VOLUME 3 ISSUE NO. 8 MARCH 2021

Serving the Nation Since 1945

JALANSH

The Monthly Newsletter of Central Water Commission

S. K. Haldar
Chairman

Message

In the morning of 07th Feb, 2021, an avalanche occurred in the upper catchment of Rishiganga River, a tributary of Alaknanda River in Chamoli District of Uttarakhand, which led to a sudden rise in the water level of Rishiganga River. This caused considerable damage to downstream Hydroelectric Projects and loss of life was also reported. The Flood Monitoring Station of CWC at Joshimath on river Alaknanda downstream of the confluence of river Dhauliganga observed Extreme Flood Situation and attained a new peak level which was about 3 m higher than the previous recorded HFL. Considering the gravity of situation, all the staffs of the Central Water Commission deployed in Alaknanda and Ganga Basin up to Haridwar were put on alert and continuous water level monitoring was ordered.

Flood situation was assessed quickly by CWC and it was informed that there is no danger of downstream flooding beyond Joshimath and the rise in water level was largely contained. On same day a meeting of National Crisis Management Committee (NCMC) under the chairmanship of Cabinet Secretary was held, wherein all the concerned agencies were directed to work in close coordination and to extend all requisite assistance to the State administration. I along with other senior officers of other Miniseries and Govt. agencies attended the said meeting.

Glacial Lake Outburst Flood (GLOF) and associated dangers have been in the agenda of the Govt. agencies; however this event has further pushed the Govt. agencies to devise the strategy and action plan to effectively deal with such a situation in future.

During the month, an important international event was organized. The Indian National Committee on Large Dams (INCOLD), New Delhi in collaboration with CWC and DRIP organized the ICOLD Symposium on "Sustainable Development of Dams and River Basins" under the aegis of ICOLD. It was inaugurated by Shri Gajendra Singh Shekhawat, Minister for Jal Shakti as Chief Guest and Shri R.K. Singh, Minister of State (IC) for Power and New & Renewable Energy, Govt. of India presided over the Opening Ceremony. CWC contributed significantly in organizing this programme which provided a great platform for knowledge sharing and policy inputs on the subject matter.

CONTENTS

Flash Flood in River Rishiganga and Dhauliganga in Chamoli District, Uttarakhand

There was an incident of flooding at Raini village in Chamoli District of Uttarakhand on 07.02.2021 due to alleged avalanche/GLOF. This area is along the Rishiganga river which is a tributary of Dhauliganga river. Dhauliganga River is one of the tributaries of Alaknanda River and it confluences with the Alaknanda River at Vishnuprayag at the base of Joshimath mountain in Uttarakhand.

The Rishiganga Hydro-Electric Project on river Rishiganga and Tapovan Project on river Dhauliganga got severely damaged due to the sudden impact of the flood. Several people/personnel went missing and later some dead bodies were recovered due to this flash flood event.

The Flood Monitoring Station at Joshimath on river Alaknanda downstream of the confluence of river Dhauliganga observed Extreme Flood Situation and attained a peak of 1388.65 m on 07.02.2021 compared to its previous HFL of 1385.54 m on 16.06.2013. The computed peak discharge was around 1670 cumec. Average rise of river bed level of river Alaknanda at Joshimath site was 3.00 m. On River Alaknanda, CWC is maintaining a flood forecasting Station at Srinagar in Pauri Garhwal District. However, the flood got moderated in the downstream of Joshimath. Hourly water level monitoring was started at various H.O. sites on river Alaknanda just after avalanche crossed Joshimath H.O. sites.

Chairman, CWC attended the National Crisis Management Committee (NCMC) meeting chaired by Cabinet Secretariat on 07.02.2021 and informed the Committee that there was no threat of any downstream flooding as the water levels in the downstream have moderated and with no major rainfall forecast, there may not be any flooding in the downstream areas of Joshimath.

Later on, CWC Officers from Dehradun visited Tapovan and Raini sites and met District Magistrate, Chamoli, Uttarakhand on 15.02.2021. They informed about the hourly water level monitoring by CWC at various sites on river Alakhnanda, after avalanche.

A Virtual Meeting was also held under the Chairmanship of Union Home Secretary to review the progress of search and rescue operation as well as to decide further course of action regarding formation of Artificial Lake in Chamoli District of Uttarakhand. Based on the recommendations of the Virtual Meeting, National Disaster Management Authority (NDMA) has formed two groups to study in detail the cause of the disaster as well as to suggest future course of action. One of the groups will study the upstream areas where a Landslide Dam has formed and the other team will study the downstream effects in case of its breach. Director(FFM) and Director(Hydrology-South), CWC are members of the study team 2 which is studying the effect on the downstream reaches. The team is expected to give its report within 60 days. Virtual meetings are being conducted by the team leaders for further line of action to conduct the studies.

ICOLD Symposium on Sustainable Development of Dams and River Basins

The Indian National Committee on Large Dams (INCOLD), New Delhi, in collaboration with CWC and DRIP, organised the ICOLD Symposium on "Sustainable Development of Dams and River Basins" under the aegis of ICOLD as a Hybrid event from 24th-27th February 2021 at New Delhi. CPMU, DRIP provided support in respect of 2 no. of technical sessions namely "Advances in Dam Safety, Risk Assessment and Management" and "Advances in the Rehabilitation of Dams and Appurtenant works". CPMU, DRIP also participated in the virtual exhibition of this event highlighting the key achievements of the Scheme. The Symposium was attended by Hon'ble Minister of Jal Shakti, Hon'ble Minister of State for Power & Renewable Energy, officials from Ministry, CWC, ICOLD, national and international experts from dam industry.

The sessions of the event can be accessed from following link:

https://www.youtube.com/channel/UClkCf_W6Y0ZhcZlP6LZSPoA/search?query=ICOLD

Visit of Hon'ble MoS to Agra

Shri Rattan Lal Kataria, Hon'ble Minister of State for Jal Shakti, Govt. of India during his visit to Agra took a meeting with officials of NMCG, CWC, UP Jal Nigam & U.P. Pollution Control Board on 17.02.2021 and reviewed the status of various works from concerned officials. Officers/officials from CWC and from other organizations also attended the meeting. Shri G. L. Bansal, Director (M&A), Agra & Shri Manoj Kumar, Executive Engineer (LYD), CWC, Agra made a presentation on the works being carried out under their respective jurisdiction.

Second Meeting of Scientific Committee for 7th IWW-2021

The second meeting of Scientific Committee for 7th India Water Week – 2021 (IWW- 2021) was held under the chairmanship of Shri S. K. Haldar, Chairman, CWC on 22.02.2021 at CWC HQ, New Delhi. The meeting was attended virtually by the members of the Committee. The follow up actions taken on the decisions of the first meeting were noted. The first meeting was held on 23.09.2020 through Video Conference.

During the 2nd meeting, the Committee deliberated and finalised various sub-themes, topics for Seminar and Panel Discussions, nodal agencies, special events by ministries, national and international organizations etc. The Committee also suggested to approach potential Nodal Agencies identified for Technical Sessions for further planning and outlined the timeline for paper submission process.

The Committee deliberated on the content of Draft First Information Bulletin and Draft Event Planner for IWW- 2021 and suggested to modify them by incorporating the decisions of the second meeting of the Scientific Committee.

The Chief Engineer (HQ), NWDA briefed the decisions taken by the Committee constituted under the Chairmanship of Member (WP&P), CWC for planning Two day BRICS Events consisting BRICS Water Ministers Meet and BRICS Water Forum during 16th -17th November 2021 on the sidelines of IWW-2021.

The Committee felt that the proposal of holding Water and Irrigation Ministers of States/UTs meet during IWW-2021 is a good step as it would provide ample scope of interaction among policy makers and implementing agencies and increase the participation from States in the event. The Committee also recommended to design and incorporate an exclusive Technical Session for Young Professionals which will be coordinated by CWC.

13th Meetings of the Task Force for Interlinking of Rivers

Thirteenth meeting of Task Force for Interlinking of Rivers (TF-ILR) was held on 25.02.2021 at New Delhi under the chairmanship of Shri Sriram Vedire, Advisor, Ministry of Jal Shakti. The present status of integration of Parbati – Kalisindh- Chambal link with proposed Eastern Rajasthan Canal Project (ERCP) was discussed in detail, finally arriving at decision to plan the components of ERCP in two phases and NWDA was asked to prepare FR / DPR of phase – I initially. Regarding Ken – Betwa link, Chairman, TF-ILR apprised the members about several meetings held by MoJS with MP and UP to sort out issues to expedite signing of MoA (which was finally signed on 22.03.2021). For alternative proposal of diversion of Godavari water upto Cauvery basin, NWDA was asked to firm up Inchampalli as the source location of this link and accordingly finalise DPR. Also, discussions were held for sharing of Cauvery and Godavari water by visiting the existing tribunal award. It was also decided in the meeting to start involving Ministry of External Affairs in the matter of MSTG Link for taking the work forward.

Presentation on "Restoration of retrogression affected Dauk Barrage, Teesta Barrage Project, West Bengal"

A Special problem regarding "Restoration measures to be taken up for Dauk Barrage", a part of Teesta Barrage Project, West Bengal was referred during 2017 to Central Water Commission (CWC) by Irrigation & Waterways Department (I&WD), Government of West Bengal. This special problem referred mainly requested for views on the designs carried out for the proposed restoration measures by I&WD, West Bengal.

Barrage and Canal Design (East & North-East) Directorate, CWC undertook the study by carrying out the scrutiny of design calculations for the proposed restoration measures on the basis of data received. Outcome of the scrutiny were shared with Project Authorities.

Meeting by Secretary (DoWR, RD&GR) regarding E-flow Monitoring in the State of Uttarakhand in Ganga basin

Secretary (DoW, RD&GR) took a meeting with Chairman, CWC, DG, NMCG, JS&FA and other officers of CWC on 25.02.2021 regarding installation of radar based water level sensor and velocity sensor at u/s and d/s e-flow sites in Uttarakhand.

It was decided to approach all project authorities for installation of automatic data acquisition and transmission equipment as per locations identified by CWC.

Jal Jeevan Mission- Urban- Budget Announcement

During her Budget speech, the Hon'ble Finance Minister announced JAL JEEVAN MISSION (URBAN) which has been designed to provide universal coverage of water supply to all households through functional taps in all 4,378 statutory towns in accordance with SDG Goal- 6.

Salient features of Mission

▪ The total outlay proposed for JJM(U) is ₹2,87,000 crore which includes ₹10,000 crore for continuing financial support to AMRUT Mission.

▪ 2.68 crore is the estimated gap in urban household tap connections that is proposed to be covered under JJM(U). Likewise, estimated gap in sewer connections/septage in 500 AMRUT cities proposed to be covered in JJM(U) is 2.64 crore.

▪ Rejuvenation of water bodies to augment sustainable fresh water supply and creating green spaces and sponge cities to reduce floods and enhance amenity value through an Urban Aquifer Management plan are other key areas of the Mission.

▪ JJM(U) will promote circular economy of water through development of city water balance plan for each city focusing on recycle/reuse of treated sewage, rejuvenation of water bodies and water conservation. 20% of water demand to be met by reused water with development of institutional mechanism.

▪ Pey Jal Survekshan will be conducted in cities to ascertain equitable distribution of water, reuse of wastewater and mapping of water bodies with respect to quantity and quality of water through a challenge process.

▪ Mission has a reform agenda with focus on strengthening of urban local bodies and water security of the cities. Major reforms are reducing non-revenue water to below 20%; recycle of treated used water to meet at least 20% of total city water demand and 40% for industrial water demand at State level; dual piping system,

▪ In order to promote Public private partnership, it has been mandated for cities having million plus population to take up PPP projects worth minimum of 10 percent of their total project fund allocation.

▪ For Union Territories, there will be 100% central funding. For North Eastern and Hill States, central funding for projects will be 90%. Central funding will be 50% for cities will less than 1 lakh population, one third for cities with 1 lakh to 10 lakh population and 25% for cities with million plus population.

▪ Funding from Government for projects will be in three tranches of 20:40:40. Third instalment onwards will be released based on outcomes achieved and credible exclusion will be exercised while funding.

Source: https://pib.gov.in/PressReleasePage.aspx?PRID=1694420

17th meeting of Coastal Protection and Development Advisory Committee

The Coastal Protection and Development Advisory Committee (CPDAC) provides a common platform to all maritime States/UTs to discuss and solve their coastal erosion problems. The 17th meeting of CPDAC was held through Video Conferencing on 18.02.2021 under the Chairmanship of Shri Ranjan Kumar Sinha, Member(River Management), CWC & ex-officio Additional Secretary to the Government of India. Members from different Maritime States and UTs, Central Govt./organizations participated in the meeting.

Half Day Workshop on Pesticide Analysis

A half day workshop on Pesticide Analysis of Water Sample was conducted by C&SRO, CWC, Coimbatore on 19.02.2021 through virtual platform. The workshop was inaugurated by Member (RM), CWC, New Delhi. At the outset, in his inaugural address, he pointed out the importance of water quality monitoring of rivers in India and acknowledged the efforts made by the scientific staffs during pandemic lock-down period. Further, he wished that the discussions and information shared from this workshop shall be useful to all the scientific staffs in CWC.

Afterwards Chief Engineer, C&SRO, CWC, Coimbatore and Chief Engineer, P&DO, CWC, New Delhi also addressed the workshop. Chief Engineer(P&D), CWC highlighted the essentiality to evaluate the impacts of river water quality and necessity to monitor pesticide in river water to study the impact of improper usage of pesticides in agriculture.

In the presentation on 'importance of extraction and analysis of pesticides in water sample using Gas Chromatograph', Mrs. L. Priyadharsini, ARO, LCWQL, CWC, Coimbatore shared various aspects and knowledge gained in the analysis of pesticide in water samples using Gas Chromatograph (GC). Live demonstration of sample analysis using GC was made during the workshop. The scope of this workshop was to give a quick glance on the theoretical principles and applications of gas chromatography along with practical demonstration sessions which imparted hands-on experience to the participants.

In his concluding remark, Director, RDC-II, CWC, New Delhi pointed out the importance of knowledge-sharing among scientific community to improve the learning capacities in relevant area and also assured the participants to conduct more similar technical events in future to learn about the most recent advances in the field of water quality.

DRIP

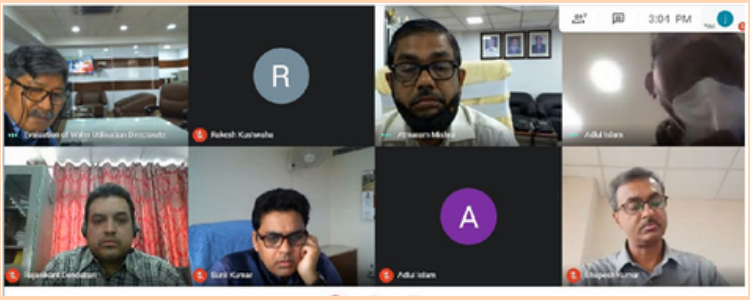
Meeting with Chief Secretary, Govt. of Gujarat and officials of NWR, WS & KD, Gujarat at Gandhinagar regarding DRIP Phase II, February 05, 2021

Smt. Debashree Mukherjee, Additional Secretary, DoWR, RD & GR had a courteous call with Sh. Anil Mukim, Chief Secretary, Govt. of Gujarat, on 05.02.2021 followed by a review meeting with officials of Narmada, Water Resources, Water Supply & Kalpsar Department (NWR, WS & KD), Gujarat. Additional Secretary apprised the Chief Secretary about the ongoing externally aided Scheme DRIP as well as newly initiated Scheme DRIP Phase II and Phase III. The review meeting was chaired by Smt. Debashree Mukherjee, Additional Secretary, DoWR, RD & GR, Ministry of Jal Shakti, wherein status of NWR, WS & KD regarding Readiness Criteria of Department of Economic Affairs (DEA) pertaining to DRIP Phase-II was deliberated. The team of NWR, WS & KD was led by Sh. M. K. Jadav, Secretary, NWR, WS & KD, Govt. of Gujarat.

Stakeholder Consultation Meetings for the implementation of published EAPs for the dams of UJVNL, TANGEDCO and Tamil Nadu WRD on February 08, February 10 and February 25, 2021 respectively.

Stakeholder Consultation Meetings to disseminate the published Emergency Action Plans (EAPs) for 2 no. of dams of Uttarakhand Jal Vidyut Nigam Ltd (UJVNL), 7 no. of dams of TANGEDCO and 11 no. of dams of Tamil Nadu WRD, as a part of implementation requirement were held virtually on 8th, 10th and 25th February, 2021 respectively. This program is a part of risk mitigation strategy to communicate the associated risks to all stakeholders. These meetings were attended by officials of CWC, NDMA, SDMA, IMD, NRSC, GSI, All India Radio, District Authorities and villages in the downstream of the dam. Under DRIP, EAPs have been published for 187 no. of dams and Stakeholder Consultation Meetings have been conducted for 93 no. of dams.

Revision of General Guidelines for Water Audit & Water Conservation"



The 1st meeting of the Committee for the revision of 'General Guidelines for Water Audit & Water Conservation' was held through virtual mode on 16.02.2021. It was chaired by Shri P. Dorje Gyamba, Chief Engineer, POMIO, CWC and attended by the members of the Committee & nominated officials from different organisations. A brief discussion on revising the guidelines was held among the participants and valuable inputs were provided by all.

The 'General Guidelines for Water Audit & Water Conservation' were first published by CWC in 2005 with the objectives to introduce, standardize and popularize the water audit and water conservation in all sectors of water use. As there has been remarkable advancement in technologies since the publication of the guidelines, it is, therefore, desirable to revisit the guidelines for incorporation of the latest tools and concepts.

Scientific Assessment of Flood Prone Area

For scientific assessment of flood prone areas in India, Ministry had constituted an Expert Committee under Chairman, Central Water Commission (CWC). The Expert Committee has further constituted Regional Committees for each States/UTs with Principal Secretaries of Water Resources Department as its Chairman and Regional Chief Engineer/Director of CWC as its Member-Secretary. The mandate of the Regional Committees is to identify, demarcate and classify the flood prone areas in their respective State/UT based on the methodology, classification and criteria finalized by the Expert Committee. In the 6th Meeting of Expert Committee held in Sep, 2020, it agreed to the study carried out by CWC and to the methodology used. It was further agreed that in respect of the States of Assam, Bihar and Odisha the study shall be carried out including the current year's flood data/satellite imageries. It was also decided that for the rest of the States, the flood affected area maps will be sent for ground truth verification to the respective States through the Regional Committees.

In above context, a meeting was held with Chief Engineer (P&D), Irrigation Department, Uttar Pradesh on 10.02.2021 and Draft Report on Scientific Assessment of Flood Prone Areas was discussed in detail. Next meeting is to be scheduled with all the members of Regional Committee constituted for providing their valuable inputs and comments on the study and to execute the process for ground verification. CWC, Dehradun has also approached Government of Uttarakhand for scientific assessment of flood prone areas in the State of Uttarakhand.

Mullaperiyar dam inspection and 14th Supervisory Committee meeting on Mullaperiyar Dam

The 14th meeting of the Supervisory Committee on Mullaperiyar Dam was held on 19.02.2021 at Kumily, Kerala preceded by inspection of the dam comprising of main dam, earthen embankment, baby dam and its appurtenant structures like galleries, hydro-mechanical works etc. by the Shri Gulshan Raj, Chairman (Supervisory Committee on Mullaperiyar Dam) & Chief Engineer, DSO, CWC, Shri Pranabjyothi Nath (Secretary, WRD, Kerala) , Shri R. Subramanian (Chairman, CTC cum ISWW, WRD Tamil Nadu) and other officers of Central Water Commission and State Govt. of Kerala and Tamil Nadu. The overall condition of dam and its appurtenant structures as revealed by visual inspection was found to be satisfactory by the Committee.

During the meeting, various agenda items under the purview of Supervisory Committee were discussed. The Committee deliberated on the rule curve for the Mullaperiyar dam prepared by Central Water Commission in consultation with Cauvery Technical Cell, WRD, Tamil Nadu. Progress made so far for implementation of Inflow forecasting system was deliberated and future course of action was decided. Status of procurement and installation of seismometers and accelerometers was apprised to the Committee. Bottlenecks in road improvement work at dam site were discussed and action plan for its execution was deliberated. The status of permission regarding removal of trees for the safety of baby dam and strengthening of baby dam was appraised. Discussions on updation of Operation and Maintenance (O&M manual) and preparation of Emergency Action Plan (EAP) were also held.

DPR of Jagganathpur Irrigation Scheme in West Singhbhum, Jharkhand

A MOU for taking up the Survey & Investigation and preparation of DPR of 31 Nos. Irrigation Schemes was signed between CWC and Water Resources Department, Govt. of Jharkhand on 29.08.2017. Out of, 31 projects, 20 projects were entrusted to Brahmaputra &Barak Basin Organization (B&BBO), CWC, Shillong, while 11 projects were assigned to Planning Circle, CWC, Faridabad under Yamuna Basin Organization (YBO), CWC, New Delhi. 10% of accepted estimated cost of the said work was released in Dec, 2017. Pre-Feasibility Report (PFR) of all the schemes were submitted to WRD, Govt. of Jharkhand in June, 2018.

The proposed Jagannathpur Irrigation Scheme dam site is located on Deo River/Nala, a tributary of Karo River in Jagannathpur Block, West Singhbhum, Jharkhand. Through this scheme, assured irrigation to 640 hectares of CCA at an irrigation intensity of 200% can be provided. The Command area in Kharif and Rabi season will have 100% irrigation (640 ha). The benefited villages in the command area are Mongra, Kenduposi, Kochra, Chhota Posi Balyadih, Mahotosai, Kundiyasai and Hesopi in Jagannathpur block of West Singhbhum District. The total annual utilization of water for irrigation is 6.621 MCM, besides 2.277 MCM for drinking and 0.600 MCM for industrial use.

The Gross estimated cost of the project is around Rs. 70.61 Crore. The net annual cost of the project is Rs. 7.31 Crore. The annual benefit to be derived from the scheme works out to be Rs. 9.91 Crore. The B. C. ratio of Jagannathpur Irrigation Scheme works out to be 1.36 and therefore, the scheme is techno-economically viable.

All chapters of the DPR of Jagannathpur Irrigation Scheme have been finalized after detailed survey, field investigations and hydro-meteorological observations by the field officials of P&I Sub-Division, Jamshedpur under Planning and Investigation Division, CWC, Faridabad. DPR was finally submitted to WRD, Govt. of Jharkhand on 15.02.2021.

Swachh Survekshan Cleanliness Awards to CWC, Guwahati

The Guwahati Municipal Corporation had conducted the 'Swachhata' competition among various schools, hospitals, hotels, Government offices, Resident Welfare Associations (RWA) and markets falling within the jurisdiction subject to fulfilment of various criteria like cleanliness of premises, availability and cleanliness of the toilets, workers' hygiene, availability of dustbins (blue and green), infrastructure maintenance and cleanliness etc. Among the Government offices, Central Water Commission received the third prize.

Ganol Hydro Electric Project, Meghalaya-Review meeting and site visit by CWC Design Team

Ganol Hydro Electric Project is a 22.50 (3 x 7.50) MW project located in the West Garo Hills District of Meghalaya. A Review meeting and site visit were taken place by CWC team. Two teams, one from Hydel-Civil Design (HCD), and another from Concrete & Masonry Dam Design (CMDD) and Embankment Dte., visited the site separately. From HCD (E&NE) Dte., Shri Abhinav Srivastava, Deputy Director (DD) headed the team along with Shri. K. Vysakh (DD) and Shri Sajal Mittal, Assistant Director (AD). Other Team from Dam Directorate was headed by Shri A. Raghvendre (DD) along with Shri K. S. Saini (AD) & Shri Madhukant Goyal (AD). Officials of MePGCL (Govt. Of Meghalaya), M/s Patel Engineering Ltd. and M/s TPSC were also present in the meeting and during the site visit.

Training Conducted by NWA

a) Training Programs:

Sr. No.	Name of the Program	Dates & Duration	No of participants	Category
a)	Mandatory Cadre Training Program for Junior Engineers of CWC (Batch 3)	01st-26th February 2021	38	Cadre Training
b)	Training-cum-Webinar on "Water Conservation and Management' ' was conducted for the representatives of Panchayat Raj Institutions (PRI) - for the State of Rajasthan	09-11th February 2021	172	Mass Awareness Program
c)	Flood Protection, Anti Erosion & River Training Works	15-17th February 2021	108	Purpose Oriented
d)	Google Earth Engine and its Application Water Sector	15-19th February 2021	137 (Registered)	Purpose Oriented

b) Webinar Series

Sl. No.	Date	Topic of Webinar	No. of Officers	YouTube Link
1.	25.01.21	Agreements for Sharing for Waters	73	https://youtu.be/L2vtVAF-3Qo
2.	01.02.21	Interstate River Water Dispute and Water Governance - issues and challenges	91	https://youtu.be/6kTBDxqfpnk
3.	05.02.21	Webinar on Latest Technologies in Water Quality Analysis	79	
4.	08.02.21	Challenges of Inter-States issues in Inter Linking of River Projects	111	https://youtu.be/8iDv54gCRGY

Financial Progress of Schemes/Components as on 28.02.2021

(Amount in Rs Crore))

Sl. No.	Scheme/Component Name	RE (2020-21)	Expenditure	Expenditure (in %)
1.	Development of Water Resources information System (DWRIS)	130.00	111.182	85.5%
2.	Investigation of Water Resources Development Schemes (IWRD)	9.000	7.849	87.2%
3.	Flood Management & Border Areas Programme (FMBAP)	10.576	8.749	82.7%
4.	Infrastructure Development (ID) Schemes	5.750	5.553	96.6%
5.	National Hydrology Project	8.886	7.245	81.52%
6.	Dam Rehabilitation and Improvement Project	21.000	16.200	77.14%

Data Corner- Basin Wise Surface Water Monitoring

Sl. No.	BASIN	Total Stations	Number of Manual Stations	Number of Telemetry Stations
1	AREA OF INLAND DRAINAGE IN RAJASTHAN	20	18	2
2	BARAK AND OTHERS	90	81	9
3	BRAHAMAPUTRA	261	224	37
4	BRAHMANI AND BAITARNI	33	19	14
5	CAUVERY	72	72	0
6	EAST FLOWING RIVERS BETWEEN MAHANADI AND PENNAR	131	91	40
7	EAST FLOWING RIVERS BETWEEN PENNAR AND KANYAKUMARI	72	71	1
8	GANGA	1,466	1,341	125
9	GODAVARI	500	481	19
10	INDUS (UP TO BORDER)	156	102	54
11	KRISHNA	207	183	24
12	MAHANADI	103	101	2
13	MAHI	123	109	14
14	MINOR RIVERS DRAINING INTO MYANMAR AND BANGLADESH	32	32	0
15	NARMADA	95	91	4
16	PENNAR	35	26	9
17	SABARMATI	115	104	11
18	SUBERNAREKHA	30	19	11
19	TAPI	104	88	16
20	WEST FLOWING RIVERS FROM TADRI TO KANYAKUMARI	72	72	0
21	WEST FLOWING RIVERS FROM TAPI TO TADRI	133	126	7
22	WEST FLOWING RIVERS OF KUTCH AND SAURASHTRA INCLUDING LUNI	351	336	15
23	TOTAL	4,199	3,785	414

Source: India WRIS as on Feb, 2021

Water Sector News

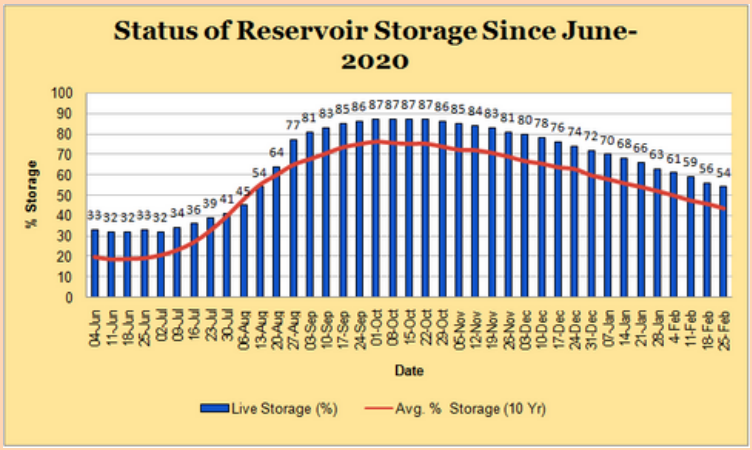
- For Jal Jeevan, govt. gives Rs. 50,000 crore (Business Standard, 02.02.2021)
- 1st Phase of Cauvery-Gundar linking to start soon (New Indian Express, 03.02.2021)
- SCentre faults both AP, TS over new water projects (The Hans, 05.02.2021)
- Jharkhand water conservation effort bearing fruit (Morning Standard, 07.02.2021)
- 'Dhauli Ganga river's water level at Joshimath breached all records after glacial burst' (Millennium Post, 08.02.2021)
- India inks MoU to build dam for safe drinking and agri water to Kabul (Times of India, 10.02.2021)
- SC asks Centre to do Environment impact assessment on flow of river in Himachal (Millennium Post, 11.02.2021)
- 20% of India has toxic arsenic in groundwater (New Indian Express, 12.02.2021)
- Haryana govt. approves a project for revival of Saraswati River (Millennium Post, 16.02.2021)
- Uranium found in Tgana groundwater samples (The Tribune, 17.02.2021)
- Telangana bags award for potable water supply (The Hans, 22.02.2021)
- TN wants national project tag for Godavari-Cauvery link plan (Financial Express, 21.02.2021)
- Dams, hydel projects don't harm environment, says Power Minister (Milennium Post, 25.02.2021)
- Ahead of polls, TN cashes in on river project (Deccan Herald, 28.02.2021)

Reservoir Monitoring

Two more reservoirs, named below have been added in the month of February 2021 in CWC's Reservoir Storage Monitoring System (RSMS).

Name of Reservoir	State	Live Storage Capacity (BCM)
Mandira Dam	Odisha	0.309
Kandaleru	Andhra Pradesh	1.792
	Total	2.101

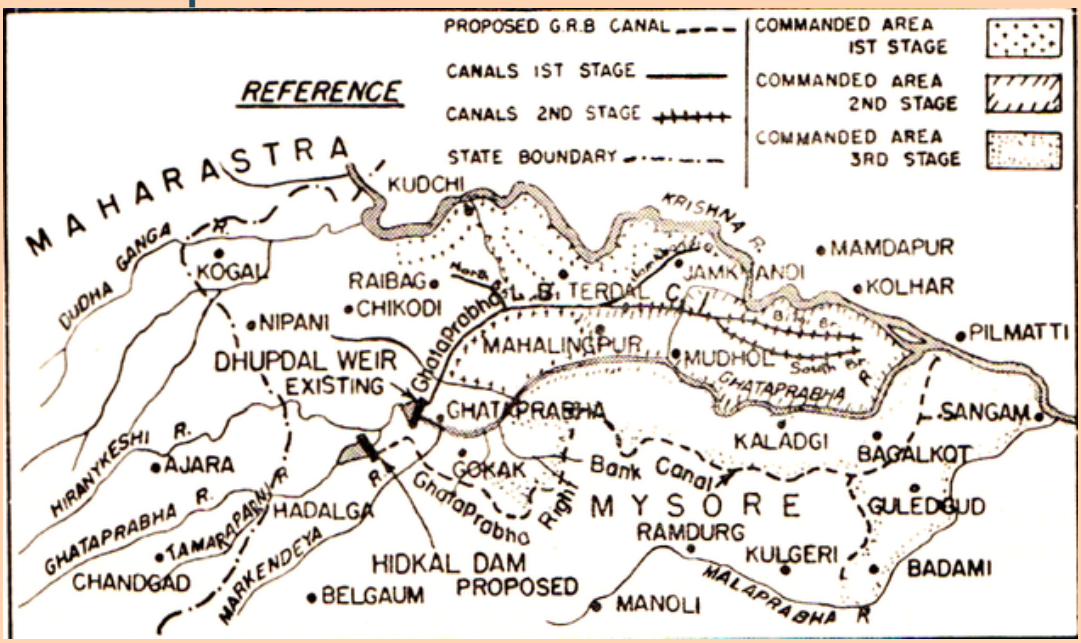
Now, CWC is monitoring the live storage status of 130 reservoirs of the country on weekly basis and issues weekly bulletin every Thursday. Out of these reservoirs, 44 reservoirs have hydropower benefit with an installed capacity of more than 60 MW. The total live storage capacity of these 130 reservoirs is 174.233 BCM which is about 67.58% of the live storage capacity of 257.812 BCM created in the country.



As per reservoir storage bulletin dated 25.02.2021, live storage available in these reservoirs is 93.536 BCM which is 53.684 % of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 104.288 BCM and the average of last 10 years live storage was 75.755 BCM. Thus, the live storage available in 130 reservoirs as per the bulletin dated 25.02.2021 is about 90% of the live storage of corresponding period of last year and about 123% of average storage of last ten years.

History- Ghataprabha River Development Scheme

The river Ghataprabha with its two main tributaries, the Hiranyakeshi and the Tamraparni, is one of the principal rivers of the Maharashtra-Karnataka area. It has substantial water resources. The river rises in the Sahyadri range of the Western Ghats new Amboli and flows generally in the eastern direction and joins the river Krishna in Bijapur district. The Ghataprabha river has a good ghat-fed catchment with an assured rainfall of 127 to 381 cm in the monsoon season and drains annually an estimated average of 0.03 lakh MCM of water.



Early Development

The conception of the Ghataprabha Valley Development Scheme aimed at the conservation of the river waters for irrigation by utilizing the natural elevation afforded by the Gokak falls dates back to 1852. Preliminary surveys were conducted in 1853 and proposals were drawn up for leading a canal from a point about 3.2 km above the falls. A scheme for the construction of a masonry weir across the river, 4 km above the Gokak falls near Dhupdal and a canal called the Gokak Canal taking off from the weir was sanctioned by the Government as a famine relief work. This scheme was completed in 1897 at an estimated cost of Rs. 15 lakh. Several proposals were considered for further development, but were all shelved on ground of poor returns.

Project Features

The proposals were finalized for the implementation of the Scheme in three stages :

(i) Construction of a 70.4 km long canal on the left bank taking off from the existing Dhupdal weir, together with 50 km of branches.

(ii) (a) Extension of the Ghataprabha Left Bank Canal to 114 km along with three branches of 96 km of total length and

(b) construction of a storage dam at Hidkal, about 19.2 km upstream of the existing Dhupdal weir;

(iii) (a) Construction of the Ghataprabha Right Bank Canal, 192 km long. Taking off from the storage dam at Hidkal and

(b) Raising a storage dam at Hidkal.

First Stage

The work under the first stage was originally started by the former Bombay Government under the Grow More Food campaign and was subsequently included in the First Five Year Plan in 1951 and carried over to the Second Five Year Plan.

The Canal takes off from the existing Dhupdal weir situated about 19.2 km down-stream of the proposed Hidkal Dam. The cost of construction of 70.4 km of the Ghataprabha Left Bank Canal and its North and Jamkhandi branches was Rs. 545 lakh. The gross command of the System was 104,368 ha inclusive of 7,554 ha under the old Gokak Canal. The irrigable area

contemplated was 48,562 ha. The ultimate carrying capacity of the canal was 57 cumec with bed widths varying from 9 to 21 m.

Second Stage

(a) Extension of the Ghataprabha Left Bank Canal from km 70.4 to 113.6 was taken up in October 1956 at an estimated cost of Rs. 468 lakh. The gross commanded area under this portion of the canal was 76,040 ha. The discharge at the start of the extension was 23.5 cumec. The total gross command of the entire canal was 180,410 ha. It was proposed to irrigate areas in Belgaum and Bijapur districts out of this gross command 120,600 ha.

(b) Hidkal Dam

The first stage of the Hidkal Dam was sanctioned in February 1960. The Dam was proposed to rise across the Ghataprabha River near Hidkal village in Hukeri taluka of Belgaum District. The Dam was impounded 660 MCM of water with an effective capacity of 616 MCM of water, sufficient to feed 1.2 lakh ha through the Ghataprabha Left Bank Canal. At the Dam, the river collected water from 1,410 sq km of the valley catchment. The maximum water spread of the Reservoir was 47 sq km. It submerged 5,760 ha occupied by 15,000 people in 20 villages.

The masonry Dam, 4,237 m long at the top, had two dykes measuring 3962 m and 392 m on the left bank to bund up low gaps. The spillway was designed to pass down a flood of 4,615 cumec. The dam's maximum height was 51 m on the river bed. The cost of the first stage of the Dam was Rs. 850 lakh.

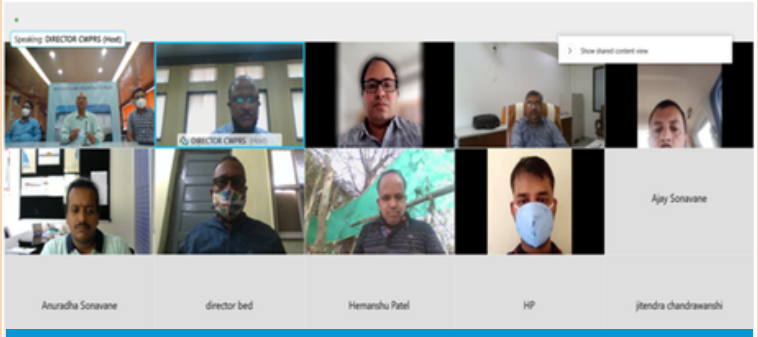
GHATAPRABHA DEVELOPMENT SCHEME Features at a Glance	
Location	Across the Ghataprabha River near village Hidkal in Hukeri taluka of Belgaum district in Karnataka State
Dam:	
Type	Masonry
Height	51 m (maximum above the river bed)
Length	4237 m
Dykes:	
Length	4354 m
Reservoir:	
Storage Capacity (Ist Stage)	660 million cum
Catchment Area	1410 sqkm
Canals:	
Left Bank Canal	114 km
Branches	146 km
Right Bank Canal	192 km
Benefits:	
Irrigation	2.41 lakh ha
Cost	Rs. 36.13 crore

The third stage of the Ghataprabha Valley Development scheme consisted of raising the Hidkal Dam to store 784 MCM more of water, at an estimated cost of Rs. 550 lakh, to feed the Ghataprabha Right Bank Canal.

Source: Bhagirath

Gallery

Shri Jitendra Panwar, Director(Monitoring) visited Yettinhole Phase II project under National Infrastructure Pipeline (NIP) during 03rd-05th Feb, 2021-Under construction Major Aqueduct of Yettinahole gravity main canal



One day online training on the role, method and importance of coastal data collection on coastal management information system activities in North Maharashtra and South Gujarat was organized on 24.02.2021

Site Visit at Ken-Betwa link project at RD 10.00 KM of proposed siphon duct (right bank of Dhasan river)

Prestressed trunion girder at Polavaram Irrigation Project, A.P

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

Designed & Published by

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