



# JALANSH



The Monthly Newsletter of Central Water Commission



## Message

S. K. Haldar

Chairman, CWC

A meeting was taken by the Union Home Minister (HM) on 15.06.2021 to review the preparedness to deal with the flood situation in the country and the formation of long-term measures for a comprehensive and overarching policy to mitigate the perennial flood problems of the country. It was attended by the Hon'ble Minister of Jal Shakti, Secretary (DoWR, RD & GR) and other officers from DoWR, RD&GR and CWC. In the meeting, I made a presentation on the action taken by the DoWR, RD&GR/CWC in the context of the directions given by the Hon'ble Home Minister in the meeting dated 03.07.2020. In my presentation, I covered briefly about the Flood Management & Border Area Programme(FMBAP), functioning of the Central Flood Control Room of CWC and the 5-

day advance inflow forecast by CWC for all the reservoirs and other initiatives. The status of issues relating to different pending Indo-Nepal Projects and the need for storage projects in the Brahmaputra basin to mitigate the perennial flood problems in Assam were also highlighted during my presentation. Subsequently, the comprehensive Disaster Management Plan (DMP) of DoWR, RD & GR was presented by CWC to NDMA on 23.06.2021. NDMA Members appreciated the comprehensive DMP document and suggested some additional features to be incorporated into the Plan.

The flash flood event of February, 2021 in Uttarakhand further emphasized the need for the efficient monitoring of Glacial Lakes. This matter is now in the active deliberations of the Parliamentary Standing Committee on Water Resources and all stakeholder Govt. agencies. In a noteworthy development, NRSC has come up with the Glacial Lake Atlas of Ganga Basin in June, 2021. In the study, a total of 4,707 glacial lakes with a water spread area greater than 0.25 ha have

been mapped. Updated inventory for Indus Basin was also published in December, 2020. Glacial Lake database (greater than 0.25 ha) for Indus & Ganga river basins has been received in CWC and the same will be utilised in the monitoring of glacial lakes in the Himalayan region.

CWC has been playing an important role in the formulation of standards in the field of water resources development and management and allied areas through its participation in various activities of the Water Resources Division Council (WRDC) and Civil Engineering Division Council (CEDC) of the Bureau of Indian Standards (BIS).

I headed the recently held 20th meeting of the WRDC. In addition, CWC is represented by its officers of the rank of Chief Engineer and Director in 17 Sectional Committees of WRDC and 13 Sectional Committees of CEDC.

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## CONTENTS

- Review meeting regarding preparedness for the forthcoming Flood Season
- Review of National Projects by Hon'ble Minister
- Launch of e-book of PMKSY-AIBP
- Review of "Interlinking of River Projects"
- Meeting regarding discussion on Canal Automation using SCADA Systems
- 3rd meeting of the Organising Committee of 7th IWW- 2021

- Meeting regarding Tilaiya-Dhadhar Diversion Scheme
- Review of North Koel Reservoir project in Bihar and Jharkhand
- Release of Ganga Basin Glacial Lake Atlas
- 20th meeting of Water Resources Divisional Council Meeting of BIS
- Review the status of works of relining of Rajasthan and Sirhind Feeder
- IWRS Award to Member(WP&P), CWC

- Disaster Management Plan for DoWR, RD&GR
- Flood Situation in the Country
- Activities of CWC under NHP and Progress
- DRIP
- Virtual Meeting regarding DVG and DEG Link with NWDA
- Data Corner-Comparative figures of rainfall during the period 1955-2015
- Reservoir Monitoring
- Training/Higher Studies
- History- KRS Dam

## Review meeting regarding preparedness for the forthcoming Flood Season

A meeting was taken by Union Home Minister on 15.06.2021 to review the preparedness measures to deal with the flood situation in the country and the formation of long-term measures for a comprehensive and overarching policy to mitigate the perennial flood problems of the country. It was attended by the Hon'ble Minister of Jal Shakti, Secretary (DoWR, RD & GR), Chairman, CWC, Addl. Secretary (DoWR, RD & GR), Commissioner (FM) and Director (FFM), CWC.

Chairman, CWC made a brief presentation on the action taken in respect of the directions of the Hon'ble Home Minister in the meeting dated 03.07.2020. Chairman, CWC informed about the structural and non-structural measures for prevention of floods, Flood Management & Border Area Programme (FMBAP) having a financial outlay of Rs. 15,000 Crore for the period 2021-26 and the functioning of Central Flood Control Room of CWC operating on a 24X7 basis. He highlighted that CWC & Google has now launched inundation flood alert dashboards and started issuing inundation forecasts. He further informed that the status of issues relating to different pending Indo-Nepal Projects and the need for storage projects in the Brahmaputra basin to mitigate the perennial flood problems in Assam.



He also informed about the 5-day advance inflow forecast by CWC for all the reservoirs in the country based on IMD's rainfall forecast in the catchment area, the benefits of Integrated Reservoir Operations and Dam Safety Bill which is pending for consideration in Rajya Sabha.

As a prelude to the above meeting, the Hon'ble Minister of Jal Shakti conducted a review meeting which was attended by concerned senior officers of DoWR, RD & GR/ CWC. As a follow-up action of the meeting with the Union Home Minister, CWC is issuing a daily flood forecast advisory to MHA in coordination with IMD and NDRF.

## Review of National Projects by Hon'ble Minister

A meeting was held on 16.06.2021 to review all the National Projects (except Polavaram Irrigation Project) by Hon'ble Minister, Ministry of Jal Shakti. Officials from MoJS, Central Water Commission (CWC), National Water Development Agency (NWDA) & Upper Yamuna River Board (UYRB) attended the meeting. During the review, project-wise discussions including current status, planning for completion of the projects and bottlenecks were carried out. The Projects (i.e. Saryu Nahar Pariyojana, Gosikhurd Project & Shapurkandi Dam Project) which have possibilities for completion at the earliest were discussed broadly to expedite their completion. Hon'ble Minister (Jal Shakti) directed to explore the bottlenecks of the aforesaid three ongoing National Projects sub-component-wise with a field visit by the concerned Chief Engineers of CWC and the State Govt. officials so that there may be action to resolve the possible issues/bottleneck for early completion of the said projects. In the case of Kulsi and Noa Dihing Projects, which are under the advanced stage of appraisal in CWC, Hon'ble Minister (Jal Shakti) suggested to take up the matter further with the Govts. of Assam, Meghalaya & Arunachal Pradesh, respectively. The D.O. letters dated 02.07.2021 of B&B Wing of DoWR, RD & GR were issued to the aforesaid North-Eastern States. Consequent upon the review of the National Projects by the Hon'ble Minister of Jal Shakti on 16.6.2021, to keep



track of the progress and bring out the critical activities and bottlenecks in the completion of projects, a visit was made to following projects:

- Shahpur Kandi Project, Punjab on 25.06.2021 by Chief Engineer, Indus Basin Organisation, Chandigarh, CWC.
- Saryu Nahar Pariyojana, Uttar Pradesh on 23rd & 24th June, 2021 by Chief Engineer (UGBO), CWC, Lucknow along with Director (M&A), CWC, Lucknow and AEE, CWC, Lucknow.
- Gosikhurd Irrigation Project, Maharashtra was visited by Chief Engineer, Monitoring Central Organisation, CWC, Nagpur during 24.06.2021 to 26.06.2021.



## Visit to National Projects



## Presentation before Hon'ble Minister, JS regarding various points and issues related to Water Quality activity by CWC

The importance of the Water Quality activities as being done by CWC is increasing day by day. CWC is the only Central agency having its own surface water sample collection system and laboratories for analysing the samples for Water Quality. The Water Quality data and reports as being generated by CWC are being utilized by the various agencies like NMCG, CPCB, Ministry of Statistics and Programme Implementation (MoSPI). A meeting was taken by the Hon'ble Minister of Jal

Shakti on 14.06.2021 for discussing various Water Quality aspects of CWC. A presentation was made on the long-term trend analysis of Water Quality along the longitudinal profile of the rivers on 8 important parameters of some important rivers based on CPCB i.e. A, B, C, D and E criteria of categorizing river waters. The Hon'ble Minister directed CWC to analyze and prepare a more inclusive and comprehensive report for representing the status of Water Quality in the Rivers.

## Launch of e-book of PMKSY-AIBP

In continuation of the Government of India's commitment to accord high priority to water conservation and its management, Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) was formulated with the vision of extending the coverage of irrigation "Har Khet Ko Pani" and improving water use efficiency "More crop per drop" in a focused manner. PMKSY has been formulated amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP), Integrated Watershed Management Programme (IWMP) and On-Farm Water Management (OFWM).

An e-Book showcasing the efforts and achievements made under the PMKSY-AIBP was launched on 17.06.2021 by the Hon'ble Minister of Jal Shakti. During the launch Hon'ble Minister of State Shri Rattan Lal Kataria, officials of D/o Water Resources, River Development & Ganga Rejuvenation and officials of Central Water Commission were present.



During the launch, the Hon'ble Minister informed that out of the 99 projects under AIBP, 44 have been completed, while the progress of about 20 projects is higher than 90% and the progress of the additional 12 projects is between 80-90%. The completed projects have added 21 Lakh hectares of land under irrigation, which has been helpful in changing the lives of farmers by increasing their income. This e-Book can be accessed from the following link.

[http://pmksy-mowr.nic.in/aibp-mis/Manual/PMKSY\\_CTB\\_ebook/mobile/index.html](http://pmksy-mowr.nic.in/aibp-mis/Manual/PMKSY_CTB_ebook/mobile/index.html)



## Review of "Interlinking of River Projects"

Hon'ble Minister of Jal Shakti has reviewed the present status of "Interlinking of River Projects" in the presence of Secretary (WR, RD&GR) and other CWC/NWDA officials. Shri Sriram Vedire, Advisor, Ministry of Jal Shakti and Director General, NWDA made a presentation

on the present status of priority links viz. Ken-Betwa, Damanganga-Pinjal, Par-Tapi-Narmada, Manas-Sankosh-Tista-Ganga, Ganga-Damodar-Subarnarekha, Mahanadi-Godavari, Godavari-Cauvery and modified PKC with ERCP of Rajasthan Projects.

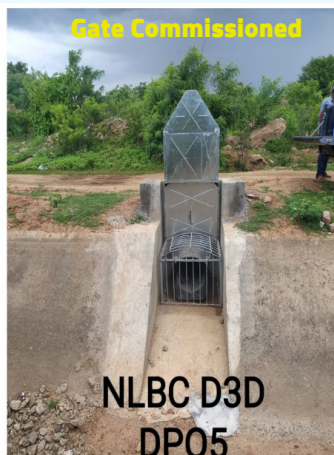
## Meeting regarding discussion on Canal Automation using SCADA Systems.

A briefing meeting was taken by Hon'ble Minister (Jal Shakti) on 24.6.2021 on "Canal Automation using SCADA". Shri S. K. Halder, Chairman, CWC; Shri Kushvinder Vohra, Member (WP&P), CWC and Shri Yogesh Paithankar, CE (PAO) made a presentation on the context & relevance of 'Modernisation of Canals'. This was followed by a presentation on 'Automation of Canals' by Dr. M. Selva Balan, Scientist E, CWPRS, Pune. Shri R. Ram, CE, KBJNL, Karnataka and Shri Rajesh Yadav from ADB were also present through virtual mode.



After detailed discussion on the challenges & need of canal modernization including earlier attempts made in this regard, Hon'ble Minister (Jal Shakti) desired to visit the Project site of Narayanpur Left Bank Canal (NLBC)

project site in Karnataka to get first hand exposure of works carried out and their efficacies and farmer's response on the same.



## 3rd meeting of the Organising Committee of 7th India Water Week- 2021

The 3rd Meeting of Organising Committee of 7th India Water Week-2021 was held under the Chairmanship of Shri Pankaj Kumar, Secretary, DoWR, RD&GR, Ministry of Jal Shakti & Chairman, Organising Committee of IWW-2021 on 03.06.2021. The Committee reviewed the progress of the Organisation of IWW-2021 and deliberated on impending activities considering the Covid-19 pandemic scenario. After exploring different options, the Committee recommended either to postpone the 7th India Water Week to the year 2022 or

to hold the event in Virtual mode as scheduled from 16-20th November 2021. The Committee submitted this recommendation before the Hon'ble Minister of Jal Shakti for taking a final decision. The Committee decided that considering India's BRICS Chairmanship 2021, BRICS Water Ministers Meet and BRICS Water forum may be held as scheduled on 16-17th November 2021 in Hybrid / Virtual mode as per the conditions prevailing at that time.

## Meeting regarding Tilaiya-Dhadhar Diversion Scheme

A meeting to discuss the water sharing dispute of the Tilaiya-Dhadhar Diversion scheme was held under the Chairmanship of Secretary, DoWR, RD&GR on 21.06.2021 through video conference. The meeting was attended by the Principal Secretary, WRD, Govt. of Bihar & Secretary, WRD, Govt. of Jharkhand, Additional

Secretary, Joint Secretary of DoWR, RD & GR and other officers of DoWR, RD & GR, MoJS. Chairman, CWC; Member (WP&P) and CE (IMO) attended the meeting from CWC's side. Chairman emphasized that both the States should amicably resolve the dispute to avoid judicial implications.



## Review of North Koel Reservoir project in Bihar and Jharkhand

A meeting was held under the chairmanship of Secretary, DoWR, RD & GR on 23.06.2021 through Video Conferencing to review the project progress and to resolve the pending issues of North Koel Reservoir Project in Bihar and Jharkhand.

The officers from DoWR, RD&GR; CWC (HQ), State Governments of Bihar & Jharkhand and WAPCOS participated in the meeting through VC. Chief Engineer (IMO), CWC & Member-Secretary, Technical Evaluation Committee (TEC) made a brief presentation on the various agenda points for discussion in the meeting. Detailed deliberations were held on each of the agenda items.



Secretary, DoWR, RD & GR requested Secretary, WRD, Govt. of Jharkhand & CE (P&M) Patna, WRD Bihar to expeditiously resolve the pending issues to ensure the completion of the project as per the target.

## Release of Ganga Basin Glacial Lake Atlas

The Secretary, DoWR, RD & GR released the Glacial Lake Atlas of Ganga Basin in a virtual event on 29.06.2021 in the presence of Secretary, Department of Space & Chairman, ISRO, Dr. K. Sivan and other senior officers of DoWR, RD & GR, Department of Space, National Remote Sensing Centre (NRSC) and State Government Authorities. The present glacial lake atlas is based on the inventoried glacial lakes in the upper part of the Ganga River basin from its origin to foothills of the Himalayas covering a catchment area of 2,47,109 sq. km. The study portion of the Ganga River basin covers part of India and the trans-boundary region. The Atlas is available on the Bhuvan portal of NRSC, ISRO (<https://bhuvan.nrsc.gov.in/nhp/>), India WRIS Portal ([www.indiawris.gov.in](http://www.indiawris.gov.in)) and NHP web site of DoWR, RD & GR ([www.nhp.mowr.gov.in](http://www.nhp.mowr.gov.in)).



Glacial Lake database (greater than 0.25 ha) for Indus & Ganga river basins has been received in CWC and the same will be utilised in the monitoring of glacial lakes in the Himalayan region.

## 3rd meeting of the Committee for Study on Issue of Flood & Siltation In River Ganga and its Tributaries due to Farakka Barrage

The 3rd meeting of the Committee for the "Study on the issue of floods and siltation in river Ganga & its tributaries due to Farakka Barrage in the State of Bihar" was held on 08.06.2021 under the Chairmanship of Chairman, CWC. The meeting was attended by officers from the Government of Bihar & NIH, Patna and other members of the Committee from CWC & DoWR, RD & GR (MoJS). Director, Hydrology(C), CWC apprised of the

developments since the last meeting held on 05.02.2021. The Representatives of RMSI gave a presentation on the submitted Inception Report and presented the status of the requested Data. Based on the inputs from Committee members, Chairman, CWC provided directions to the concerned stakeholders to expedite data collection in this regard.

## First meeting of Standing committee on Disaster Management

The first meeting of the newly constituted Standing Committee on Disaster Management (SC-DM) was held in Virtual Mode under the Chairmanship of Member Secretary, National Disaster Management Authority (NDMA) on 23.06.2021. The Standing Committee on Disaster Management (SC-DM) is a Committee of Space Applications Management System (SAMS) for enabling the effective use of space technology in the Disaster

Management domain. The meeting was attended by Chairman, CWC along with Member(RM) and Director(FFM), CWC. Chairman, CWC requested ISRO to map glacial lakes and water bodies of less than 10 ha area and also requested for hand-holding with CWC to enable to carry out the mapping. He also suggested for providing the relevant satellite data free of cost.

## 20th meeting of Water Resources Divisional Council Meeting of BIS

CWC, being an apex technical body in the water resources sector has been playing an important role in the formulation of standards in the field of water resources development and management and allied areas through its participation in various activities of the Water Resources Division Council (WRDC) and Civil Engineering Division Council (CEDC) of Bureau of Indian Standards (BIS). Chairman, CWC is presently the Chairman of WRDC. The 20th meeting of the WRDC was held on 29.06.2021 under the Chairmanship of Shri S. K. Haldar, Chairman, CWC. CWC is represented by its officers of the rank of Chief Engineer and Director in the 17 Sectional Committees of WRDC and 13 Sectional Committees of CEDC.

### Review the status of works of relining of Rajasthan and Sirhind Feeder

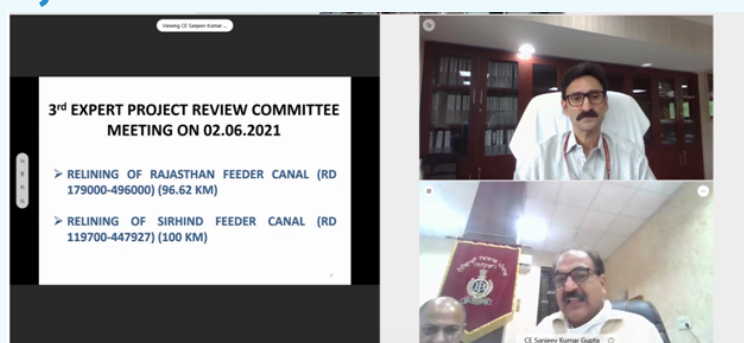
The 3rd Meeting of the Expert Project Review Committee under the Chairmanship of Member(WP&P), CWC was held on 02.06.2021 through Video Conferencing to review the status of works in respect of the Relining of Rajasthan Feeder and Sirhind Feeder. All the Members of the Committee comprising officials from CWC, Government of Punjab & Rajasthan, CWPRS, CSMRS and IIT Delhi were present.

Rajasthan Feeder and Sirhind Feeder have their offtake in the upstream of Harike Headworks constructed in downstream of the confluence of the Sutlej and the Beas Rivers. Sirhind Feeder with 5439 cusecs capacity at head serves both the States of Punjab and Rajasthan. It has a design capacity of 1668 cusecs at tail reach to provide water to Rajasthan. Besides irrigation, Sirhind Feeder provides drinking water to some areas in the States of Punjab and Rajasthan. Rajasthan Feeder with 18500 cusecs capacity is exclusively meant for providing water to the Indira Gandhi Nahar Project serving the command lying in the territory of Rajasthan. Besides irrigation, Rajasthan Feeder also provides drinking water to the State of Rajasthan. Rajasthan Feeder and Sirhind Feeder run parallelly with a common bank. These two canals were taken up for construction in the late 50's and were completed in mid 60's. Both the feeders were



### Meeting of Sectional Committee-WRD 05: On Draft "Geological Exploration for Tunnels – Guidelines"

A meeting was held on 21.06.2021 through Video Conferencing (VC) in view of the Covid-19 protocol. It provides the specific guidelines for geological investigation as required for fixing of tunnel alignments, evaluate geologic conditions along the tunnel route, requirement of geotechnical analysis and proposals for rock support and treatment of weak zones. It also covers both surface and sub-surface investigations to be carried out in different stages of investigations. After discussion, the proposed draft was sent for further comments to the concerned Organizations. Committee members from CWC participated in this meeting.



constructed as lined channels with brick tiles. Nevertheless, Seepage continued to occur which has increased in the recent past due to damages in the lining. The relining projects have been accorded Investment Clearance by DoWR, RD & GR in April, 2016 for Rs.1305.267 crore (Works- Rs 1210.417 crore and Estt- Rs 94.85 crore) and Rs.671.478 crore ( Works- Rs 623.08 crore and Estt- Rs 48.40 crore) respectively at 2015 price level. Further in 2018, cabinet approval was granted to provide Central Assistance amounting to Rs 205.758 Crore and Rs. 620.41 Crore for Sirhind Feeder (SF) and Rajasthan Feeder (RF) respectively. In addition to the above, CA amounting to Rs. 50.00 Crore was provided for Sirhind Feeder (SF) during 2013-14 and Rs. 105.84 Crore for Rajasthan Feeder (RF) during 2010-11. The Project details and current progress are summarized as under:

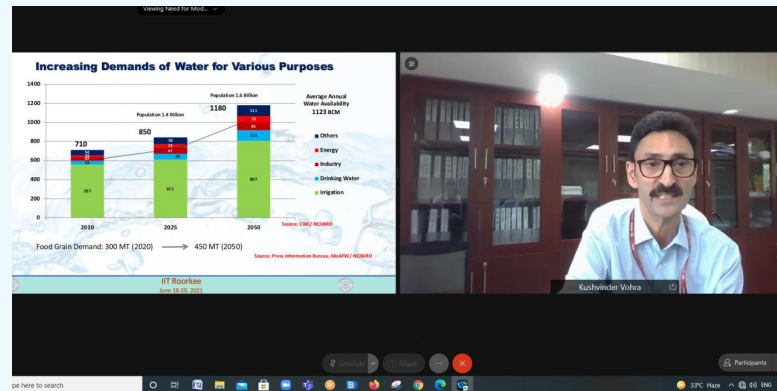
Particular	Sirhind Feeder	Rajasthan Feeder
<b>Total CCA (Lakh Ha)</b>	621000	1963000
<b>Estimated Water Saving after Relining (Cusec)</b>	256	560
<b>Stabilization/Improved Irrigation due to water saving (Ha)</b>	69096 (Punjab & Rajasthan)	98739 (Rajasthan)
<b>Relining Work Completed (Approx. km)</b>	44	23
<b>Total Expenditure as on May, 2021 ( Rs. Crore)</b>	221.13	187.89



## International E-conference on Water Source Sustainability held by IWRS and IIT, Roorkee

Shri Kushvinder Vohra, Member (WP&P), CWC was invited as the keynote speaker during the International e-Conference on Water Source Sustainability organized by IIT Roorkee and Indian Water Resource Society (IWRS) held during 18-20th June, 2021. The conference saw several national and international speakers talk on various aspects such as Water Supply & Demand Management, Water source sustainability, Sustainable Irrigation Management, Water Governance, Impact of Climate Change, etc. Shri K. Vohra made a presentation titled "Need for Modernization in Irrigation Infrastructure" during the event on 18.06.2021.

The presentation focused on the issues of low water use efficiency, low water productivity, lack of equitable & reliable service delivery, etc. related to Major & Medium Irrigation (MMI) projects in India as shown by various studies carried out by CWC and DoWR, RD&GR. It highlighted the need to focus on modernization of the irrigation projects and also showcased various initiatives

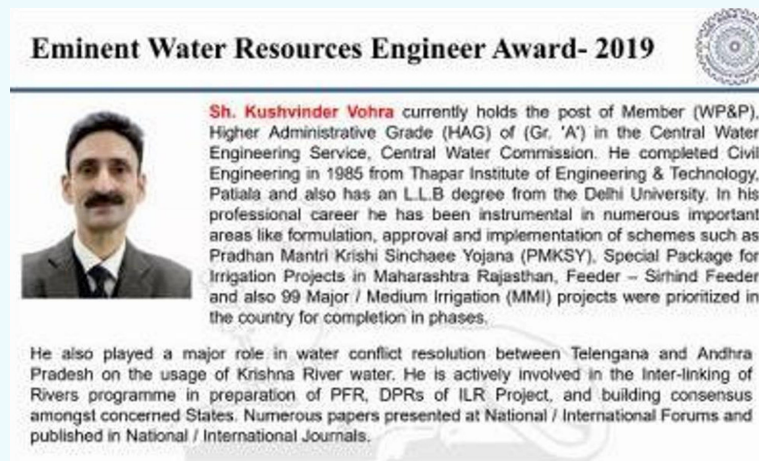


already undertaken by Govt. of India and some of the States towards Irrigation Modernization such as the use of Piped Distribution Network, Canal Automation, Extension Rehabilitation and Modernization (ERM) of Irrigation projects, Micro Irrigation, etc. The presentation also talked about the new initiative "Support for Irrigation Modernization Programme (SIMP)" taken up by CWC with the technical support from Asian Development Bank (ADB) to modernize MMI projects in India.

## IWRS Award to Member(WP&P), CWC

Indian Water Resources Society (IWRS) was founded in 1980 as a Society registered under the Societies Registration Act. IWRS Registered office is located in the Water Resources Development Training Center, I.I.T. Roorkee. IWRS has about 7408 individual members; 335 fellows and 48 institutional members. The main objective of IWRS is the advancement of knowledge in technical and policy aspects of water resources development and management. IWRS serves as a platform for free and frank discussions amongst those concerned with water-related issues.

Every year IWRS gives awards to the eminent scientists and engineers of this field. Shri Kushvinder Vohra, Member (WP&P), CWC was selected by the IWRS for "Eminent Water Resources Engineer Award-2019" for his contribution to the development of water sector in India. He has been instrumental in numerous important areas like formulation, approval and implementation of



schemes such as Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), special package for irrigation projects in Maharashtra, Rajasthan Feeder- Sirhind Feeder and also prioritization of 99 Major/ Medium Irrigation (MMI) projects. The Award was presented in the Inaugural session of the International E-Conference on Water Source Sustainability held on 18.06.2021.

## TAC-BB on the scheme, "Protection of Majuli Island from flood & erosion of river Brahmaputra"

The Members of the Technical Advisory Committee of Brahmaputra Board (TAC-BB) undertook a virtual visit to work sites of the Scheme "Protection of Majuli Island

## TAC-BB on "Restoration of Dibang and Lohit rivers to their original courses at Dhola-Hatighuli Phase-V"

The Technical Advisory Committee, Brahmaputra Board (TAC-BB) conducted a virtual visit to the project site "Restoration of rivers Dibang and Lohit to their original courses Phase-V - Conversion of the existing tie bund across the spill channel of river Dibang into a full-

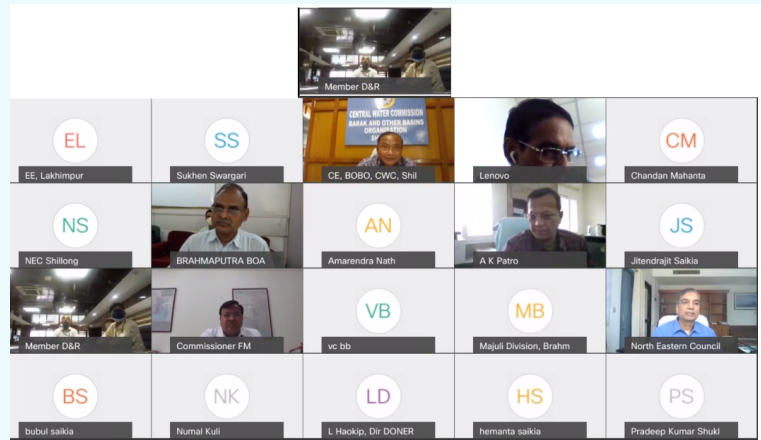
fledged embankment at Bahbari and construction of new embankment - Part-A of Phase - V" from 9:30 AM onwards on 16.06.2021. TAC-BB took stock of the progress of on-going works and suggested suitable measures on the technical challenges encountered during the execution of the work.

## Meeting of the Apex Committee to review the Flood Control Measures under the Chairmanship of Deputy Chief Minister, Delhi

Meeting of the Apex Committee to review the Flood Control Measures and preparedness before the onset of monsoon-2021 under the Chairmanship of Deputy Chief Minister, Delhi was held on 23.06.2021 and attended by Member(RM), CWC & Director FM-I, CWC.

## 4th visit of the Monitoring Committee for 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 on 18.06.2021 and 06.07.2021 to six reaches of bank revetment, three spur sites, CC block casting and RCC porcupine laying sites. The Committee was presided by Member(D&R), CWC, New Delhi. The Members of the Monitoring Committee were virtually taken to various work locations and executed works were shown with the help of photographs, video clips and live coverage from sites where internet connectivity could be established.



## Disaster Management Plan for DoWR, RD&GR and presentation on DMP

NDMA reviewed the Disaster Management Plan (DMP) of DoWR, RD & GR in a meeting which was held in Virtual Mode on 23.06.2021. Director (FFM) made a presentation on DMP of DoWR, RD & GR which has been mandated to act as a Nodal Authority for flood-like situations due to dam failures/ natural calamities etc. & matters related to flood forecasting.

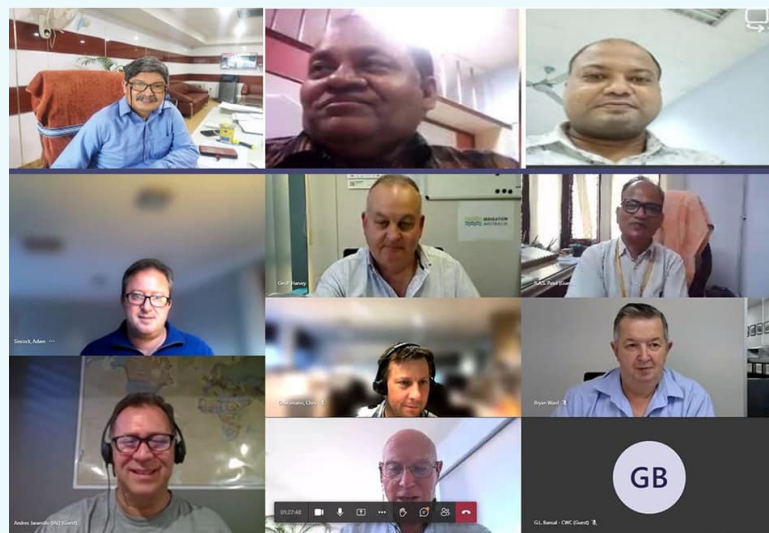
The meeting was attended by Shri. Kamal Kishore, Member, NDMA, Lt. Gen. Syed Ata Hasnain, Member, NDMA, Shri. Rajendra Singh, Member, NDMA, Shri. Krishna S. Vatsa, Member, NDMA, Dr. V. Thiruppugazh, Additional Secretary, Member (RM), CWC, Commissioner (FM) & SJC(FM), DoWR, RD&GR. NDMA Members appreciated the comprehensive DMP document of DoWR, RD & GR and suggested some additional features to be incorporated into the Plan.





## India-Australia Joint Working Group- Meeting for Subarnarekha Irrigation Project Irrigation efficiency Scope Study

India-Australian technical officers had a virtual meeting on 07.6.2021. The meeting was co-chaired by Mr. P. Dorje Gyamba, Chief Engineer (POMIO), CWC from the Indian side and Mr. Adam Sincok, Director, International Engagement and Urban Water Section (IEUW), Water Division from the Australian side. The meeting was also attended by officials from Irrigation Australia Limited (IAL) to whom the work 'scope of study' has been assigned by the Australian side. The last meeting was held on 10.3.2021. The agenda of the meeting was to introduce Subarnarekha Irrigation Project (Odisha) which has been taken up for Irrigation Efficiency Pilot Project under India-Australia MoU. Officials from CWC and WRD, Govt. of Odisha made a brief presentation on Maa Kichakeswari Panipanchayat Command under Subarnarekha project that included various aspects such as sources of water, land status, land holding of farmers, type of soil, groundwater status, rainfall, present irrigation infrastructure, implementation of CAD activities, present irrigation practices, present



agriculture produce, existing irrigation infrastructure, etc. Discussions were also held regarding the information required by IAL for carrying out the 'scope of study' under the pilot project and the same was provided to them.

## Baseline Studies of National Water Mission – Meeting with WALAMTARI, Hyderabad

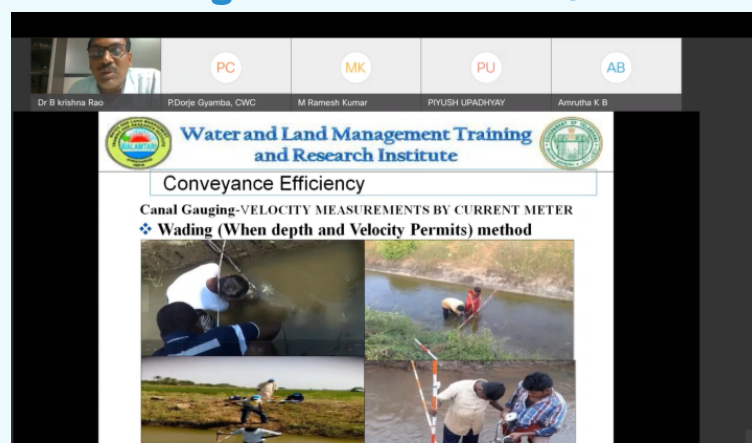
A meeting was held under the Chairmanship of Shri P. Dorje Gyamba, Chief Engineer (POMIO), CWC with the officials from State Government of Andhra Pradesh and Water and Land Management Training Research Institute (WALAMTARI), Hyderabad on 23.06.2021 through virtual mode to discuss the Draft Final Report submitted by WALAMTARI for Baseline Study of Rallapadu Medium Irrigation Project (Andhra Pradesh).

Baseline Studies have been taken up by National Water Mission (NWM) to assess the water use efficiency in Major/ Medium Irrigation Projects in the Country in line with one of the 5 goals of NWM, which is to increase the water use efficiency by 20%. CE (POMIO) is one of the members of the Core Group formed for steering these

## DRIP

### Meeting to Review the Progress of Partner Agencies of DRIP Phase II and Phase III

Joint Meetings to review the progress of the agencies of DRIP Phase II were held virtually with Rajasthan WRD, UJVNL, Manipur WRD, Meghalaya Power Generation Corporation Limited (MePGCL), Kerala WRD, KSEB and Gujarat NWR, WS & KD on June 11, June 15, June 16, June 18, June 23, June 25 and June 29, 2021 respectively. Deliberations were made on the progress achieved by the partner agencies and action plan to fulfil the readiness criteria of DEA which requires the award of civil contracts for a minimum of 30% of the cost estimate for loan signing with the World Bank. The meetings were attended by the officials of the Ministry, CPMU, World Bank and the State representatives.



studies and responsible for technical examination of Reports during the course of study in light of CWC's Guidelines for "Computing the Water Use Efficiency of Irrigation Projects".



## Flood Situation in the Country

During the period from 1st May to 30th June 2021, 852 flood forecasts (579 Level and 273 Inflow) were issued, out of which 777 (563 Level and 214 Inflow) forecasts were within the limit of accuracy with a percentage accuracy of 91.19%. No Red Bulletin (for Extreme flood situation) was issued and 97 nos. of Orange Bulletin (for Severe flood situation) were issued in the month of June from the Central Flood Control Room.

### Summary of flood Situation during May-June, 2021:

Flood Category	Reported by No. of Stations	State/UT
Extreme Flood Situation ( FF Station)	0	Not Applicable
Extreme Flood Situation ( Flood Monitoring Station)	1	Tamil Nadu
Severe Flood Situation (FF Stations)	16	Assam, Odisha, Bihar, Uttar Pradesh, Uttarakhand
Above Normal Flood Situation	37	Assam, Bihar, Jharkhand, Uttar Pradesh, West Bengal
Reservoirs having Inflow above threshold limit	28	Karnataka, Jharkhand, Odisha, West Bengal, Maharashtra, Bihar, Uttar Pradesh, Uttarakhand, Tamil Nadu



## Activities of CWC under NHP and Progress

Sl.No.	Item	Status
<b>1</b>	Procurement of Modern Technologies for measuring Hydro-meteorological data	
<b>a</b>	New ADCP	Tender for procurement of 29 nos. of ADCP is under process
<b>b</b>	Velocity Radar	Tender for Procurement of 13 no. of Velocity Radar System is under process
<b>2</b>	Reservoir Sedimentation Studies Using Hydro Graphic Survey	Work for Phase-I (32 no of reservoirs) has been awarded in Jan, 2021. Preliminary Survey of the 10 no. reservoir and Hydro-graphic survey of 6 no. of reservoirs has been completed.
<b>3</b>	Early Flood Warning System Including Inundation Forecast in Ganga Basin	Proposal has been sent to Ministry for approval. Work will be awarded after approval
<b>4</b>	Consultancy services for" Development of Decision Support System near to real time for Integrated Reservoir Operation System of Ganga Basin"	Proposal has been sent to Ministry for approval. Work will be awarded after approval
<b>5</b>	Study on the issue of Flood and Siltation in River Ganga and its Tributaries due to Farakka Barrage in the state of Bihar	Consultancy Services awarded in March, 2021. Inception Report has been submitted by the Consultant
<b>6</b>	Supply, Installation, Testing and Commissioning of Water Quality Testing Goods/Equipment and Related Services	Water Quality Testing Equipment 3 Nos. GCMS and 4 Nos. ICP-MS has been delivered to CWC Water Quality Labs
<b>7</b>	Real time Data Acquisition System in Narmada Basin	Contract Agreement signed in August, 2020. Work in progress
<b>8</b>	Real time Data Acquisition System in Arunachal Pradesh	Contract Agreement signed in Nov, 2020. Work in progress



## Reservoir sedimentation studies using Hydrographic Survey under NHP

Reservoir sedimentation is an issue of vital concern and is among the subjects of utmost importance in the water sector. CWC has planned to carry out a sedimentation survey of around 191 Reservoirs of national importance. For the studies, a fund amounting to Rs 30 crore has been approved in Project Implementation Plan (PIP) National Hydrology Project (NHP). Phase –I of the studies has already been started in February 2021 in which 32 reservoirs from the states of Rajasthan, Tamil Nadu, Himachal Pradesh, Karnataka and Bihar are taken

### Virtual Meeting regarding DVG and DEG Link with NWDA

Design(NW&S) Unit Officers from Embankment(NW&S), Gates (NW&S), BCD (NW&S) & HCD (NW&S) attended a virtual meeting with the NWDA officers on 29.06.2021 regarding providing relevant test/field data for taking up of the DPR designs for intrastate river links of Damanganga Vaitarna Godavari (DVG) and Damanganga Ekdare Godavari Link (DEG). From the NWDA side, the meeting was attended by Director General NWDA, Chief Engineer HQ, NWDA, Chief Engineer NWDA, Hyderabad & Superintending Engineer –I, NWDA, New Delhi and other officers.

up. The 3rd meeting for Monthly Progress Review of Reservoir Sedimentation Studies using Hydrographic Survey of 32 Reservoirs in India under National Hydrology Project (NHP) Phase-I was held on 09.06.2021 through Video Conferencing. The Monthly Progress Report for May 2021 was presented by M/s TVIPL representative and was reviewed by the Committee Members under the chairmanship of Chief Engineer, EMO, CWC.



### Financial Progress of Schemes/Components as on 30.06.2021 (Amount in Rs. crore)

Sl. No.	Scheme/Component Name	BE (2021-22)	Expenditure (As on June, 21)	Expenditure (in %)
1	Development of Water Resources information System (DWRIS)	166.100	20.262	12.20
2	Investigation of Water Resources Development Schemes (IWRD)	12.000	1.709	14.25
3	Flood Management & Border Areas Programme (FMBAP)	27.408	1.868	6.84
4	Infrastructure Development (ID) Schemes	4.500	1.228	27.29
5	Dam Rehabilitation and Improvement Project (DRIP)	25.000	1.850	7.4
6	National Hydrology Project (NHP)	23.905	1.504	6.29

## Water Sector News

- Kolkata sees more rainfall due to Yaas (The Statesman, 01.06.2021)
- Antarctic glacier is breaking up faster (Telangana Today, 13.06.2021)
- Water disputes affect AP-TS relations (Deccan Chronicle, 02.06.2021)
- Monsoon covers 80% of country's area (The Hans, 14.06.2021)
- Met department forecasts normal monsoon (The Hans, 02.06.2021)
- Nagarjunasagar to see seaplanes landing soon (Deccan Chronicle, 16.06.2021)
- Power demand for lift irrigation to cross 6.5 GW (Deccan Chronicle, 04.06.2021)
- Shah takes stock of flood preparedness (The Times of India, 16.06.2021)
- Southwest monsoon makes onset over Kerala (Deccan Chronicle, 04.06.2021)
- Mekedatu project : NGT closes suo motu proceedings (Deccan Herald, 19.06.2021)
- 147 projects under Namami Gange completed (Business Line, 04.06.2021)
- SYL project : Centre to push for Khattar-Amarinder meet (The Tribune, 19.06.2021)
- Rs. 1,169 cr World Bank plan to boost Shimla water supply (The Tribune, 04.06.2021)
- Indira Gandhi Canal repair accomplished in record time (The Hindu, 22.06.2021)
- Brahmaputra water level rising, parts of Kaziranga inundated (The Pioneer, 05.06.2021)
- Parliamentary panel holds meeting on glaciers, seeks to streamline research, warning systems (Indian Express, 22.06.2021)
- Two back-to-back cyclones delayed monsoon : Experts (The Tribune, 05.06.2021)
- TS, AP spar over power generation at Srisailem (The Hans, 29.06.2021)
- May records 2nd highest rainfall in 121 years : IMD (Millennium Post, 11.06.2021)
- 10 Lakshadweep islands might go under water in next 30 yrs. (The Hans, 29.06.2021)
- U'khand disaster was caused by massive rock and ice avalanche : Study (The Statesman, 12.06.2021)
- World's largest hydropower dam goes live in China ahead of CPC's centenary celebrations (The Statesman, 29.06.2021)

## Data Corner-Comparative figures of rainfall during the period 1955-2015

Sl. No.	Basins	Average RF in Water Year (1955-1984)		Average RF in Water Year (1965-1984)		Average RF in Water Year (1985-2015)	
		mm	BCM	mm	BCM	mm	BCM
<b>1</b>	Indus (within India)	762	303	752	299	895	356
<b>2</b>	Ganga- Brahmaputra- Meghna						
	a)Ganga	1069	978	1035	947	1007	914
	a)Brahmaputra	2589	551	2635	561	2330	495
	a)Barak & others	2462	126	2593	133	2625	134
<b>3</b>	Godavari	1122	365	1062	346	1117	365
<b>4</b>	Krishna	842	225	797	213	841	226
<b>5</b>	Cauvery	957	82	948	81	949	81
<b>6</b>	Subarnarekha	1412	40	1408	40	1427	40
<b>7</b>	Brahmani-Baitarani	1407	80	1369	78	1456	83
<b>8</b>	Mahanadi	1311	200	1237	189	1317	200
<b>9</b>	Pennar	684	38	675	38	716	40
<b>10</b>	Mahi	840	36	839	36	811	35
<b>11</b>	Sabarmati	726	25	711	24	727	25
<b>12</b>	Narmada	1133	117	1104	114	1045	108
<b>13</b>	Tapi	876	61	838	58	839	59
<b>14</b>	West Flowing Rivers from Tapi to Tadri	2664	161	2548	154	2661	161
<b>15</b>	West Flowing Rivers from Tadri to Kanyakumari	3059	166	2929	159	2773	151
<b>16</b>	East Flowing Rivers between Mahanadi & Pennar	1081	91	1035	88	1144	97
<b>17</b>	East Flowing Rivers between Pennar & Kanyakumari	928	95	938	96	960	98
<b>18</b>	West Flowing Rivers of Kutch & Saurashtra including Luni	482	100	465	96	479	100
<b>19</b>	Area of inland drainage in Rajasthan	317	51	305	49	302	49
<b>20</b>	Minor Rivers draining into Myanmar (Burma) and Bangladesh	1680	57	1733	58	1812	61
	<b>Total</b>	<b>1123</b>	<b>3945</b>	<b>1096</b>	<b>3853</b>	<b>1105</b>	<b>3880</b>

Source: Reassessment of water availability in basins using space inputs, 2019, CWC &amp; ISRO



## Training Programmes Conducted by NWA, Pune during June-2021

Sl. No.	Name of Training Programme	Duration/ Date	No. of Trainee	Category
1	Fourth International Distance Learning Course in Advanced Topics in Hydraulics, Hydrological Sciences and Hydrometeorology for Asian Region (in Progress)	31 <sup>st</sup> May 2021 – 16 <sup>th</sup> July 2021	91	RTC-WMO
2	Distance Learning Program on Water Resources Sector of India for School Teachers -V	01 <sup>st</sup> -03 <sup>rd</sup> June 2021	187	Mass Awareness
3	Distance Learning Program on Water Resources Sector of India for School Teachers -VI	02 <sup>nd</sup> -04 <sup>th</sup> June 2021	199	Mass Awareness
4	Distance Learning Program on Water Resources Sector of India for School Teachers -VII	07-09 <sup>th</sup> June 2021	183	Mass Awareness
5	Distance Learning Program on Water Resources Sector of India for School Teachers -VIII	08-10 <sup>th</sup> June 2021	178	Mass Awareness
6	Distance Learning Program on Water Resources Sector of India for School Teachers-IX	09-11 <sup>th</sup> June 2021	162	Mass Awareness
7	Purpose Oriented Training Through Distance Learning on Project Hydrology	07-18 <sup>th</sup> June 2021	92	Technical
8	Purpose Oriented Training through Webinar Series on e-Governance Tools	07-11 <sup>th</sup> June 2021	291	Technical
9	Training Program on Building Competencies for Personal Excellence in Public Governance with Art of Living Foundation, Bengaluru in on-line mode (Batch-I)	22 <sup>nd</sup> -25 <sup>th</sup> June 2021	20	Faculty Development
10	Webinar 1 :International Cooperation in water Sector of India: Role of Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti	07.06.2021	188	Policy
11	Webinar 2 : History of Development of International Water Law; Water Allocation in Transboundary basins; Helsinki Rules (1966), Berlin Rules(2004)	14.06.2021	179	Policy
12	Webinar 3 : International Water Law: The UN Watercourses Convention 1997 and other instruments	21.06.2021	164	Policy
13	Webinar 4 : Indus Water Treaty Surviving the odds	28.06.2021	168	Policy

## Higher Studies

Nine CWC Officers have been sponsored for pursuing 2 year M.Tech Course for 2021-23 at IISc Bangalore, IIT Roorkee and Anna University Chennai.

## Gallery



Dr R. K. Gupta , Member (D&R), CWC delivered presentation in the Webinar organised by ICID on its 72nd foundation day on 24.06.2021 on the theme Sustainability of Agricultural Water Management under difficult circumstances.



Fish Ladder- Polavaram Irrigation Project



Halon Dam, 31m high, 1000 m long composite gravity dam in MP on Halon river, a tributary of the Narmada river. It provides irrigation facilities to about 13000 ha land. It was. The project was designed by CWC and commissioned last year.

## Reservoir Monitoring

CWC is monitoring the live storage status of 130 reservoirs of the country and issues a weekly reservoir bulletin every Thursday. Out of the above, 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 the bulletin dated 24.06.2021, the live storage available in these reservoirs was 54.37 BCM which is about 31% of the total live storage capacity of these

## History

The dams and reservoirs have been playing the dual role of harnessing the river waters for accelerating socio-economic growth and mitigating the miseries of a large population of the world suffering from the vagaries of floods and droughts. Dams and reservoirs contribute significantly in fulfilling basic human needs such as water for domestic and industrial use, irrigation, flood control, hydropower, navigation and recreation.

The Krishna Raj Sagar (KRS) dam is located across the Cauvery River near Kannambadi village in Srirangapatna taluk of Mandya District which is a type of Gravity Dam constructed by means of Stone Masonry with Surki Mortar. KRS Dam is named after the Maharaja of Mysore, Krishna Raja Wodeyar IV, under whose reign the construction of this dam happened. The renowned Engineer and Bharat Ratna awardee Shri M. Visvesvaraya was associated with the design and construction of this majestic Dam.

Foundation Stone to the dam was laid in October 1911 and the construction of the Dam was completed in the year 1932. The dam is situated below the confluence of river Cauvery with Hemavathi & Laxmanathirtha and is approx. 14 km on the upstream side of the historic town of Srirangapatna and 19 km from Mysore City. The length of the Dam is about 2621 m and the maximum height of the dam above the lowest foundation is 42.672 m. The reservoir formed by the dam has a gross storage capacity of 1.400 BCM and a live storage capacity of 1.276 BCM. The reservoir has 2 canals on its right side and on its left side is one canal namely Vishveshwaraiah Canal.

reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 57.494 BCM and the average of the last ten years of live storage was 38.003 BCM. Thus, the live storage available in 130 reservoirs is 95% of the live storage of the corresponding period of last year and 143% of the ten year's average storage.

In last two years, CWC has added around 39 additional reservoirs under its monitoring network and live storage being monitored has been enhanced by around 12.24 BCM.



KRS dam is also one of the main sources of drinking water and irrigation water for Mandya and Mysore. Along with this, its major purpose is to ensure water supply to the Shivanasamudra hydroelectric power station. The dam is located in proximity to sightseeing Brindavan Gardens in Mysore.

The whole work, being of a magnitude requiring special attention, was carried out under departmental supervision and no contractors were employed at any stage. The number of labourers employed during the construction period was as many as 10,000 during the period of maximum work.

Recently, the project rehabilitation was included under the Dam Rehabilitation and Improvement Project (DRIP). In addition, an MoU has been signed by CWC to provide detailed Engineering Consultancy for the replacement of 136 gates of the Dam.



## 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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