to discuss the status of projects of AP and Telangana in Krishna & Godavari Basin being taken up unilaterally by the States of AP and Telangana. Chairman, CWC and Member(WP&P), CWC along with Shri Sriram Vedire, Advisor, DoWR,RD&GR and other senior officers of CWC, KRMB, GRMB attended the meeting.

As per Andhra Pradesh Reorganisation Act 2014, Apex Council is entrusted with the final approval of new projects on Krishna, Godavari Basin after getting the project appraised by the Krishna / Godavari River Management Boards & CWC. During presentation made by CWC and further clarification by Chairman GRMB/KRMB, was indicated that 34 projects (23 in Krishna + 11 in Godavari Basin) are proposed/under execution in both the States.

Most of these project proposals (DPR) have not been shared or approved by CWC/ respective Boards.

In this meeting, it was noted that KRMB & GRMB have already directed both the States to submit the DPRs for appraisal and technical clearance by the KRMB/GRMB and Central Water Commission (CWC) for final sanction of Apex Council. Boards have also directed the respective Governments not to go ahead with new projects across the inter-state rivers till the projects are appraised and sanction obtained from the Apex Council. State Govt. should immediately stop the ongoing work in these Projects.

In the meeting, it was also suggested to convene the meeting of Apex Council as soon as possible.

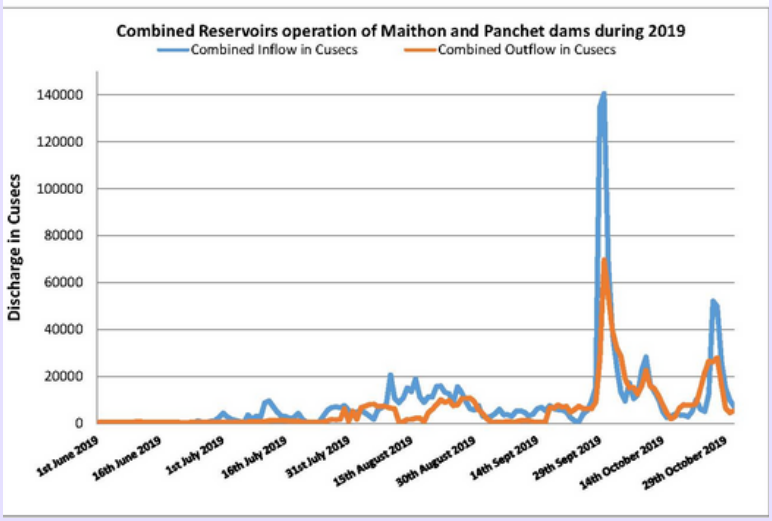
142nd meeting of DVRRC

The 142nd meeting of Damodar Valley Reservoirs Regulation Committee (DVRRC) was held through Video Conferencing on 12.06.2020 under the Chairmanship of Shri R. K. Sinha, Member (RM), CWC and Chairman, DVRRC.

In the meeting, various matters were discussed and decisions were taken. Some of the discussion points are enumerated below.

- Integrated Operation of various DVC reservoirs
- Fringe area survey for Tenughat Reservoir above 852 Ft.
- Improvement in the carrying capacity of Lower Damodar Channel to pass atleast 2.5 lakh cusecs
- Issues related to proposed Balpahari Dam
- Water accounts for municipal & industrial users from Damodar Barakar basin
- Introduction of Online Water Allocation Application System
- Model study of Durgapur Barrage pond and structural rehabilitation work of Durgapur barrage
- Desiltation Work of Water Supply Canal from Durgapur Barrage
- Repair of Gates of Durgapur Barrage
- Review of reservoir operation carried out during monsoon season of 2019

The performance of flood moderation for Maithon and Panchet reservoirs and the record storage in these reservoirs during monsoon 2019 was appreciated by the committee members.



Flood Situation in the Country

Central Water Commission (CWC), through its field divisions, collects hydrological and hydro-meteorological data on real –time basis during the flood season every year. Using these data, flood/inflow forecasts are formulated for 325 locations (197 Level and 128 Inflow Forecast Stations) and disseminated to various user agencies through Fax/e-mail/SMS and Website. In addition to the data collected from the network of CWC stations, the meteorological data and Quantitative Precipitation Forecast (QPF) received from India Meteorological Department are also utilised in formulation of flood forecast.

Regular Flood Forecasting Activity commenced on 01.05.2020 in Brahmaputra and Barak basins. During the period from 1st May to 30th June 2020, 1284 flood forecasts (1190 Level and 94 Inflow) were issued, out of which 1206 (1175 Level and 31 Inflow) forecasts were within limit of accuracy with a percentage accuracy of 93.92%. 157 nos. of Orange Bulletin (for severe flood situation) and 48 number of Red Bulletin for Extreme Flood Situation were issued in the month of June from Central Flood Control Room till 30th June.

Extreme Flood Situation

One FF station observed Extreme Flood Situation during June 2020. 3 Flood Monitoring Stations observed Extreme Food Situation.

Sl. No	State	District	River	Station	Type of Station
1.	Assam	Sivasagar	Dikhow	Sivasagar	Flood Forecasting
2	Assam	Kamrup	Puthimari	Suklai	Flood Monitoring
3	Bihar	Kishanganj	Mahananda	Moujabadi	Flood Monitoring
4	Uttar Pradesh	Maharajganj	Chandan	Thoothibari	Flood Monitoring

Severe Flood Situation for FF Stations

29 FF Stations observed Severe Flood Situation in the States of Assam, Bihar and Odisha during the period 01.05.2020 to 30.06.2020.

Above Normal Flood Situation

20 FF Stations in Arunachal Pradesh, Assam, Bihar, Uttar Pradesh and West Bengal observed Above Normal Flood Situation during the period 01.05.2020 to 30.06.2020.

Inflow Forecast

18 reservoirs received inflows above threshold limit during the period from 01.05.2020 to 30.06.2020.

4th Meeting of WRD 27

4th meeting of WRD 27 was held on 05.06.2020 through video conferencing to discuss the status of Handbook for water resource management. The Meeting was chaired by Shri N.K. Mathur, Former Member (D&R, CWC). Other participants were officers from CWC, BIS, CWPRS, IMD and National Institute of Hydrology to provide their input and discuss the various aspects of handbook.

As water sector is spread over numerous stake holders with multidisciplinary nature of work and the importance of the sector is increasing day by day, such handbook will prove to be a power-full tool for the various professionals, contractors, authorities, NGOs etc. This handbook will act as a single book reference for all the professionals.

In the meeting, it was decided to develop the handbook including environmental aspect, management aspect such as how to manage flood, drought, dams etc. Subsequently, it was decided to come out with Approach Paper which will include the broad outline of the chapters and content analysis which will be part of the handbook, study the existing available published standard of BIS to avoid duplicity and overlapping, identifying the topics/subjects to be included in the handbook.

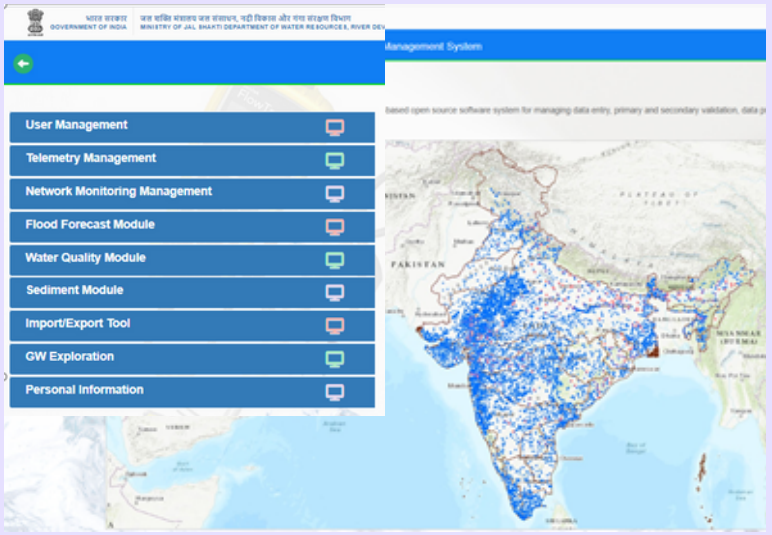
Water Information Management System (WIMS)

During the Hydrology Project-I, Central Water Commission had developed suites of software packages viz. Surface Water Data Entry System (SWDES), Hydrological Modelling Software (HYMOS) and Water Information System Data Online Management (WISDOM). These softwares were primarily used for data entry, primary and secondary data validation, data processing, data storage and dissemination of Hydro-meteorological data. The application software was developed in a stand-alone environment and in the client server environment, integrating GIS, database and various systems software to provide client applications and a limited web service. Out of these, HYMOS software was the proprietary software.

To overcome the drawbacks which were encountered during the running of above softwares, Central Water Commission has developed Online Surface Water Information System (e-SWIS) software under the Hydrology Project-II (HP-II). e-SWIS, (web and GIS-based Surface Water Information System) implemented in participating Agencies in Hydrology Project II, and potentially in all States and UTs of India. The main objectives of development of the new software was to replace obsolete components of existing software, improve its system architecture and add some new components

The Central Water Commission and other Implementing Agencies operate an extensive network of hydrometric and hydro-meteorological measurement stations from which data on climate, river flows and water quality are collected. Moreover, seeing the importance of Integrated Information system with the concept of centralized database with widened scope of data collection, due to increase in nos. of agencies under National Hydrology Project-NHP, Internet enabled surface water information system (e-SWIS) has been upgraded to Water Information Management System (WIMS).

Water Information Management System (WIMS) software is an upgradation and extension of e-SWIS software. WIMS is a web-based open-source software system for managing data entry, primary data validation, data processing, storage for Surface Water and Ground Water Resources. WIMS stores all the information of station for both station type (Surface Water/Ground Water) based on agencies. Earlier in e-SWIS software, the Groundwater module functionality feature was not present, but in WIMS Software, Ground Water module functionality is implemented and Ground Water station data can feed on Ground Water Module. The user Management Module is the most important module and it can be managed by their Nodal Agency in WIMS.



Another feature of WIMS is Telemetry Management in which Live data from INSAT & GPRS are received.

The benefits of WIMS software are as under:

- Based on web applications
- Surface as well as Ground Water data is feeded into WIMS
- Telemetry Management
- Data from State and other implementing agencies coming to WIMS
- Inclusion of Flood Forecasting and Water Quality Management
- Easy access to information
- Automatic backup procedure
- Complete security control over data and functionality
- Data can be entered from anywhere
- Data access will be controlled and restricted to authorized users
- Data Integration is automatic and there is no need to physically send the data for central depository
- Data can be exported in various useful format like MIKE-11, Excel, Water year Book

Virtual Monitoring of Shahpurkandi Dam

Shahpurkandi Dam Project is being constructed on River Ravi 11Km downstream of Ranjit Sagar Dam and 6 Km upstream of Madhopur headworks to provide a balancing reservoir to ensure optimum utilization both for Irrigation in the canal system taking off from Madhopur Headworks & Ravi Canal (J&K) and Power generation at Ranjit Sagar Dam Power House.
The project was declared as National Project by Govt. of India in Feb., 2008. The revised cost of the project was approved by the Advisory Committee of DoWR, RD & GR, MoJS on Irrigation, Flood Control & Multipurpose Projects in its 138th meeting held on 31.10.2018 for ₹2715.70 Crore (PL Feb, 2018). On completion of the project, an area of 5000 ha in Punjab State and 32173 ha in J&K State would be benefitted. Further, 1.18 Lakh ha area under Upper Bari Doab Canal (UBDC) system shall also be stabilized.

The project comprises of construction of 55.5 m high concrete dam with 22 bays of 12m each clear span (spillways), 7.70 km. long Hydel Channel designed for a discharge of 385 Cumecs (13591 cusecs) along the left bank of river; 2 Nos. Power Plants of total 206 MW capacity (2X3X33MW + 08MW) and 2 No. Head Regulators (One to feed Shahpurkandi Hydel Channel (Punjab) and other to feed the Ravi Canal (J&K)).

During the year 2019-20 & 2020-21, Central Assistance amounting to ₹60.00 Crore & ₹59.529 Crore respectively, have been released by Central Govt. Further, as reported by State Govt, expenditure to the tune of ₹1097.24 Crore till 31.05.2020 has been made by them on the project.

Virtual Visit / Meeting of the Implementation Committee

The third meeting (virtual) of the Monitoring Committee constituted vide MoWR, RD & GR Order No. P-12014/1/2015-SPR/7202-7214 dated 14th December, 2018 to oversee / monitor the implementation of the Shahpurkandi Dam (National Project) on river Ravi in Punjab and other works was held under the Chairmanship of Member(Water Planning & Projects), Central Water Commission on 15.06.2020.

During the virtual visit, a short video film made through Drone was shown highlighting the works undergoing in main dam section, fabrication yard, Hydel Channel Head Regulator, Ravi Canal Head Regulator, alignment of Ravi canal, Sukhral Khad etc. Thereafter officials located at these key points in the Shahpurkandi Dam project explained the progress of the works. Necessary directions were given for expediting the works.

Shatoot Dam Project, Afganistan

Lalandar (Shatoot) Dam Project is proposed to be constructed with the main objective of providing WHO standards compliant domestic water supply of 85 MCM per year to Kabul City, the capital of Afghanistan from the Maidan River (a tributary of Kabul River falling in the Indus basin). The water stored in the dam will be conveyed to the Water Treatment Plant (WTP) of capacity of 4m3/s through a pipeline of 8,454 m. In addition to the domestic water supply, the existing water rights of the farmlands irrigated by Maidan River will be retained and a cultivated area of 1843 Ha (net) will be irrigated with 40% irrigation efficiency which stands at 28% at present.

The proposed project envisages construction of an earth and rock-fill dam with a clay core, Water Treatment Plant (WTP), pipeline between dam and WTP, access road and office buildings and rehabilitation of existing irrigation/ drainage networks. The dam is located at 11 km south-east of Kabul city. It will be 92 m high, 500 m long near crest, 10 m wide at crest and 354 m wide at bottom. Spread over 420 hectares, the reservoir is expected to have a total volume of 146 million cubic meters (MCM). Diversion system envisages construction of two tunnels designed for 25 year flood at right bank, and an ungated spillway on the right abutment to pass flood waters.

58th UYRB meeting

The 58th meeting of Upper Yamuna River Board (UYRB) was held on 16.06.2020 under the Chairmanship of Shri S. K. Haldar, Member(WP&P) and Chairman, UYRB through video conferencing. The representatives from the six Basin States/UT viz. NCT of Delhi, Haryana, Rajasthan, Uttar Pradesh, Uttarakhand and Himachal Pradesh along with the officials from UJVNL, HPPCL, CWC, CEA, CGWB and CPCB participated in the meeting. Shri D. P. Mathuria, Member Secretary, UYRB and Shri Rahul Varshney, Deputy Directorr, UYRB also participated in the meeting.

The main issues discussed in the meeting were short supply of Yamuna Water to Rajasthan from Okhla, progress of three National Projects on upstream of Yamuna viz. Lakhwar, Kishau and Renukaji, pollution at Wazirabad and Agra Canal.

The agenda points discussed were as below:

1. Short supply of Yamuna water to Rajasthan from Okhla headwork
   (a) Installation of Telemetry System
   (b) Complaints of theft
2. Utilization of Yamuna water U/s of Tajewala
3. Implementation of Storage Projects in Upper Yamuna Basin
   (a) Renuka Project
   (b) Kishau project
   (c) Lakhwar-Vyasi project
4. Water quality issues
   (a) Pollution of Yamuna raw water at Wazirabad
   (b) Status of Interceptor Sewer Scheme for Yamuna River
   (c) Status of schemes for Gurgaon Feeder Canal and Agra Canal

5. Construction of building on plot of land of UYRB at NOIDA
6. Raw water augmentation by utilization of effluent as raw water source for NCT of Delhi
7. Substitution of 51 cusec of irrigation component of Delhi at Auchandi and Jaunti Regulator in lieu of release of 51 cusecs in DSB at Munak
8. Utilization of Himachal's share of un-utilized Yamuna water by Delhi.
9. Administrative Reforms of UYRB
10. Non-payment of share by Uttar Pradesh towards construction of Hathnikund Barrage
11. Annual Reports of UYRB

Fruitful discussions were held on the above agenda points to sort out the issues involved amicably, specially the pollution issue as well as Raw water augmentation by utilization of effluent as raw water source for NCT of Delhi.

Training

Training Organized by NWA, CWC, Pune

Sl. No.	Topic of Programme	Date	Venue	Participants
1	Training on "Drainage & Watershed Delineation and Jurisdiction Demarcation using GIS"	26.05.2020 to 05.06.2020	DL mode	24 Participants
2	Training on "Project Hydrology"	01.06.2020 to 14.06.2020	DL mode	62 Participants
3	Mandatory Cadre training Programme for Junior Engineers, CWC (Batch-1)	15.06.2020 to 10.07.2020	DL mode	50 Junior Engineers of CWC
4	Training on "Data Collection at Hydrometeorological site"	15.06.2020 to 26.06.2020	DL mode	497 Officers of CWC & Ministry
5	Training on "Water Resources Sector in India for School Teachers"	22.06.2020 to 24.06.2020	DL mode	294 School Teachers of Maharashtra
6	Induction Training Programme for Junior Engineers-CWC	22.06.2020 to 17.07.2020	DL mode	67 Junior Engineers
7	Training on "Water Resources Sector in India for School Teachers"	29.06.2020 to 01.07.2020	DL mode	164 School Teachers of Maharashtra
8	Training-cum-Workshop on ePAMS (Project Appraisal Management System)	30.06.2020 to 02.07.2020	DL mode	200 Participants from Central and State Govts

Data Corner

Quantum of water to be ensured at Billigundulu site of CWC in a Normal year in the light of Judgement of Hon'ble Supreme Court in Cauvery Water Dispute

Sl. No.	Month	(in TMC)	Sl. No.	Month	(in TMC)
1	June	9.19	7	December	7.35
2	July	31.24	8	January	2.76
3	August	45.95	9	February	2.5
4	September	36.76	10	March	2.5
5	October	20.22	11	April	2.5
6	November	13.78	12	May	2.5
				Total	177.25

Apex Committee meeting under the chairmanship of Chief Minister, Delhi

The Meeting of the Apex Committee to review the Flood Control Measures, desilting of drains, availability & functioning of pumping stations, action plan for vulnerable points etc. in the National Capital Territory of Delhi was held on 26.06.2020 under the Chairmanship of Hon'ble Chief Minister, Delhi through VC. It was attended by Shri R. K. Sinha, Member(RM), CWC and other officials from FMO.

Right Bank Slope Stabilisation Issue of Shongtong Karcham HE Project, HP

Shongtong Karcham HEP (450MW) is proposed to be a ROR project on River Sutlej in Himachal Pradesh. Construction of other components of water conductor system such as intake, desilting chamber, head race tunnel, surge shaft and powerhouse complex are in advanced stage. However, the project is currently facing a time lag due to slope stability issue of right bank along barrage axis. High creep movements observed in this location has mandated to go for a strengthened barrage complex in conjunction with special slope stabilisation measures that will ensure safe transfer of creep load from right bank to stable and sound left bank.

The proposal prepared by M/S HPPCL through M/s AF Consultant, the design consultant, has been examined in details in CWC. Accordingly a

meeting with design consultants was also held in CWC to discuss the analysis carried out. The observations of CWC on the design reports have been conveyed to M/s HPPCL on 12.06.20 and it has been asked to re-submit the studies after considering CWC's observations.

Water Sector News

- Mission Bhagiratha ends drinking water woes (Telangana Today, 02.06.2020)
- Rains lash Kerala; orange alert issued (Asian Age, 03.06.2020)
- Cyclone Nisarga kills 4 in Maha, over 75,000 moved to safety (Deccan Chronicle, 04.06.2020)
- Almatti gets first inflows of season, 12.7k cusecs flows into dam (Deccan Herald, 06.06.2020)
- NHPC carries out in-house Teesta Dam CIS repair (The Statesman, 08.06.2020)
- Drinking water to all villages by July (Telangana Today, 11.06.2020)
- Country has received nearly 34% excess rainfall so far (Deccan Herald, 14.06.2020)
- Rs. 82.7 cr approved for Mission Bhagiratha (Telangana Today, 20.06.2020)
- 7 lakes, dams in Mumbai have water for just 42 days (The Hans, 23.06.2020)
- Flood-like situation in North-east after monsoon rainfall (Hindustan Times, 30.06.2020)

History-Kota Barrage

Kota Barrage is standing beside the old and impressive Garh Palace. It was part of Rs. 90 crore Chambal Multipurpose Project which included various other components. Designed to irrigate 0.56 Million ha of fertile lands in Rajasthan and Madhya Pradesh, canals take off immediately upstream of the Barrage on its right and left flanks. The construction of this Rs. 3.8 crore structure presented a formidable task with constructional problems probably nowhere encountered in India.

Interest in Chambal

The Chambal is the largest river of former Madhya Bharat and Rajasthan, and has a very large potential for development of Irrigation and hydro-electric power for use in both the States. After Independence and the formation of the States of Rajasthan and Madhya Bharat, a comprehensive Plan for the development of the Chambal was drawn up under the guidance of the Central Government for joint execution by the two States, who were to share the benefits on practically fifty-fifty basis. Under this scheme importance was given to both Irrigation and Power development, and the proposal for constructing a barrage across the Chambal in Rajasthan with a canal system was included in its first stage along with the Gandhi Sagar storage-cum-power dam. The Kota Barrage has many unique features. The project was designed under the guidance of then Central Water Power Commission (CWPC). It was probably for the first time in India that an earth dam, nearly 37 m high, was successfully built on highly pervious foundations. The technique of clay- grouting, not previously tried in India, was also employed here. The barrage can also boast of the largest size of spillway radial gates, designed, manufactured and erected completely by Indian engineers at that time. The raising of the Earth Dam over with 8.5 lakh cu m of earthwork and rock-fill, in only three months gave new confidence to Indian engineers, who can hope that bigger tasks can also be completed by careful planning. It was completed in the year 1960. The successful completion of the Kota Barrage with its canal system ensured prosperity to a large population in Rajasthan and Madhya Pradesh, who had assured irrigation facilities for over 8 lakh ha of fertile lands. The areas coming under irrigation by the Canal System raised the country's annual food output by nearly half a million tons and which appreciably helped in easing the food shortage in the country.

KOTA BARRAGE

Features at a Glance

LOCATION	Near Kota City in Rajasthan, across the Chambal River
TYPE	Earth, masonry, concrete
HEIGHT	37 m above foundation
LENGTH	522 m
CANALS	About 373 km on right, [130 km (81 ml) in Rajasthan and rest in Madhya Pradesh], and about 3.2 km on the left, with two branches each of 64 km in Rajasthan.
QUANTITY	Total rock cutting : 0.12 Million m^3
BARRAGE	Concrete : 0.06 Million m^3 Masonry : 0.07 Million m^3
CANALS	Concrete and Masonry : 0.57 Million m^3 Earthwork : 20.4 Million m^3
BENEFITS	Irrigation : 5.6 lakh ha (ultimate)
COST	Rs. 3.83 Crore

Central Water Commission

An attached office of Dept. of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Govt. of India

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Water Systems Engineering Directorate
Central Water Commission

2nd Floor(South), Sewa Bhawan, R K Puram, New Delhi-110 066
E-mail: media-cwc@gov.in