



# JALANSH

The Monthly Newsletter of Central Water Commission



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R. K. Jain  
Chairman

### Message

The first two months of Monsoon witnessed contrasting trend with surplus rainfall in the month of June and deficient in July at the country level. However, during the month of August, country received copious rainfall breaking the record of several decades. As per the live storage available in 123 reservoirs monitored by CWC on weekly basis as on 27.08.2020, the water availability in these reservoirs is 2% more than the previous year and it is also about 19% more than the last ten years average storage. At agriculture end, as per August data, sown area of Kharif crop was about 7% more than the previous year.

High intensity rainfall events caused flood situation in various parts of the country. During the month of August itself, rivers at 18 sites of CWC crossed their previous recorded Highest Flood Level (HFL). Seventeen States in the country namely States of Arunachal Pradesh, Assam, Bihar, Odisha, Uttar Pradesh, West Bengal, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Uttarakhand, Andhra Pradesh, Telangana, Kerala, Karnataka,

Chhattisgarh and Gujarat have witnessed severe to extreme flood situations during the period from May to August this year. CWC field units are regularly monitoring the flood situation in each river basin.

To review the flood situation and flood preparedness in the country, Hon'ble Home Minister Shri Amit Shah held a meeting at MHA on 03.07.2020. Shri U. P. Singh, Secretary, DoWR, RD&GR, myself and other senior officers of Ministry and CWC participated in the meeting. During the meeting, I made a presentation on the flood situation, various Flood Management activities in the country including details of structural /non-structural measures for Flood Mitigation, Integrated Reservoir Operation (IRO), major storage projects proposed for flood mitigation in Ganga and Brahmaputra Basins etc.

I held extensive review meetings with officers of our Regional Offices during the month. Matters such as updating the database for Major and Medium Irrigation (MMI) projects, compilation of state-wise data for UIP, IPC & IPU, installation and functioning of telemetry on CWC sites and on reservoirs monitored by CWC, activities related to flood forecasting and hydrological observation, infrastructure development, survey and investigation etc. were discussed. Necessary guidance was also issued to Regional Offices on above matters.

During the month, CWC also had interaction with private sector representatives to know their capabilities in the field of water sector to have better water management system in the country.

NITI Aayog has invited the Ministry of Jal Shakti to collaborate in development of the third round of the CWMI (CWMI 3.0) with the reference year 2018-19. CWC is actively associated in refining the Key Performance Indicators (KPIs).

Various discussions/meeting were attended by CWC officers on the ongoing/proposed projects such as North Koel, Adi-Badri, Polavaram, Kishau, Dagmara etc.

It is heartening to note that National Water Academy, Pune has tackled the challenges posed due to COVID-19 situation in a very effective manner and increased its training activity/outreach manifold during current financial year by utilizing distance learning/IT tools. One of the most successful training programmes conducted was for school teachers to give them overview of water sector of India. More than two thousand school teachers have been benefitted through these programmes. I hope that they would pass on the knowledge gained to the budding students which will go a long way in developing water-informed citizens in future.

*Pravin*



Ongoing SMI Projects in Himachal Pradesh under PMKSY

## Meeting taken by Hon'ble Home Minister to review the preparedness for tackling the flood situation

A review meeting was held under the Chairmanship of Hon'ble Home Minister on 03.07.2020 to review the preparedness for tackling the flood situation in all river basins of the country. Shri U. P. Singh, Secretary, DoWR, RD&GR, Shri R. K. Jain, Chairman, CWC, Smt. Debashree Mukherjee, Additional Secretary, DoWR, RD&GR, Shri Atul Jain, Commissioner(FM), DoWR, RD&GR and Shri Sharad Chandra, Director(FFM), CWC participated in the above meeting from Ministry of Jal Shakti. In the meeting, a presentation was given by Chairman, CWC on Flood Management in India including details of structural/non-structural measures for Flood Mitigation, Integrated Reservoir Operation (IRO), major storage projects proposed for flood mitigation in Ganga and Brahmaputra Basins etc.

**The main action points which emerged during the meeting were as follows:**

1. to develop a well planned scheme to reduce flooding and minimize the loss to property and lives.
2. better coordination between agencies to have a permanent system for forecasting of floods and rise in water levels in major catchment zones/areas of the country.
3. to take up measures to provide permanent solutions to perennial flood problems in the states of Bihar and Uttar Pradesh and North Eastern States.
4. to review and assess the storage of dams with a view to ensure timely release of water and thereby prevent of floods.
5. to issue advisories/ early warning to States based on the assessment of rainfall in catchment areas.

**Action Taken Note has also been submitted to the Ministry of Home Affairs (MHA) covering following salient details:**

1. CWC is presently issuing Flood Forecast at 327 locations (198 level + 129 inflow) in various states
2. CWC maintains close liaison with all stake holders including the State Disaster Management Departments/Irrigation/Flood Control Departments and all project authorities.
3. Structural Measures especially Dams cater to long term solution of flood problems.

## Dagmara Multipurpose Project

Dagmara Multipurpose Hydropower project is proposed to be developed as a run of the river scheme for power generation across Kosi River in Bihar State. It envisages utilization of water flows in Kosi River, for power generation, flood control and other benefits. Project envisages construction of an earthen dam and concrete barrage across the Kosi River with fully gated spillway and two surface powerhouse. The reservoir of the project spreads within the two existing embankments till about 15 km from the proposed barrage at chainage 31 km on eastern embankment within Indian Territory. Proposed structure is about 31 km on downstream side from the existing Kosi Barrage and Indo-Nepal border. The Barrage site is proposed near village Old Bhaptiahi on left bank and village Dudhaila on right bank of Kosi River in Supaul district of Bihar.

DPR of the project was cleared in 2013 however TEC could not be done due to cost issues. Now, comments regarding the revised layout have been issued by CWC in May 2020. A meeting (online) to discuss various aspects of present layout was held under the chairmanship of Shri R.K. Singh, Hon'ble MoS (IC) for Power and New & Renewable Energy on 10.07.2020.

## Meeting taken by Secretary, DoWR, RD&GR through VC to discuss and finalize comments on the existing KPIs of CWMI

Keeping in view the growing water crisis, the National Institute for Transforming India (NITI) Aayog has developed the Composite Water Management Index (CWMI) to enable effective water management in Indian States. The CWMI consist of 09 themes to fully capture the performance of States with respect to Water Management which is further divided into 28 Key Performance Indicators (KPI).

The CWMI Version-1 was released in year 2018 which was based on water data from both central and state sources for two years viz. FY 15-16 and FY 16-17. The CWMI Version-2 was released in August, 2019 based on the data for performance in FY 17-18, which successfully carried forward the initiative of the first round and enhanced the Key Performance Indicators (KPIs). CEO, NITI Aayog invited Ministry of Jal Shakti to collaborate in development of the 03rd round of the CWMI (CWMI Version 3.0) with



4. CWC also takes up sedimentation surveys by both i.e. hydrographic survey and remote sensing based surveys methods. CWC is compiling the status of siltation in 369 important/ major reservoirs in the country and shall bring out the compendium on siltation of reservoirs shortly.
5. CWC has selected about 10 rivers with dams and IMD will provide rainfall warning to CWC for a month based on which the assessment of flow can be made for a month in advance. Work on this activity has started in consultation with IMD.
6. For regulated basins, better flood management is possible with IRO. The development of Decision Support System (DSS) for integrated operation of reservoirs has been conceptualised for 8 major basins i.e. Ganga, Godavari, Krishna, Cauvery, Mahanadi, Mahi, Tapi, and Subernarekha. Mainly Large Reservoirs have been included which have significance to moderate floods.



A team of CWC officers led by Dr. R. K. Gupta, Member(D&R), CWC attended the same. Representative of Govt. of Bihar gave a presentation about the project proposal. Key aspects of project layout such as two powerhouse complexes and de-silting arrangements were discussed by Chief Engineer, Designs(N&W), CWC during the meeting.

reference year 2018-19. CWC provided the draft observations to D/o WR, RD & GR on the existing Key Performance Indicator (KPIs) of Composite Water Management Index (CWMI) Report version 2 and suggested modifications for CWMI version 3.

On 03.07.2020, Secretary (WR, RD & GR) held a video conference (VC) to discuss and finalize the points to be included in the final Document by NITI Aayog prior to commencement of development of CWMI 3.0. The meeting was attended by Chairman, CWC, DG, NMCG, Member(WP&P), CWC, Chairman CGWB, Director NIH, Commissioner(SPR), DoWR, RD&GR, Chief Engineer(BPMO), CWC, Director BP-II Dte., CWC and several other officers. Based on the discussions held in the meeting, more refined and consolidated suggestions on the KPI have been sent to DoWR, RD & GR in July 2020.

## Meeting taken by Secretary, DoWR, RD&GR regarding Water Quality of Rivers

A meeting was held under the Chairmanship of Secretary, DoWR, RD&GR through video-conferencing on 20.07.2020 on "Water Quality Activities in India" to discuss the following points:

1. Presentation on Water Quality Activities being carried out by each organization.
2. Data collection, its dissemination and sharing
3. Future needs of water quality monitoring networks
4. Way forward

Secretary, DoWR, RD & GR, in the opening remarks briefly mentioned the decision taken in the meeting chaired by Hon'ble Minister, MoJS on 10.04.2020 on the necessity of more mutual interactions and cooperation among organizations working in water quality field. He emphasized on moving towards real time monitoring and taking action on improving quality of water resources in India. Thereafter, presentations were made by CWC, CGWB, NMCG, NRCD, NIH AND NWIC.

After detailed deliberations, following instructions / directions were given by Secretary, DoWR, RD&GR:

- The NABL accreditation of remaining 11 labs should be expedited by CWC.
- Proposed 464 new WQ stations may be established by CWC under the existing DWRIS scheme. The expenditure in the ongoing DWRIS scheme is

still within approved amount mentioned in EFC memo and the observation of water quality parameter is not a new work but a continuing activity of CWC. The existing infrastructure of CWC at 277 sites (out of 464 proposed sites) is already available and the measurement of additional WQ parameter along with the gauge/discharge, etc., can be immediately started with minimal effort.

- There should be mutual understanding between all organizations for integration and optimum utilization of resources of various organizations i.e. by utilizing the existing infrastructure of laboratories and manpower for the monitoring and improvement of the quality of water resources available in the country to the extent possible. Implementation should be explored through MoUs by concerned organizations.

- Sanctioned scientific strength of all organization may be filled up either pursuing through SSC/UPSC/departmental promotion or new posts may be created by surrendering the un-utilised post under different categories of each organization.

- There is a need to monitor some of the emerging contaminants e.g. Nitrates from fertilizers, pharmaceuticals and personal care products. There is a need to identify and regularly monitor new pollutants in the rivers / surface water / ground water.

- Co-relation between surface water quality and ground water quality may be studied.

- A simple WQ Index similar to the Air Quality Index of CPCB which can be related / understood easily by the public should be explored.

## First meeting of National Infrastructure Pipeline- Task Force, DoWR, RD & GR

The first meeting of the National Infrastructure Pipeline (NIP) - Task Force, DoWR, RD & GR was held under the Chairmanship of Secretary, DoWR, RD & GR on 31.07.2020 through Video Conferencing.

Shri S. K. Haldar, Member(WP&P), CWC and Shri P. Dorje Gyamba, Director(WP&P-C) Dte., CWC attended the meeting. Economic Advisor, DoWR, RD&GR presented about concept of NIP, role of the DEA/DoWR, RD & GR, monitoring pattern and other strategies to be followed in due course. In the meeting, it was decided to constitute Inter-Ministerial

Steering Committee (IMSC) headed by Secretary, DoWR, RD & GR in line with the governance framework recommended by NIP Report. IMSC will be reviewing and monitoring the water and sanitation sub-sectors projects included in the NIP, pertaining to DoWR, RD & GR. IMSC will include representatives from Ministries such as MoEF&CC, MoA&FW, MoRTH, M/o Railways, MoTA etc. Action items for various wings/organization within department were decided. CWC was entrusted to compile the details of State NIP projects.

## Meeting regarding revision of Mission Document of NWM

Shri U. P. Singh, Secretary, DoWR, RD & GR took a meeting on revised Mission Documents of National Water Mission (NWM) on 27.7.2020. AS, DoWR, RD&GR, AS&MD, NWM, JS&FA, DoWR, RD&GR attended the virtual meeting. From CWC, Shri R. K. Jain, Chairman, CWC along with Member(WP&P), Member(RM), CE(BPMO), CE(IMO), CE(EMO), Director, WP&P (C), Director(BP-I), CWC attended the virtual meeting.

National Action Plan on Climate Change (NAPCC) was released on 30.06.2020 to identify measures that promote development objectives while also yielding co-benefits for addressing climate change effectively. It is having 8 Missions namely National Solar Mission, National Mission for Enhanced Energy Efficiency, National Mission on Sustainable Habitat, National Water Mission, National Mission for Sustaining the Himalayan Ecosystem, National Mission for a "Green India", National Mission for

Sustainable Agriculture, National Mission on Strategic Knowledge for Climate Change.

The National Water Mission was set up in 2011 with the objective of "conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management". The comprehensive Mission Document of the NWM was approved by Union Cabinet on the 06.04.2011. Notification was issued in July 2011. Further, the Secretary, MoEFCC vide his DO letter dated 03.01.2018 addressed to Secretary, MoWR had also requested that the Ministry (MoJS) may initiate the process of revision of mission document of NWM. A change proposed in the revised Mission Documents in accordance with the goals was discussed on meeting held on 27.07.2020 and comments of CWC were conveyed to NWM, thereafter.

## Development of Integrated Water & Crop Information & Management System under INDIA-WRIS

Shri Sriram Veditre, Advisor, Ministry of Jal Shakti took a virtual meeting on Development of Integrated Water & Crop Information & Management System on 17.7.2020. Shri R. K. Jain, Chairman, CWC, Shri S. K. Haldar, Member(WP&P), Dr. R. K. Gupta, Member(D&R), Shri Sunil Garg, Director, NWIC, Shri Yogesh Paithankar, Chief Engineer, PMO, CWC and Shri P. Dorje Gyamba, Director, WP&P(C) Dte., CWC attended the meeting.

During the meeting, CE, PMO, CWC made a presentation on CWC's efforts in formulation and running of India-WRIS portal till year 2017. Data required/activities required/role of State and Central Agency required for proposed modules of development of Integrated Water & Crop Information & Management System was discussed in the meeting. Chairman, CWC emphasized to have a relook on all the modules proposed as the data requirement is enormous. The Hon'ble Minister of Jal Shakti also held a review meeting in this regard in which Shri R. K. Jain, Chairman, CWC and Shri Yogesh Paithankar, Chief Engineer(PMO), CWC participated. The Hon'ble Minister directed to review the proposal keeping in view various practical aspects and directed CWC to provide the requisite support.



## Second meeting of Negotiation Committee w.r.t. complaint of State of Tamil Nadu under Section 3 of ISRWD Act, 1956 on Pennaiyar River Water

The 2nd meeting of the Negotiation Committee on Pennaiyar/Ponniyar River Water Dispute was held on 07.07.2020 under the chairmanship of Chairman, CWC through video conferencing. Member(WP&P), Chief Engineer(IMO), Chief Engineer(CSRO), officials of ISM-1 Dte., the representatives of State of Tamil Nadu, Karnataka and Andhra Pradesh along with other officials of Central Government attended the meeting.

The State of Tamil Nadu had submitted a request to the Central Government to refer water dispute on Pennaiyar River with Karnataka to a Tribunal for adjudication under Section 3 of the Inter State River Water Disputes (ISRWD) Act, 1956 on 30.11.2019. Accordingly, DoWR, RD & GR, Ministry of Jal Shakti constituted the Negotiation Committee under Section 4 of the ISRWD Act, 1956 having members from basin States, Central Water Commission, Ministry of Agriculture, MoEF&CC and NIH, Roorkee for resolution of the Pennaiyar river water dispute in January, 2020. The first meeting of the Negotiation Committee was held on 24.02.2020.

## Review meeting with Field Offices

Meetings were taken by Shri R. K. Jain, Chairman, CWC in presence of Member(WP&P) & Member(RM) through video conferencing from 01.07.2020 to 09.07.2020 with field organizations of CWC. Several matters were discussed in these meetings and necessary guidance were issued to Regional Offices. Some of them are enumerated as under:

- Compendium of MMI projects needs to be updated up to March 2019 data.
- Reconcile the data for IPC/IPU/UIP with the state government
- Collection of State-wise & Basin-wise Water Resources Development Master Plan
- Planning for completion of Telemetry installation on Reservoirs monitored by CWC
- Calibration of telemetry data for 25 reservoirs whose data is not received in FFM Dte.
- Various matters related to Hydrological Observations/ Telemetry Stations
- Reorganization of sites under various organizations

## 40th Classified Data Release Committee Meeting

Ministry of Water Resources, River development & Ganga Rejuvenation (MoWR,RD&GR), Government of India had approved revised Hydro-meteorological Data Dissemination Policy, 2018 for implementation by CWC & CGWB. From the point of view of data dissemination, the country has been divided into following three regions;

- Region-I: Indus basin & other rivers and their tributaries discharging into Pakistan;
- Region-II: Ganga-Brahmaputra-Meghna basin & other rivers and their tributaries discharging into Bangladesh/Myanmar; and
- Region-III: Remaining other rivers and their tributaries.

Data for Region-I and Region-II is classified. Classified data is released for

## Upgradation/Revision of DPR of Kishau Multipurpose Project

Kishau Multipurpose Project is proposed across River Tons (a tributary of River Yamuna) along the border of Uttarakhand and Himachal Pradesh. Proposed location of the project is in Himachal's Sirmour district about 50 km upstream of Dakpathar (The confluence of river Yamuna and Tons) and 10 km upstream of existing Ichhari Dam. DPR of project was submitted to CWC in 2010 by UJVNL. Observations / Comments (2011) on DPR were communicated to UJVNL. Compliances to most of the observations of CWC/CEA remained pending. Later it was decided to revise the DPR of Kishau Multipurpose Project.

To expedite the process of revision of DPR, a meeting, through video conferencing, was held under the Chairmanship of Member(WP&P), CWC on 17.07.2020 with officers of Central Water Commission/Central Electricity Authority/ Upper Yamuna River Board/ Kishau Corporation Limited (KCL) to discuss the scope of work for upgradation / revision of DPR of Kishau Multipurpose Project. The data requirement for updation of hydrological studies, irrigation planning, survey and investigations



The Negotiation Committee after exhaustive deliberations had submitted its final report to DoWR, RD & GR on 31.07.2020.

PARTICULARS	SID GANGTOK	LBD JALPAIGURI	DAMODAR DIVISION ASANSOL	LSD-3 BIRBHAMPUR
1. Issue of missing discharge data at various sites	Regular entry of data in WIMS is being done	Regular entry of data in WIMS is being done	Regular entry of data in WIMS is being done	Regular entry of data in WIMS is being done
(a) Non-entry of data in WIMS	Regular entry of data in WIMS is being done	Regular entry of data in WIMS is being done	Regular entry of data in WIMS is being done	Regular entry of data in WIMS is being done
(b) Not mentioning in remarks column "Dry", "No Flow" etc.	All rivers are mostly perennial. However, remarks "Dry", "No Flow" will be entered, if applicable	Remarks "Dry", "No Flow" will be entered, if applicable	Remarks "Dry", "No Flow" will be entered, if applicable	Remarks "Dry", "No Flow" will be entered, if applicable

- NABL Accreditation for Water Quality labs
- Infrastructure Development and efficient budget utilization
- Status of S&I Projects being handled by CWC
- Update of Websites of Regional Offices and usage of e-Office
- All VIP references, parliamentary matters etc. shall be responded on priority basis.

specific purpose/ study only and will be non-transferable. Such data requests are placed before a Classified Data Release Committee (CDRC) headed by Chairman, CWC and having representation from MEA, IB, RAW, MoD, DoWR, RD&GR and NWDA.

The 40th meeting of the reconstituted "Classified Data Release Committee" under Hydro-meteorological Data Dissemination Policy, 2018 was held on 14.07.2020 under the Chairmanship of Chairman, CWC to consider the cases for release of classified data. 11 numbers of cases were received with recommendation from concerned field Chief Engineers of CWC (10 New Cases and 1 Old Case). After detailed deliberation on individual cases of classified data release, the Committee authorized to release data for all the 11 Cases.



required etc. were discussed with the project authorities.

Early revision of DPR was emphasized and the project authority was requested to submit the time line for preparation of Revised DPR to CWC within one month time. Project authority was also advised to start consultation with GSI/Survey of India/ NIH in the meantime.

## 12th meeting of Task Force for Interlinking of Rivers chaired by the Advisor, MoJS

The Twelfth Meeting of Task Force for Interlinking of Rivers was held on 16.07.2020 at New Delhi through video conferencing under the Chairmanship of Shri Sriram Vedire, Chairman, Task Force & Advisor, Ministry of Jal Shakti. Shri S.K. Haldar, Member(WP&P), CWC and other senior officers from CWC attended the meeting. Various matters related to Interlinking of Rivers were discussed in the meeting. Some of them are enumerated as under:

- Pre-feasibility report of integration of Parbati-Kalisindh-Chambal link with Eastern Rajasthan Canal Project

- Par-Tapi-Narmada (PTN) link and Damanganga-Pinjal link projects
- Alternative proposal of Diversion of Godavari waters upto Cauvery basin (Phase-I)
- Manas-Sankosh-Teesta-Ganga link project
- Legal issues, requirement of new act under Entry 56 of List-I of constitution, set up of an executing authority/agency at national level to act as a nodal agency for implementing inter-linking of rivers program in the country.

## 27th Meeting of Technical Evaluation Committee (TEC) of North Koel Project

The 27th meeting of the Technical Evaluation Committee (TEC) for completing the balance works of North Koel Project (NKP) was held on 09.07.2020 at CWC, New Delhi through Video Conferencing (VC) under the Chairmanship of Member(WP&P), CWC and Chairman (TEC), NKP. The officers from DoWR, RD&GR, CWC HQ & field units at Patna and Ranchi; officers from State Governments of Bihar, Jharkhand at Aurangabad, Palamu; and officers from WAPCOS at Gurugram and Aurangabad attended the meeting through VC. During the meeting, representatives of Govt. of Jharkhand were requested to expedite the reply to DO letter written by Secretary, DoWR, RD&GR, to Chief Secretary, Govt. of Jharkhand on 05.02.2020 regarding security arrangements at Dam site without any cost burden to the executing agency. TEC also asked the representatives of Govt. of Bihar to convey their views regarding the issue of complete lining of RMC as recommended by the Technical Team and D.O. letter dated 13.02.2020 written by Hon'ble Minister, MoJS at the earliest. Apart from the above, there were discussions on; Status of land



acquisition; Status of progress of various components of the balance works of the project by WAPCOS; Issue of thickness of LDPE Sheet in canal lining in the Right Main Canal (RMC); Status of design and drawings of Kandi Distributary System of Left Main Canal of the project; Status of verification of invoices related to LMC works submitted by WAPCOS; Status of non-payment of State share for the works of LMC of the project etc.

## Dam Rehabilitation and Improvement Project (DRIP)

### Virtual meeting to review the Project Readiness status of DRIP Phase II

A virtual meeting was held on 01.07.2020 to review the Project Readiness status of DRIP Phase II under the chairmanship of Additional Secretary, DoWR RD & GR. The meeting was attended by CPMU and World Bank officials. So far, 87 no. of Project Screening Templates (PSTs) have been prepared by 15 states with a proposed cost of Rs 3757 Crore.

### Discussion on draft Guidelines for Classifying the Hazard Potential of Dams

A virtual meeting was held on 27.07.2020 to discuss and finalise the Draft Guidelines for classifying the hazard potential of dams under the chairmanship of Chief Engineer, DSO. The meeting was attended by the members of the review committee, CPMU and World Bank. Deliberations on finalising the guideline taking into consideration the suggestions of the review committee were held.

### Meeting on Guidelines for Assessing and Management of Environmental Impacts in Existing Dams

A meeting was held on 23.07.2020 under the Chairmanship of Secretary, MoEF&CC wherein CE, DSO and CPMU-DRIP, CWC made a presentation on the Draft Guidelines for Assessing and Management of Environmental impacts in Existing Dam Projects being prepared under DRIP. It was apprised in the meeting that the validation of MoEF&CC to this guidelinewill help remove ambiguities in applicability of different rules and

AS, DoWR, RD&GR chairing the review meeting



regulations related to environment, forest and wildlife clearances during rehabilitation of dams. Secretary suggested further improvements in the guideline to make more clarity on applicable clearances. MoEF&CC agreed to convey approval to the guideline after due approvals.

### Bhatsa Dam

To discuss/finalize the bid-document of Bhatsa dam of Maharashtra under DRIP Phase II & Phase III, 3 meetings were held on virtual platforms on July 4, July 8 and July 14, 2020. In the meetings Officials of Central Project Monitoring Unit (CPMU)/CWC, State Project Monitoring Unit (SPMU)/Maharashtra WRD and World Bank were present.

## Training for School Teachers on Overview of Water Resources Sector in India

National Water Academy, Pune has conceptualized the training programme for school teachers and is conducting the same since 2003. 592 teachers were benefitted in 16 residential training programmes conducted till March 2020. The main beneficiaries of the program were School teachers and faculties of District Institute of Education & Training (DIET) from the State of Maharashtra. Due to present pandemic situation, NWA switched the delivery mode of the course from residential to Distance Learning for a duration of 3 days and opened the program to all School Teachers, faculties of District Institute of Education & Training (DIET) and faculties of Directorate of Technical Education (DTE) Pan-India. The programme has attracted huge participation across the country.

Inaugural address for the programme by Shri U.P. Singh, Secretary, DoWR, RD&GR, Ministry of Jal Shakti and Shri R.K. Jain, Chairman, CWC can be accessed from following links:

<https://youtu.be/RrmlwLbG5Vw>

### Programmes conducted during 2020-21

Dates of Training	Number of Batches	No. of Teachers Participated	States/UTs
22 <sup>nd</sup> Jun to 1 <sup>st</sup> Jul 2020	4 Batches of 3 Days each	458	Andhra Pradesh, Assam, Bihar, Delhi, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttarakhand, Uttar Pradesh and Union Territories of Puducherry & Andaman Nicobar Islands.
2 <sup>nd</sup> Jul to 13 <sup>th</sup> Aug 2020	8 Batches of 3 days each	1787	
<b>Total</b>	<b>12 Batches</b>	<b>2245</b>	

<https://youtu.be/FkK6n-cVFAA>

The programme has received very good feedback from the participants and much more participation is expected in future for such programmes.

## Media Interaction

### Interview to News Channels

During the month of July, various Pvt. News Channels viz. ABP News, News18 India and NDTV held interview of Chairman, CWC regarding Flood Situation. Chairman, CWC informed about the prevailing Flood situation in the State of Bihar and Assam and related forecasts. Interviews are available on the following links.

<https://khabar.ndtv.com/video/show/news/flood-situation-in-bihar-and-assam-quite-serious-central-water-commission-chairman-555413>

<https://www.facebook.com/abplive/videos/591628054886120/?v=591628054886120>

<https://youtu.be/QNkdF5-J-IQ>

### Panel Discussion / Talk on "Flood Preparation and Mitigation Measures in India" on Doordarshan

Shri Sharad Chandra, Director(FFM), CWC participated in the Panel Discussion on Flood Preparation and Mitigation Measures in India namely विशेष कार्यक्रम: आपदा का सामना. It was broadcasted on Doordarshan on 05.07.2020. He elaborated about the various initiatives of CWC regarding Flood Forecasting in the programme. The panel discussion is available on following link.

<https://www.youtube.com/watch?v=NMV6DRUA95E>

## Flood situation-July, 2020

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 327 locations (198 Level and 129 Inflow Forecast Stations) and disseminated to various user agencies through Fax/e-mail/SMS and Website. Two new Flood Forecasting sites (one level and one inflow) were added during July 2020. One level forecasting site at Dholpur on the river Chambal in Chambal District of Rajasthan and one Inflow forecasting station Laxmi Barrage on the river Godavari in JayshankarBhupalpally District of Telangana was operationalised.

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.

During the period from 01.05.2020 to 31.07.2020, 4060 flood forecasts (3572 Level and 488 Inflow) were issued, out of which 3734 (3554 Level and 180 Inflow) forecasts were within limit of accuracy with a percentage accuracy of 91.97%. 221 nos. of Orange Bulletin (for severe flood situation) and 208 number of Red Bulletin for Extreme Flood Situation were issued in the month of July from Central Flood Control Room till 31st July.

### Summary for Flood during 01.05.2020 to 31.07.2020

#### Extreme Flood Situation at FF Stations

Four FF station observed Extreme Flood Situation during this period:

Sl. No	State	District	River	Station
1.	Assam	Sivasagar	Dikhow	Sivasagar
2.	Bihar	Gopalganj	Gandak	Dumariaghat
3.		Muzaffarpur	Gandak	Rewaghat
4.		Samastipur	Burhi Gandak	Rosera

#### Extreme Flood Situation at Monitoring Stations

12 Flood Monitoring Stations observed Extreme Flood Situation

## Committee Meeting for drafting of Post Graduate (M.Tech) course in Dam Engineering to be started from next academic session

While concurring the Dam Safety Bill, the PMO has directed to introduce a regular Post Graduate Course in Dam Engineering/ Dam Safety. Meetings in this regard were held with IITs/IISc under the chairmanship of Additional Secretary, DoWR, RD&GR in May-June, 2020. The course will be started by



### Severe Flood Situation for FF Stations

65 FF Stations observed Severe Flood Situation in the States of Arunachal Pradesh, Assam, Bihar, Odisha, Uttar Pradesh, West Bengal and Jharkhand.

#### Above Normal Flood Situation

10 FF Stations in Assam, Bihar, Uttar Pradesh and West Bengal observed Above Normal Flood Situation.

#### Reservoirs having Inflow above threshold limit

39 reservoirs received inflows above its threshold limit in West Bengal, Chhattisgarh, Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Tamilnadu, Telangana, Uttar Pradesh and Uttarakhand.



## Industry Interaction

### 1. Presentation made by Vexl Environ Projects Pvt. Ltd., Bhopal

M/S VEXL ENVIRON PROJECTS Pvt Ltd (an ISO 9001-2015 Engineering company) based in Bhopal & working in the field of Water, Energy & Environment gave a detailed presentation to CWC covering the following themes on 20.07.2020.

- Flood Analysis
- Dam Break Analysis with Evacuation management plan
- Automation of Dam Operations for Flood Mitigation (covering Dam series management)

### 2. Interaction with Tata Consulting Engineers Ltd.

Tata Consulting Engineers (TCE) Limited one of the India's leading engineering Consultant in the private sector gave a presentation to CWC with regard to its activities in water sector.

Shri S. K. Halder, Member(WP&P), Dr. Rakesh Kumar Gupta, Member(D&R), Shri P. Dorje Gyamba, Director(WP&P-Coordination) from CWC and TCE team comprising of Ms S Philip, Government Relations, Dr. Rajashekhar Malur, Head- Power Business, Mr. B. B. Gharat, Head Delivery - Infrastructure, Mr. G. N. Virupaksha, Group Sector Head-Water and Mr. PLN Rao, Sector Head (Hydro) joined the presentation.

TCE Water Sector team briefed about their involvement in studies and engineering of Water Resources projects, Inter basin transfer of water, Irrigation, Flood management, River development & rejuvenation and construction of large tunnels for water transfer. Some of the recent projects of national importance are:

- Blue Consultancy for Flood management and Inland Water ways for Amaravathi Capital City of AP
- Project Management Consultancy for National Mission for Clean Ganga-NamamiGange project across five states

- River Rejuvenation
- Real time flood forecasting
- Hydrology, Hydraulics & overall mathematical modeling capabilities to handle the above.
- Development of a product known as Membrane sol for water proofing of dams & canals with excellent properties was also presented.

Chairman, CWC, Members of CWC officers from RM, WP&P, D&R wing attended the meeting through VC.

- Project Management Consultancy for Municipal Corporation of Greater Mumbai for many large tunnels ranging in size from 2.2 m to 4.0 m for transfer of water.

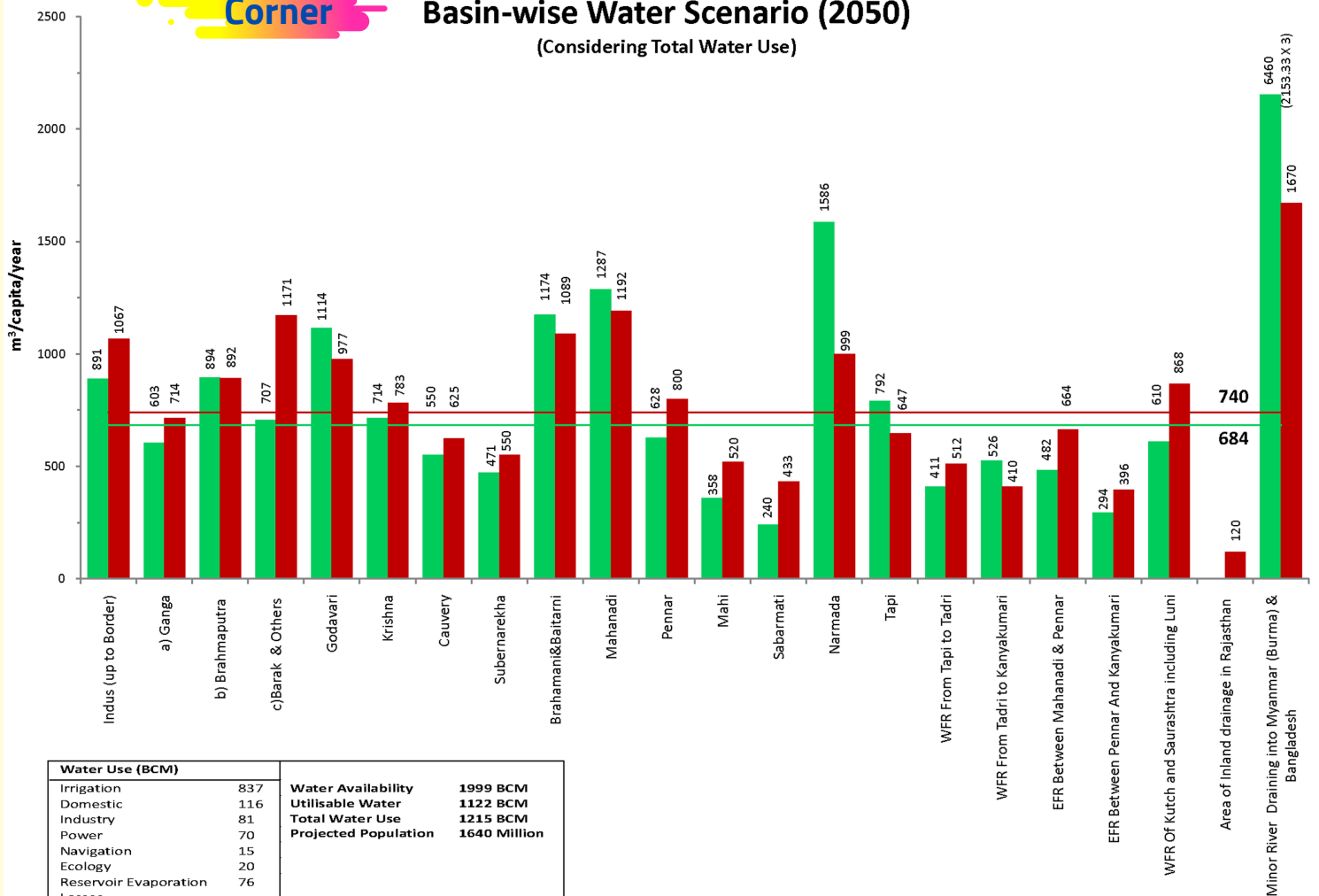
TCE's Power Business Team briefed about their involvement in all types of projects such as Run-of-River Projects, Dam Toe, Canal Drop, Pumped Storage, Rehabilitation/RMU totalling more than 21 GW of installed capacity worldwide. TCE is one of the few consultants empanelled with CERC in India and are involved in several landmark projects in India and abroad. A few are as under:

- Pinnapuram PSP\*(1680 MW) – Owner's Engineer for one of the World's largest Integrated Renewable Energy with Storage Project (IRES)
- Ghatghar PSP (250 MW) – First time adoption of Roller Compacted Concrete (RCC) technology and Stepped Spillway for a high dam in India
- Shrinagar HEP (330 MW) – Concept to Commissioning services
- Select International projects –BatokaGorge HEP\* (2400 MW), Ingula PSP (1332 MW), North Kariba (360 MW) &ItzhiTezhi (120 MW), Upper Karnali\* (900 MW)

The presentation was made by TCE to look into the possibility of private sector working with CWC for overall water resources development in the country.

## Data Corner

### Basin-wise Water Scenario (2050) (Considering Total Water Use)



■ Basin-wise Utilisable Water Resources    ■ Basin-wise Total Water Use  
— National Utilisable Water Resources    — National Total Water Use

Source: Report of NCIWRD, 1999; Reassessment of Water Availability in India using Space Inputs, CWC, 2019; Report of Standing Sub-Committee, 2000

## Adi-Badri Project

A team of officers from Designs(N&W) unit, CWC led by Shri S. K. Sibal, Chief Engineer, CWC visited Yamuna Nagar on 02.07.2020 to attend the meeting chaired by Hon'ble Minister of State, Ministry of Jal Shakti, Government of India to discuss Adi-Badri Project for revival of Sarsvati River.

## 7th Technical Group meeting of PHEP-II

The 7th Technical Group meeting of Punatsangchu-II HE Project (Bhutan) was held on 28.07.2020 through Video Conferencing. The meeting, chaired by Shri A.B. Pandya, Ex.Chairman CWC, was attended by officials from PHPA-II, CWC, WAPCOS, NIRM and experts from IIT Delhi regarding "completion of grouting for converting fallen muck into M10 grade in North side of Down Stream Surge Gallery". From CWC, Chief Engineer, Designs (E&NE), Director, HCD (E&NE) and Dy. Director HCD (E&NE) participated in the meeting.

## Water Sector-News

- ✈ June records 'excess' rainfall, good precipitation like in July (Millennium Post, 02.07.2020)
- ✈ HP Govt asks Javadekar to grant FRA exemption for Jal Jeevan Mission (The Statesman, 12.07.2020)
- ✈ 2.5 mn got piped-water connections during Covid' (Business Standard, 13.07.2020)
- ✈ Assam floods wreak havoc, 68 dead, 48 lakh affected (Deccan Chronicle, 17.07.2020)

## History-Prakasam Barrage

The story of the 3,736 ft long Krishna Barrage begins in September 1952, when the Krishna anicut was seriously damaged by floods and the anicut body-wall breached. The Anicut near Vijayawada was built during 1852-55 to irrigate the fertile Krishna delta through a canal network on either bank. The scheme envisaged an ultimate ayacut of 5.8 lakh acres. This target was reached by 1894 much earlier than anticipated. Shutters were therefore installed on top of the anicut. The 6 ft falling shutters installed in 1925 were to cater to an ultimate ayacut of about 8 lakh acres. Exceeding this, it soon rose to 11 lakh acres. The capacity of the canals to feed the increased ayacut depended on the flow in the river, sufficient to raise it at least by two feet above the shutters of the anicut. Installation of 8 ft shutters, in place of the 6 ft ones, would have assured such supply. But this could not be implemented as the anicut, not being designed for it, might be too weak to stand the pressure of the increased height of water behind it.

The inauguration of the Krishna Barrage in Andhra marked an important stage forward in the utilization of the waters of the Krishna, which is closely linked with the cultural, historical and religious heritage of the region. It was formally commissioned on 24.12.1957. The contemporaneous Chief Minister of Andhra Pradesh, Shri Neelam Sanjiva Reddy, who inaugurated the Barrage-the longest of its type in the country at that time, renamed it after the late Shri Prakasam, to commemorate the great service of the 'Andhra Kesari'. Shri Prakasam had laid the foundation stone of the project in February 1954, when he was the Chief Minister of Andhra State.

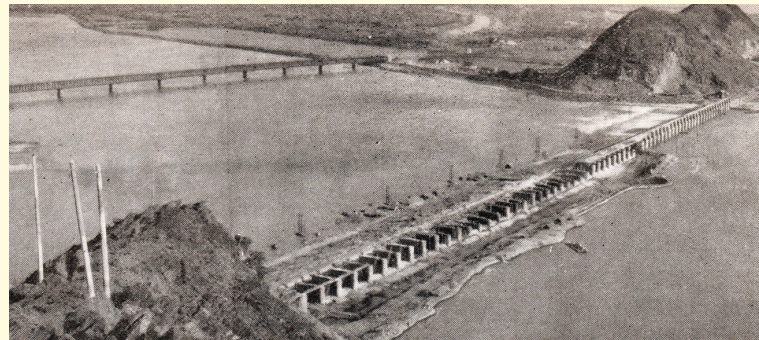
### Barrage Features

The Prakasam Barrage is 3,736 ft long and retains water to a depth of 20 ft above the bed level of the river. It has 70 gates of 40 ft span in which 12 ft high shutters will operate to regulate the floods in the river and the flow of the water in the canals on either side. A water level of 10 ft above the present anicut level can be maintained, as against 6 ft on the Krishna Anicut. The roadway over the barrage is 24 ft wide with two 5 ft wide

## Guidelines for sediment management in water resources and hydropower Projects

The 2nd meeting of the Committee to review "Guidelines for Sediment Management in Water Resource and Hydropower Projects" was held on 14.07.2020 under the chairmanship of Shri T.K. Sivarajan, Chief Engineer, Designs(E&NE), CWC. It was attended by Directors of various Design units of CWC. The guidelines are stressing on REServoir CONservation (RESCON) approach and addresses objective for Storage and ROR type water resources and hydro power projects. The basic objective is to safeguard loss of Live Storage Volume and to ensure safety of hydro power mechanical components from the erosion due to high sediment concentration. The meeting was focused for revising the previous set of guidelines on sedimentation management and bring out a revised guideline to ensure better safeguard against Sediment Concentration.

- ✈ Despite flood, Kharif crops' plantation grows by 18% (The Pioneer, 25.07.2020)
- ✈ As industries reopen, pollution in Yamuna rises; DJB says water supply to be hit (Millennium Post, 25.07.2020)
- ✈ So far, 14% above average rainfall (The Tribune, 27.07.2020)
- ✈ Assam lost 8,000 sq km of land to soil erosion (Deccan Chronicle, 28.07.2020)



footpaths on either side. Ten thousand tons of steel and 50,000 tons of cement have gone into the new structure. It embodies 7 million cubic ft of concrete and masonry and 900 reinforced concrete wells over which the barrage is founded.

### Gate Manufacture

The barrage gates were manufactured in the new Public Works Department Workshops near the site of the Barrage. All the gates together weighed 2,000 tons, and it costed Rs. 130 per sq ft, including the cost of operating equipment and hoist bridge. This resulted in considerable economy when compared to the purchases of shutters from outside.

### Economy in Cost and Time

The work was estimated to cost Rs. 2.84 crore at the schedule of rates of 1953. The work had been completed six months ahead of schedule with a saving of about Rs. 15 lakh.

### Benefits

The Barrage stabilized water supply to the existing ayacut of 11 lakh acres in the Krishna delta. Anxiety over the damaged anicut and the precarious system of tripping and lifting anicut shutters, had been obviated by the new structure. A higher water level is now being maintained by the Barrage and began more supplies fed to the canals during the transplantation season, thereby the transplantation in the delta began completing about two weeks earlier.



## 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

