



Shri Kushvinder Vohra
Chairman, CWC

Message

June 2023 has been a month filled with meaningful engagements and productive initiatives in the realm of water conservation, management, and dam safety. As we commemorated International Yoga Day and World Environment Day, the Central Water Commission (CWC) actively participated in various activities, fostering a spirit of enthusiasm among our dedicated employees.

Particularly noteworthy was the 4th National Water Awards, 2022. The Vice President of India, Shri Jagdeep Dhankhar, conferred honors upon 41 winners across 11 categories for their exceptional contributions to water conservation. In his address, Vice President Dhankhar applauded the awardees and stressed the crucial need for optimal utilization of our natural resources. Union Minister for Jal Shakti, Shri Gajendra Singh Shekhawat, highlighted government initiatives like Jal Jeevan Mission and Jal Shakti Abhiyan, emphasizing their role in addressing India's water

challenges. This event underscored the pivotal role of awarded projects in promoting a culture of sustainable water use.

Several impactful meetings marked the month, focusing on the implementation of the Dam Safety Act, 2021, and the Dam Rehabilitation and Improvement Project (DRIP). The 2nd meeting of the National Committee on Dam Safety (NCDS), which I chaired, approved seven regulations and two sub-committees, highlighting our commitment to ensuring the safety and resilience of dams. The review of DRIP, Phase-II, and dam safety matters on June 15, 2023, addressed critical agenda points, including the progress on the National Level Database of specified dams and the establishment of Centers of Excellence for Dam Safety. Additionally, a dam incident reported in Rajasthan in June 2023 underscores the ongoing challenges and the need for continued vigilance.

Our global collaborations remain a priority, with the India – EU Water Partnership meeting on June 22, 2023, discussing deliverables under Phase – II and outlining the methodology for the upcoming Phase – III of IEWP Action. This meeting emphasized joint development for common understanding, with proposed work areas including Urban

Flooding and Climate Change Adaptation.

Further, consultations regarding the establishment of a Centre of Excellence for Smart Water Resource Management, involving officials from the Embassy of Denmark and DHI, Denmark, took place on June 7, 2023. The need for a comprehensive proposal to transform the proposed Center of Excellence into a truly impactful institution was highlighted.

CWC organized a national workshop on 'Integrated Management of Sediments in River Basins and Reservoirs for Sustainable Development' on June 19, 2023 which were Inaugurated by Shri Pankaj Kumar, Secretary, DoWR, RD&GR. The workshop witnessed the participation of over 200 delegates from diverse sectors, contributing to valuable discussions on sustainable sediment management.

I express my gratitude to the CWC team and all stakeholders for their dedicated efforts. Together, we continue to advance the cause of water conservation and safety, ensuring a sustainable future for generations to come.



- Discussion draft regulations with World Bank team along with drafting members of the sub committee
- The 2nd Meeting of the National Committee on Dam Safety (NCDS)
- World Bank Implementation Support Mission of DRIP-I
- Assessment of status/progress on various issues under Dam Safety Act (DSA), 2021
- Monthly Review Regarding Various Issues Related to DRIP Phase-II and Dam Safety Matters
- Review of implementation of DRIP Phase-II & Phase-III and Dam Safety Act, 2021 in the state of Uttar Pradesh
- Situational report of dam incidents/failure
- Discussion on ToR for establishment of Centre of Excellence for Smart Water Resource Management
- Fifth Meeting with Bhutan delegation regarding Punatsangchu Hydroelectric Project
- Discussion with EU Delegation on the status of the deliverables under Phase – II of IEWP Action & methodology for upcoming Phase – III of IEWP
- Polavaram Irrigation Project
- Kishenganga HE project, J&K
- Lakhwar Multipurpose Project
- Saraswati River Revival Project
- 2D and 3D Numerical Hydraulic Model Studies for Reservoir Sedimentation of Ratle HE Project (J&K) being carried out by DHI
- Review Design issues of Daudhan Dam of KBLP
- SIMP Phase-2 Mid-Term Workshop Conducted by Central Water Commission and Asian Development Bank
- National Workshop on "Integrated Management of Sediments in River Basins and Reservoirs for Sustainable Development"
- Polavaram Irrigation Project at Rajahmundry, Andhra Pradesh
- Damring Irrigation Project (Meghalaya) and Burisuti Irrigation Project (Assam)
- Cholavaram Dam, Tamil Nadu
- Jigro Dam and Lower Khajuri Weir (Uttar Pradesh)
- Kumbho Dam, Odisha
- Lakhwar Multipurpose Project (300 MW)
- Rukura Dam, Odisha
- Discussion on the progress of the proposed 1st Census of MMI irrigation project & 1st Census of spring
- Internal consultative meeting on "proposed Centrally Sponsored Sub-Scheme Pradhan Mantri Sinchai Kshetra Adhunikaran Upyojana (PMSKAU)"
- 3rd meeting of the Working Group for reorientation of PMKSY-AIBP and CADWMScheme
- Inauguration of Hydrology (urban) directorate under HSO at CWC (Hq.)
- World Environment Day

DAM SAFETY ACT, 2021 AND DRIP

Discussion draft regulations with World Bank team along with drafting members of the sub committee

A meeting to finalize the seven draft regulations of section 54 of Dam Safety Act 2021 was held on 02.06.2023 under the chairmanship of Shri Sanjay Kumar Sibal, Chairman, NDSA & Member D&R, CWC with World Bank officers. The members of the Sub-Committee for framing of draft regulations were present in the meeting, which was held in hybrid mode.



The 2nd Meeting of the National Committee on Dam Safety (NCDS)

The 2nd meeting of National Committee on Dam Safety (NCDS) was held on 06.06.2023 at CWC (HQ), New Delhi. The meeting was chaired by Shri Kushvinder Vohra, Chairman, NCDS & CWC. The meeting was attended by Shri Sanjay Kumar Sibal, Member (D&R) and other members of NCDS i.e. representatives of the Central Government, representatives of the State Governments from Andhra Pradesh, Bihar, Gujarat, Rajasthan and Specialists in Dam Safety Shri D.K. Sharma, Chairman, HP Electricity Regulatory Commission and Prof. C.V.R. Murty, Institute Chair Professor, Civil Engineering, IIT Madras. During the meeting, 7 regulations prepared under section 54 (2), and



two sub-committee(s) viz. Structural Engineering and Earthquake Safety of dams, Capacity Development were approved by the committee members. In addition to this, other agenda points were deliberated in detail.

World Bank Implementation Support Mission of DRIP-I

Shri Vijai Saran, Project Director, DRIP and Chief Engineer DSO, CWC, Shri S.S. Bakshi, Director, DSR/CPMU, Shri Saurabh Sharan, Dy. Director,

DSR, Shri Bhise Yogesh Nanasaheb, Dy. Director, DSR and Shri Siddhant Azad, Dy. Director, DSR attended the World Bank Implementation Support

Mission of DRIP-II, organized by World Bank from 7th to 9th June 2023 at New Delhi to review the progress of all the Implementation Agencies. Shri Samir Kumar Shukla (Director, FE&SA Directorate), Shri Prabhat Kumar (Deputy Director, FE&SA Directorate) and Shri Yogesh Kumar Gupta (Assistant Director, FE&SA Directorate) also participated. Under the Scheme, tenders amounting approx. Rs 2519.854 Cr published, and contract(s) amounting Rs 1560.72 Cr awarded. The expenditure incurred so far is Rs 733 Cr up to May, 2023. The loan disbursed so far by the World Bank is US\$ 44 million. The overall progress by the states was satisfactory.

Shri Vijai Saran, Project Director, DRIP and Chief



Shri Pankaj Kumar, Secretary DoWR, RD & GR and Ms Debashree Mukherjee, Special Secretary, DoWR, RD & GR and Shri Anand Mohan, Joint Secretary (RD & PP) attended the Wrap Up session of the review mission.

Assessment of status/progress on various issues under Dam Safety Act (DSA), 2021

A Meeting was held under the Chairmanship of Shri Sanjay Kumar Sibal, Chairman, NDSA & Member (D&R), CWC on 12.06.2023 to assess the status/progress on various issues under Dam Safety Act (DSA), 2021 as discussed during the meeting held on 12.05.2023 and various other issues. The meeting was attended by members of NDSA and SDSOs of eleven states having more than 100 dams viz. Maharashtra, Madhya Pradesh, Odisha, Rajasthan, Gujarat, Chhattisgarh and Karnataka (states having more than 200 Specified Dams) and states of Andhra Pradesh, Tamil Nadu, Telangana, Uttar Pradesh (states having more than 100 Specified Dams) on the virtual platform. The concerned Regional Directors of NDSA, Member (Technical), Member (Regulations) and Member (Disaster and Resilience) also attended the meeting. The various other issues discussed during



the meeting include Updating the list of specified dams, Categorization of Inspected dams, Remedial action taken for Category-I and Category-II dams based on inspections and timelines to complete these remedial actions, Preparation of Annual Report for Assessment Period 2022-23 by all SDSOs etc. Chairman NDSA also reviewed measures proposed by dam owners for category-I & II dams to avoid any untoward incident.

Monthly Review Regarding Various Issues Related to DRIP Phase-II and Dam Safety Matters

A review meeting on Dam Rehabilitation and Improvement Project (DRIP), Phase-II, and Dam Safety matters took place on 15.06.2023 in New Delhi under the chairmanship of the Secretary, DoWR, and RD & GR. Key agenda points covered progress on updating the National Level Data Base, the process for appointing an Engineering and Management Consultant for DRIP, establishment of Centers of Excellence for Dam Safety, including

collaborations with IIT Roorkee and IISC Bangalore, and the status of various proposals and regulations under the Dam Safety Act, 2021. Discussions also included the constitution of Sub-Committees of the NCDS, creation of posts for NDSA, and the status of dam inspections and follow-up actions. Capacity building initiatives for Central/State Government officials in diverse areas of Dam Safety were also addressed.

“ NO MATTER, HOW MUCH RICH YOU ARE, YOU CAN'T LIVE WITHOUT WATER ”

Review of implementation of DRIP Phase-II & Phase-III and Dam Safety Act, 2021 in the state of Uttar Pradesh

Shri Vijai Saran, Project Director, CPMU-DRIP & Chief Engineer, DSO & Member (Policy & Research), NDSA Chaired a meeting on review of implementation of DRIP Phase-II & Phase-III and Dam Safety Act, 2021 in the state of Uttar Pradesh on 28.06.2023 at Lucknow. Shri Prabhat Kumar, Dy. Director, FE&SA, CWC and Shri Ankit Kumar, Dy. Director, FE&SA Dte also attended the meeting. Chief Engineer, SPMU, Project Director, SPMU, and other senior officials of UP I&WRD also participated in the meeting.

Project Director, CPMU-DRIP along with Chief Engineer, SPMU, UP and Project Director, SPMU,



UP also met Principal Secretary, UP I&WRD on 28.06.2023 and had detailed discussions regarding facilitating implementation of DRIP Phase-II & Phase-III and Dam Safety Act, 2021 in the state of Uttar Pradesh and review of all category I & II dams in UP.

Situational report of dam incidents/failure

The Bi-weekly situational report on dam incident/failure provided by the field offices of CWC is being compiled and submitted to the office of Hon'ble Ministry of Jal Shakti. In the month of June, 2023, O/o Director (M&A), Yamuna Basin

Organization (YBO), CWC, Jaipur reported damage/breach of Surawa Dam & Panchala Dam in the Jalore district, Rajasthan which was caused by heavy rainfall due to Biparjoy cyclone during 16th -17th June 2023.



MEETINGS WITH FOREIGN DELEGATION

Discussion on ToR for establishment of Centre of Excellence for Smart Water Resource Management

A meeting was held under the chairmanship of Chairman, CWC to discuss draft ToR for establishment of Centre of Excellence for Smart Water Resource Management on 07.06.2023 in Sewa Bhawan, New Delhi. The meeting was attended by the officials from Embassy of Denmark at New Delhi and DHI, Denmark and senior officers from CWC. During the meeting it was emphasized to Denmark side to frame ToR and activities under

it, which will make the proposed CoE (Modeling Centre) a truly Centre of Excellence instead of making it a pilot study oriented centre. Denmark side noted the views of CWC and assured to come up with proposal meeting requirements/expectations of CWC. In this regard, a reminder e-mail has been sent to Denmark side on 19.07.2023 for early submission of proposal regarding Centre of Excellence. Further response from Denmark side is awaited.

Fifth Meeting with Bhutan delegation regarding Punatsangchuu Hydroelectric Project

Fifth Meeting of the Eight-Member Inter governmental Group (IGG) for Punatsangchhu-I Project was held from 8th to 9th June 2023 at Shangri-La Eros, New Delhi. The Chairperson of Eight-member Inter Governmental Group constituted by the GOI and Royal Govt of Bhutan for Punatsangchhu-I Hydroelectric Project met Shri Kushvinder Vohra, Chairman, CWC on 8th June 2023. Shri Sanjay Kumar Sibal Member (D&R), officers from Ministry of External Affairs/Bhutan Embassy and Indian Embassy were also present. Discussions on Dam design, Barrage design, cost



comparisons on Dam and barrage options as well as discussions on recommendation & way forward by IGG to the two Governments were done.

Discussion with EU Delegation on the status of the deliverables under Phase – II of IEWP Action & methodology for upcoming Phase – III of IEWP

The meeting of the India – EU Water Partnership to discuss the status of the deliverables under Phase – II of IEWP Action & methodology for upcoming Phase – III of IEWP was held under the chairmanship of Shri Kushvinder Vohra, Chairman, CWC & Ex Officio Secretary to Govt. of India on 22.06.2023. The meeting was attended by Officials from CWC, delegations of the European Union (EU) and representatives from GIZ.

In the meeting, discussion was held regarding the Terms of Reference (ToRs) of the Phase-III of IEWP Action and that, it should be developed jointly for the common understanding among

partners. It was suggested by CWC to include two work areas namely, (i) Urban Flooding and (ii) Climate Change Adaptation. Chairman, CWC stressed on the need of in-situ Capacity Building of Indian officials to ensure better and continuous learning prospects. Project Manager, IEWP Action (GIZ) also mentioned that trainings in collaboration with NWA, Pune are planned to be organized by September 2023.

The Phase – II of IEWP Action was also discussed. It was apprised that the River Basin Management Plan for Tapi River basin would be available as deliverable of Phase – II.



MEETING REGARDING PROJECT

Polavaram Irrigation Project

A review meeting was held under the chairmanship of Hon'ble Minister of Jal Shakti on 01.06.2023 at Shram Shakti Bhawan, New Delhi. The meeting was attended by Shri Sanjay Kumar Sibal, Member (D&R). In the meeting, physical and financial progress of Polavaram Irrigation Project were reviewed. The other important matters discussed were additional PDFs proposed for phase-I due to LIDAR survey, cost estimate proposed by Government of Andhra Pradesh for balance works of phase-I, plan of action for balance civil works, scour treatment and health assessment required remedial measures for upstream coffer dam, including timelines for various activities, status of issues pertaining to submergence in Odisha, Chhattisgarh and Telangana.



Another meeting taken to discuss the issues related to Polavaram Irrigation Project was attended by Shri Sanjay Kumar Sibal, Member (D&R) on 05.06.2023. The meeting was taken by Shri Kushvinder Vohra, Chairman, CWC with officials of WRD, GoAP, CWC, M/s WAPCOS, CSMRS, CWPRS and project design consultants.

Kishenganga HE project, J&K

A meeting was taken by Shri Kushvinder Vohra, Chairman, CWC on 03.06.2023 with Mr. G.R. Basson, the Technical Expert for Indus Water Treaty (IWT) matters related to the case before the Neutral Expert for Kishenganga and Ratle HEPs, on hybrid mode. The meeting was attended by Shri Sanjay Kumar Sibal, Member (D&R), Shri Vivek Tripathi, CE, Designs (N&W), Shri Ashok Kumar

Kharya, CE, EMO, Shri Govardhan Prasad, Director, Hydrology (S), Shri N.S. Shekhawat, Director, HCD(N&W), Smt. M.S. Harshitha and Shri Rajeev Kumar Tank, Deputy Directors, HCD(N&W). Officers from NHPC were also present in the meeting. Studies related to 2D/3D Numerical Modeling for Reservoir Sedimentation of Ratle HEP were discussed.



Lakhwar Multipurpose Project



A meeting on Lakhwar Multi-Purpose Project, Uttarakhand was held between officers of CWC, UJVNL, CSMRS and NIRM on 08.06.2023 in Central Water Commission, New Delhi. In the meeting, preliminary outcomes of 3D numerical model studies being carried out by NIRM and its impact on design of power house complex of the Lakhwar MMP, Uttarakhand was discussed.

Saraswati River Revival Project

Meeting to review Saraswati River Revival Project was attended by Shri Sanjay Kumar Sibal, Member (D&R) on 23.06.2023 in CWC, New Delhi under the Chairmanship of Shri Kushvinder Vohra, Chairman, CWC. The meeting was convened between officials of CWC, CSMRS, HSHDB and I&WRD, Haryana. During the meeting, the progress of the Saraswati River Revival Project was reviewed and further course of action required for various issues related to the project were discussed. In the meeting, Haryana Saraswati Heritage Development Board (HSHDB) has proposed to develop a project comprising of the following components, to revive the Saraswati River by transferring the water of Somb River:-

- Adi Badri Dam on Somb River in the territory of Himachal Pradesh. (Storage 2 MCM)
- Somb Saraswati Barrage at about 2.5 km d/s of the Adi Badri dam on Somb River. (Storage 0.45 MCM)
- Underground Conveyance Pipelines of about 7.5 km to transfer water from Somb River to Saraswati Reservoir.



- Saraswati Reservoir on Panchayat land at about 7.5 km from the barrage to store the diverted water (Storage 15 MCM)

Various agenda points were discussed and detailed deliberations took place. Chairman, CWC assured all possible cooperation for expediting the progress of works and discussed in detail various aspects pertaining to planning and design of the project. Shri Dhuman Singh Kirmach, Dy. Chairman, Haryana Saraswati Heritage Development Board & Dr. R. Chitra, Director, CSMRS also participated in the meeting.

2D and 3D Numerical Hydraulic Model Studies for Reservoir Sedimentation of Ratle HE Project (J&K) being carried out by DHI

3rd meeting of Consultancy Monitoring Committee (CMC) was held on 27.06.2023 under chairmanship of Shri Sanjay Kumar Sibal, Member(D&R) at Sewa Bhawan, New Delhi to discuss the reports received from DHI with regard to on-going 2D and 3D

numerical hydraulic model studies for Reservoir Sedimentation of Ratle HE Project (J&K) and also to discuss the study report on Kishengana HEP received from Prof. G.R. Basson, the Technical Expert for IWT matters.

Review Design issues of Daudhan Dam of KBLP

On 30.06.2023, Secretary, DoWR, RD&GR, MoJS presided a meeting to discuss design issues of Daudhan Dam of Ken Betwa Link Project (KBLP), M.P. with Central Water Commission. The meeting was attended by Shri Sanjay Kumar Sibal, Member (D&R), CWC and other senior officers from concerned departments including Central Water Commission, NWDA and NHPC. The Secretary was apprised that the draft tender document of the Daudhan dam has been finalized by the Technical advisory Group (TAG) of KBLPA and it is proposed

to take up the work in Engineering, Procurement and Construction (EPC) mode. It was further brought out that the TAG, after detailed deliberations, opined that in the present layout of Daudhan dam of the year 2007 with a spillway on the left bank, a huge quantity of the work material shall be required to be excavated for diversion channel and other works and the excavated material shall require to be disposed outside the PTR. This may be a time consuming process and may not be economical also.

MEETING REGARDING PROJECT

During the meeting, Shri Sanjay Kumar Sibal, Member (D&R) submitted an alternate layout plan of the dam, keeping the spillway in the centre (river portion) and also adopted low level orifice spillway as per the latest technology for flood and silt management in the river. With a central spillway, the diversion arrangement during the construction period can be made in the central portion of the river itself. This will bring out a

significant reduction in the excavation resulting in speedy construction and also bring the advantage of sediment flushing to increase the longevity of the dam, besides reducing the gate size.

After detailed deliberations, it was decided in the meeting that the layout plan with a spillway in the central portion of the river with a low-level orifice spillway proposed by CWC may be adopted.



SEMINAR/WORKSHOP

SIMP Phase-2 Mid-Term Workshop Conducted by Central Water Commission and Asian Development Bank

On 09.06.2023, a Mid-Term workshop for the Support for Irrigation Modernization Program (SIMP-II) was organized by CWC and ADB at Hotel Leela Palace, New Delhi. In the workshop WRD Officers from Haryana, Rajasthan, Maharashtra and Karnataka and Officers of CWC under the Ministry of Jal Shakti, New Delhi participated. The workshop was inaugurated by SAER Director Ms Mio Oka and Chief Engineer Mr P. Dorje Gyamba, POMIO, CWC. Chief Engineer Gyamba emphasized the need for modernizing Major and Medium Irrigation (MMI) projects to enhance water use efficiency (WUE) in alignment with the Vision@2047 of the Ministry of Jal Shakti.

During the workshop, discussions included the status of the Irrigation Modernization Plan (IMP) for selected projects, with a special mention of the Loharu project in Haryana. Ms Mio Oka from ADB highlighted SIMP as a flagship initiative for achieving critical ambitions in climate resilience, agriculture development, rural roads, and market



Support for Irrigation Modernization Program (SIMP - Phase II) Mid-term Workshop

9 June 2023, New Delhi

linkages. Mr. Lance Gore, Principal Water Resources Specialist, ADB, discussed ADB's investments in water management modernization in India, emphasizing support for project readiness.

Key presentations covered topics such as a national strategy on modernization, the Loharu IMP, a draft protocol on Water Use Efficiency, and various approaches to improving water productivity, showcasing the comprehensive efforts and collaborative approach of the stakeholders towards achieving sustainable water management in India.

National Workshop on "Integrated Management of Sediments in River Basins and Reservoirs for Sustainable Development"

CWC organized one-day national workshop on 'Integrated Management of Sediments in River Basins and Reservoirs for Sustainable Development' on 19.06.2023 at New Delhi. The event was inaugurated by Shri Pankaj Kumar, Secretary, DoWR, RD&GR in the presence of Ms. Debashree Mukherjee, Special Secretary, DoWR, RD&GR and Shri Kushvinder Vohra, Chairman, CWC. The technical sessions were chaired by Shri Kushvinder Vohra, Chairman, CWC, Shri Sanjay Kumar Sibal, Member(D&R), Shri Naveen Kumar, Member(WP&P) and Shri P. Manroi Scott, Member(RM). More than 200 delegates from different Central Ministries, States/UTs, Academic

Institutes and Implementing Agencies of Dam Rehabilitation and Improvement Project (DRIP) participated.

In his address Chairman, CWC highlighted that long serviceable life of dam/reservoir is crucial to water resources development and management. Most dams are gradually being filled up. Studies undertaken by Central Water Commission shows that average loss of gross storage is about 0.45% per year, and that of live and dead storage is about 0.3% and 0.95% per year, respectively. He mentioned that Ministry of Jal Shakti has also recently formulated a "National Framework on Sediment Management" which emphasizes on

systematic and holistic planning with minimum ecological impacts. At present, Central Water Commission is collecting sediment data at 407 sites. He highlighted the Sediment management works being carried out under the Dam Rehabilitation and Improvement project (DRIP) scheme.

In the workshop, presentations were made by



subject experts on wide range of topics such as national framework on sediment management, sediment assessment studies, application of geomorphological tools for river morphological health assessment, modeling tools for basin scale assessment of sediment loads etc. Many States/UT's shared their experience through interventions.

VISIT/INSPECTION

Polavaram Irrigation Project at Rajahmundry, Andhra Pradesh

Polavaram irrigation project is a multipurpose project on river Godavari (about 42 km upstream of Sir Arthur Cotton Barrage). The project envisages providing water for irrigation, domestic purpose, industries along with generation of hydropower.

Partial damages were observed in cut off wall and guide bund constructed on the left side upstream of spillway of the project on 03.06.2023. In this context, DoWR, RD & GR vide office memorandum no. P-30028/1/2021-O/o SJC (SPR-I)-MoWR dated

07.06.2023 constituted fact finding committee under chairmanship of A.B. Pandya, Secretary General- ICID. The committee members include Shri Sanjay Kumar Sibal, Member (D&R), CWC, Shri Sriram Vedire, Advisor, MoJS, Shri Shivnandan Kumar, CEO, PPA and Dr. (Smt.) R. Chitra, Director, CSMRS. The committee along with the officers of WRD, PPA, WAPCOS and MEIL visited the project site in the forenoon of 15.06.2023 and a meeting was convened with all concerned in the afternoon of the same day.

Damring Irrigation Project (Meghalaya) and Burisuti Irrigation Project (Assam)

The work of Survey & Investigation and preparation of Detailed Project Report (DPR) of Damring Irrigation Project (Meghalaya) and Burisuti Irrigation Project (Assam) have been entrusted to NEID-I and NEID-III respectively under IWRD Scheme of DoWR, RD & GR, MoJS. A joint field visit of CWC Designers, CWC Field Officers, concerned State Government Officials etc to these projects were undertaken from 19th- 24th June 2023.

The CWC Design team comprising of Sh. S. K. Sharma, Director, BCD (E&NE), Sh. Ashutosh

Cholavaram Dam, Tamil Nadu



Anand, Deputy Director, CMDD (E&NE) and Sh. Sagar Rawat, Assistant Director, Hydrology (NE) visited the proposed sites of Damring Irrigation Project (Meghalaya) and Burisuti Irrigation Project (Assam) and held discussions with State Government Officials.

Shri Bhise Yogesh Nanasahab, Dy. Director, DSR Dte visited Category-I- Cholavaram Dam, Tamil Nadu along with the team of officers of CWC and CSMRS, led by Sh R Thangamani, Regional Director, Southern Region NDSA, Chennai and inspected the Cholavaram Dam, Tamil Nadu on 24th June- 2023. During the inspection, a team of officers from WRD, Tamil Nadu also participated.

Jigro Dam and Lower Khajuri Weir (Uttar Pradesh)

Shri Somesh kumar, Director, Embankment (N&W) Dte has visited, 02 Nos. of category-I dams, i.e Jigro dam and Lower Khajuri Weir in the state of Uttar Pradesh (As per Post Monsoon-2022 and Pre

Monsoon -2023 inspections) from 26 June to 28 June 2023 vide NDSA(HQ) office order no. Mi/35/2023-NDSA-MOWR-Part(1) dated 21.06.2023 and report submitted vide letter no. NDSA/NR/2022/650-656 dated 30.06.2023.

Kumbho Dam, Odisha



Shri Siddhant Azad, Dy. Director, DSR Dte visited Category-I- Kumbho Dam, Odisha along with the team of officers of CWC and CSMRS, led by Sh

Sanjay Kumar Singh, Regional Director E&NE Region NDSA, Guwahati and inspected the Kumbho Dam, Distt Bargarh, Odisha on 28th June-2023. During the inspection, a team of officers from WRD, Odisha also participated. Based on the Post-Monsoon (2022-23) and Pre- Monsoon (2023) inspections, Odisha State Dam Safety Organisation classified the Kumbho Dam as Category-I Dam meaning "Deficiencies which may lead to failure". After the inspection of the Dam, the team has submitted the Inspection Report to Chairman NDSA.

Lakhwar Multipurpose Project (300 MW), Dakpathar, Uttarakhand

A joint inspection visit of officers of Instrumentation Dte., CWC, CSMRS and UJVNL to Lakhwar Multipurpose Project was conducted on 27.06.2023 as per the request of GM, Lakhwar MPP, UJVNL. From CWC, Director (Instrumentation) and Dy. Director (Instrumentation) visited the project site. After the field visit, discussions were held in Dakpathar office on 28.06.2023 regarding Instrumentation of the power house and other related issues of the project.



Rukura Dam, Odisha

Shri Siddhant Azad, Dy. Director, DSR Dte visited Category-I- Rukura Dam, Odisha along with the team of officers of CWC and CSMRS, led by Sh Sanjay Kumar Singh, Regional Director E&NE Region NDSA, Guwahati and inspected the Rukura Dam, near Bonai town, Odisha on 29th June-2023. During the inspection, a team of officers from WRD, Odisha also participated. Based on the Post-Monsoon (2022-23) and Pre- Monsoon (2023) inspections, Odisha State Dam Safety Organisation



classified the Rukura Dam as Category-I Dam meaning "Deficiencies which may lead to failure". After the inspection of the Dam, the team has submitted the Inspection Report to Chairman NDSA.



TRAINING

Updating of the model (openLISEM & Delft 3D modelling software) – Theory and Practical & revision on morphological analysis

Hydrology(C) Dte, CWC organised a training on "Updating of the model (openLISEM & Delft 3D modelling software) – Theory and Practical & revision on morphological analysis" under the project Physical based Mathematical Modelling for Estimation of Sediment Rate and Sediment Transport in Seven (7) River Basins for 20 CWC officials which was held from 14.06.2023 to 20.06.2023.



Discussion on the progress of the proposed 1st Census of MMI irrigation project & 1st Census of spring

On 09.06.2023, a meeting chaired by the Secretary of DoWR, RD & GR addressed the progress of the 1st census of Major and Medium Irrigation (MMI) projects and Springs. Representatives from CWC, including Member WP&P, Chief Engineer PMO, and Director P&P, participated. The Secretary urged expedited preparation of census material and a tabulation plan by CWC, aligning with the 7th MI and 2nd Water Bodies census. NIH officials presented the finalized schedules, concepts, and the ISHVAR app for Spring census, with the Secretary recommending NIC's examination for future deployment.

Another meeting on 23.06.2023, under the

Secretary's chairmanship, discussed the 7th MI census, 2nd water bodies census, and 1st census of MMI projects and Springs. CWC submitted revised schedules and tabulation plans. The Secretary urged immediate sharing with State/UT Governments, formal letters to NIC for cost estimates, and to State Governments for department nominations. Nodal officers were appointed for CWC, NIH, and NIC. The Secretary proposed launching the censuses in August 2023 and suggested an MoU between MI(Stat), CWC, and NIH. Publication timelines set by MI(Stat) for various censuses aim for completion by December 2025, with a call for possible revisions for an early release.

Internal consultative meeting on "proposed Centrally Sponsored Sub-Scheme Pradhan Mantri Sinchai Kshetra Adhunikaran Upyojana (PMSKAU)"

DoWR, RD & DR is envisaging a sub scheme for Modernization of Command Area Development works (Pradhan Mantri Sinchan Kshetra Adhunikaran Upyojna) as a sub component of already approved PMKSY-CADWM Scheme. The Sub scheme is proposed to be operated out of the likely savings of PMKSY-CADWM. The Sub Scheme is envisioned with extensive use of modernization of supply network from established source to the farm gate up to 1 Ha with underground pressurized pipe irrigation network and integration with established communication technology like IoT/SCADA for volumetric Measurement, Extensive use of technology – like Geotagging of infrastructure and GIS command area mapping, app Based Control, MIS Portal, Knowledge Tool Kit. The proposed ownership and control would be through Water Users Society. In this regard Central Water Commission has offered following suggestions/observations on the Concept Paper. Main suggestions /observations are as follows:

- It is envisaged as Key Quantifiable outcome that increasing overall WUE by 20% in a command of 4.25 lakh ha will lead to anticipated saving up to 0.9 BCM. It is further mentioned that 0.9 BCM of water can be easily used for Expansion of Command, augmenting flows for 24-hour water supply in nearby cities or returning the flow to rivers. The detailed project report should specifically indicate these parameters in quantifiable manner
- Micro irrigation is not popular among paddy

cultivators due to some misconception. Expert opinion on its advantage may be widely circulated among farmers. One pilot project in each district of paddy grown area may be promoted to evolve the success story.

- The success model of micro irrigation as implemented in the "Ramthal Lift Irrigation Project (Karnataka)" and the "Narmada Canal Project (Rajasthan)" are good examples. In the concept paper, in addition to micro irrigation use of IoT and SCADA control are also proposed. Such success stories and the related studies may be widely shared and circulated among the implementation agencies, stake holders and cultivators with proper reference so that they may be better convinced and motivated for the adoption of micro irrigation.
- As per Key parameters for sustainability, the successful WUS can create Farmer producer Companies (FPCs). Further it is stated that vendors will deal with the WUS directly instead of relying on the already overburdened 30 States/UT Governments. Institutionalized legal framework may also be required for the same and hence, in this regard views of Ministry of Law and Justice and Ministry of Agriculture & FW may also be obtained.

Broadly, it is felt that the idea behind the Sub Scheme is appealing, as it will save the water and would also help in expanding the area under irrigation.

3rd meeting of the Working Group for reorientation of PMKSY-AIBP and CADWM Scheme

The 3rd meeting of the Working group for re-orientation of PMKSY-AIBP and CAD&WM was held on 13th June, 2023 under the chairmanship of Member (WP&P). The second agenda item assigned to Working Group is integration of drinking water with projects to be funded under PMKSY-AIBP project for source stabilization. Department of Drinking Water and Sanitation informed that surface water is contributing significantly in Jal Jeevan Mission. Convergence of AIBP projects with drinking water components is required for sustainable source stabilization. Further, under ERM projects, part of saved water may also be assigned for drinking water under Jal Jeevan

Mission. Benefits Cost Ratio (BCR) of drinking water component under water resources projects were also discussed. For urban water supply benefits are being taken as per the bulk supply rates notified by State Governments/PHED/Local municipalities, as per the guidelines. However, for rural water supplies such benefits are not included during calculation of BCR. It was suggested that wherever water charges are notified, the BCR may be calculated as per the prescribed guidelines. However, in areas where water charges have not been notified, cost of water supply component may be deducted from the project cost to firm up the BCR for irrigation component.

Inauguration of Hydrology (urban) directorate under HSO at CWC (Hq.)

Shri Kushvinder Vohra, Chairman, CWC & Ex-officio Secretary, Govt. of India inaugurated Hydrology (urban) directorate under HSO at CWC (Hq.) on 9th June 2023. Shri Manoj Tiwari, CE(HSO) along with other officials of CWC(Hq) were also present in the inauguration ceremony. CWC has taken up urban hydrology studies/ consultancy assignments as a new initiative in the following manner:-

- To Undertake hydrology modeling for talking issues related to high-intensity rainfall, riverine flood, drainage and interrelated issues in urban areas.
- To provide hydrology-related inputs for mitigating current distress, planning of emergency measures and inputs for urban development

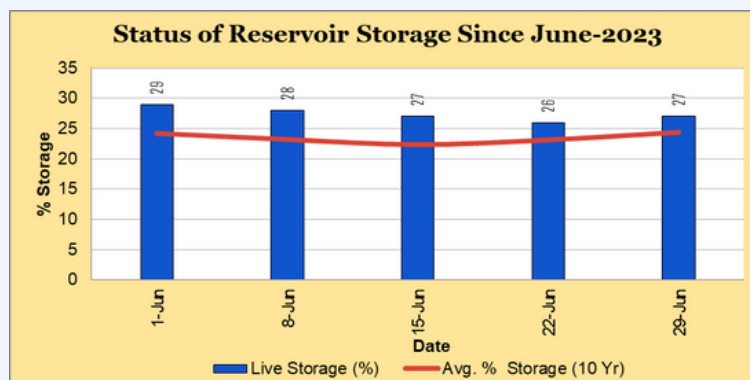


planning related to urban hydrology. The inaugural ceremony was followed by interaction of Chairman, CWC with staff of Hydrological Studies Organization (HSO). Chairman, CWC highlighted the need for entering into the field of urban Hydrology and encouraged them for their new assignments.

Reservoir Monitoring

Central Water Commission is monitoring live storage status of 146 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 18 reservoirs are of hydro-electric projects having total live storage capacity of 34.960 BCM. The total live storage capacity of 146 reservoirs is 178.185 BCM which is about 69.11% of the live storage capacity of 257.812 BCM which is estimated to have been created in the country.

As per reservoir storage bulletin dated 30.06.2023, live storage available in these reservoirs is 47.95 BCM, which is 27% of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding



period was 49.022 BCM and the average of last 10 years live storage was 43.487 BCM. Thus, the live storage available in 146 reservoirs as per 30.06.2023 Bulletin is 98 % of the live storage of corresponding period of last year and 110% of storage of average of last ten years.

Financial Progress of Schemes as on 30.06.2023

(Amount rounded-off in ₹ Crore & specific to CWC's component)

Sl. No.	Scheme/Component Name	BE(2023-24)	Expenditure	Expenditure (in %)
1	Development of Water Resources information System (DWRIS)	162.130	15.0796	9.30%
2	Investigation of Water Resources Development Schemes (IWRD)	20.000	1.209	0.60%
3	Flood Management & Border Areas Programme (FMBAP)	20.310	1.8662	9.19%
4	Direction & Administration (D&A)-Major Works and OE (SAP)	11.000	0.00	0.00%
5	National Hydrology Project (NHP)	31.58	0.6386	2.00%

Flood Situation in the country -June 2023

Regular Flood Forecasting Activity commenced on 01.05.2023 in Brahmaputra and Barak and Jhelum basins. During the period from 1st May to 30th June 2023, Total 460 (422 level+38 Inflow) flood forecasts were issued, and 439 (401 Level+38 Inflow) forecasts were within permissible limit with a 95.43 % percent accuracy. 50 nos. Red Bulletin (for Extreme flood situation) and 46 nos. of Orange Bulletin (for Severe flood situation) were issued in the month of June from Central Flood Control Room.

Summary of Flood Situation during 01.05.2023 to 30.06.2023

Extreme Flood Situation

No FF station observed Extreme Flood Situation. Three flood monitoring station observed Extreme flood situation.

Severe Flood Situation for FF Stations

14 FF Stations observed Severe Flood Situation in Assam, Bihar and Uttar Pradesh.

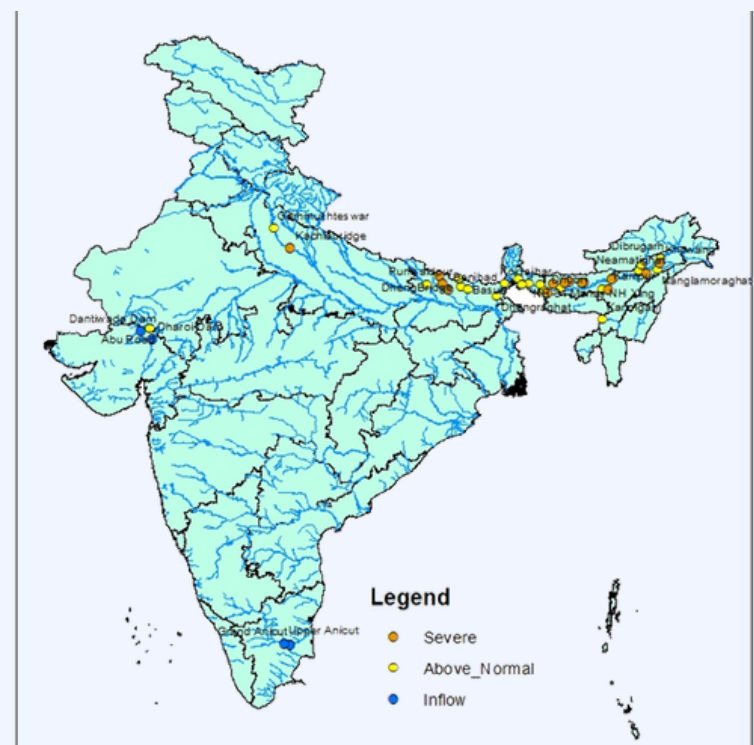
Three flood monitoring station observed Severe Flood Situation in Assam and Bihar.

Above Normal Flood Situation

22 FF Stations in Assam, Bihar, Jammu and

Kashmir, Rajasthan, Uttar Pradesh and West Bengal observed Above Normal Flood Situation.

Reservoirs having Inflow above threshold limit
4 reservoir received inflows above their threshold limit.



Water Sector-News

- TN parties object to DKS plan to expedite Mekedatu project (Deccan Chronicle, 01.06.2023)
- Reviews Flood Management Preparedness- Develop disaster-warning software: Shah (The Times of India, 03.06.2023)
- AI-based project to help combat flood, industrial disasters in Bharuch district (The Times of India, 07.06.2023)
- Cyclone Biparjoy rapidly intensifies into severe cyclonic storm; dampening monsoon (Millennium Post, 08.06.2023)
- India can avoid 400k deaths if JJM meets target: WHO report (Hindustan Times, 10.06.2023)
- Yet another blow to water-starved Rayalaseema in A.P. (The Hindu, 13.06.2023)
- Landslides, floods hit Assam, Meghalaya, 3 killed (The Times of India, 18.06.2023)
- NTPC Barauni wins award for water conservation (The Times of India, 20.06.2023)
- Less than 1% water bodies monitored by central, state pollution control boards (Deccan Herald, 22.06.2023)
- WRD plans to take up study to link Kosasthalaiyar and Araniar rivers (The Hindu, 24.06.2023)
- Mahoba to be 1st district in UP with tap water for every household (The Times of India, 27.06.2023)

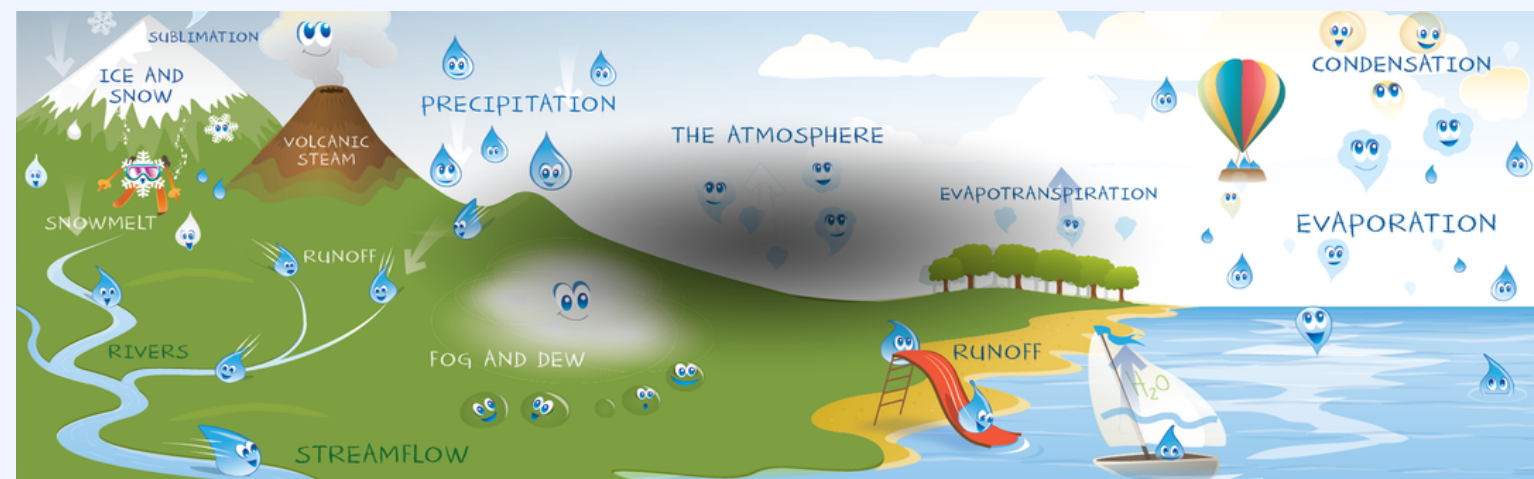
World Environment Day

CWC's World Environment Day celebration on June 5, 2023, was a triumph, reaching nationwide and grassroots levels. Activities included a pledge ceremony, tree planting led by Chairman Shri Kushvinder Vohra, and Nukkad Natak for public engagement. The focus on environmental well-being was underscored by a tree plantation drive, promoting carbon sequestration and ecological balance. Nukkad Natak conveyed messages on

water conservation and sustainable practices, resonating with diverse audiences. Chairman Vohra emphasized sustainable practices, and a clothing donation drive concluded the day, benefiting "The Earth Saviours Foundation." CWC's holistic approach showcased its commitment to environmental responsibility, fostering a nationwide movement for a greener, healthier future.



The Water Cycle



Gallery



MoU was signed today between CWC and CSMRS for the Construction Material Survey and Geotechnical Investigation of the Panchnad Irrigation Project.



नर्मदा बेसिन संगठन, के.ज.आ, भोपाल द्वारा आज़ादी के अमृत महोत्सव के अंतर्गत ग्राम मंडी, नसरुल्लागंज में दिनांक 21-06-2023 को " सतही लघु सिंचाई योजना के लाभ " विषय पर संगोष्ठी एवं जन जागरूकता अभियान का आयोजन किया गया

History- UMIAM HYDRO-ELECTRIC PROJECT (Stage-1)

ASSAM, situated to the north-east of India among the foothills of the Himalayas is a very rich State-rich in mineral resources, rich in its natural fertility, and hydro-power.

Dam

The cement concrete gravity dam, 64 m high and 176 m long across the narrow gorge of the Umiyam river, will store the run-off from 219 sqkm of the Umiyam catchment. The reservoir level will be full at 978 m above sea level and it will not be allowed to go below 960 m. The live storage in the reservoir will be 115 million cum and the dead storage will be 39 MCM. The river, up the Dam site carries very little silt. Even assuming 350 cum of silt load per sq km of the catchment area per year, the life of the



Joint visit of officers of CWC, GSI, CEA, NHPC, Power Development Corporation, Ladakh, Irrigation & Flood Control Ladakh to proposed Investigation site of Drass- Suru Link Project and Karkit HE Project in District Kargil of Ladakh ,UT from 21.06.2023 to 24.06.2023.



अंतर-राज्यीय प्री मानसून बैठक "Flood Management & Preparedness for Monsoon 2023 for Narmada Basin" का आयोजन नर्मदा बेसिन संगठन , के.ज.आ., भोपाल में दिनांक 06.06.2023 को किया गया

reservoir works out to more than 400 years.

Spillway

The maximum flood discharge for the spillway design has been taken to be 1,840 cum per sec. The spillway will be provided with three gates of 12.2 m x 11.1 m each with 3 m thick piers in between. This discharge capacity is based on the maximum rainfall so far observed which was 305 mm in six hours.

Dam Foundation

The Shillong plateau in which the dam site is situated is structurally distinct from the Himalayan range, but bears a great resemblance to the geology of peninsular India. The rocks are in many respects similar to those seen in Bihar and Bengal. The Shillong platerau can be considered an outlying

part as it were of peninsular India, probably contiguous with it beneath the Indo-Gangetic alluvium. The rocks encountered at the dam site are phyllites and quartzites. The dam will be built entirely on this rock after necessary curtain-grouting. Suitable inspection and other galleries and instruments to measure the various stress deflection will be provided in the dam. Special precautions are necessary as the site is in a highly seismic zone. In fact the 1897 earthquake which was one of the most disastrous earthquakes in history had its epicenter in this area. The area was affected by later earthquakes – the Dhubri earthquake of 1930, Bihar-Bengal earthquake of 1934 and the great Assam earthquake of 1950. Hence in designing the dam, forces due to earthquake accelerations have been considered. The earthquake acceleration may take place in any direction. In the design the acceleration in the most unfavourable direction both for full and empty reservoir conditions has been taken.

The quantity of concrete in the Dam is estimated at 1.582 lakh cu m (56 lakh cu ft) and the cost at Rs. 2 crore. The contract has been awarded to an Indian firm of contractors, who has already completed the diversion tunnel and is at present working on the abutments and foundations of the dam and construction of the coffer dam.

Dykes

In addition to the main Dam, two earthen dykes – one 24.4 m (80 ft) high and 427 m (1,401 ft) long, and another 12.2 m (40 ft) high and 167.8 m (550.5 ft) long are to be constructed in two valleys. These are estimated to cost Rs. 26 lakh and are also under construction by a private firm of contractors who has started work on the same. In the main dyke a soil up to the depth of 6.7 m (22 ft) has been removed to get the proper foundation.

Water Conductor System

As the power house will be located in an adjacent valley, a horse-shoe tunnel, 2,136 m (7,008 ft) long and 2.69 m (8.82 ft) dia has to be driven through the separating ridge. An intake for the tunnel, a trash rack and a gate will also be installed in the Uiam reservoir. To prevent rolling debris from blocking the portal, a submerged weir will be raised. The tunnel, which will be lined, is estimated to cost about Rs. 60 lakh, and the contract for it has been awarded to an Indian Construction Firm. The tunnel will be driven from four points in its course – one at either end, and two in between, approached through an adit. The work has made good progress, and the tunnel has been bored through.

At the end of the tunnel a vertical tank is provided, with an expansion chamber of 15 m (49.2 ft) dia to cushion the pressure fluctuations of the penstocks below it during the operation of the turbines.

The surge shaft, like the tunnel, will be lined with concrete. Emergency valves for closing the penstocks will be provided in the surge shaft. From it two 1.97 m (6.46 ft) dia penstocks run down to the power house. At the beginning of each there will be a steel-lined pressure tunnel of 1.97 m (6.4 ft) dia for 64 m (210 ft), after which they will be steel pipes mostly above ground level. Before the penstocks enter the power house, each will bifurcate into two 1.33 m (4.04 ft) dia pipes for feeding the 9,000 kW turbines.

Construction Progress

To provide access to the various work sites, 14 km (8.7 mile) of approach and colony roads have been built. The Uiam reservoir submerges about 5.6 km (3.48 mile) of the Gauhati-Shillong road and the work of providing the diversion of this national highway has also been taken up by the Project authority. Ultimately the national highway will pass over the main dam, but as it is proposed to fill up the reservoir even before the dam is built to the full height, a subway approach at a cost of Rs. 2 lakh will be built just below the main dam to serve as a temporary diversion. The new road will have two 10 m (33 ft) wide pathway skirting the Uiam lake for the most part.

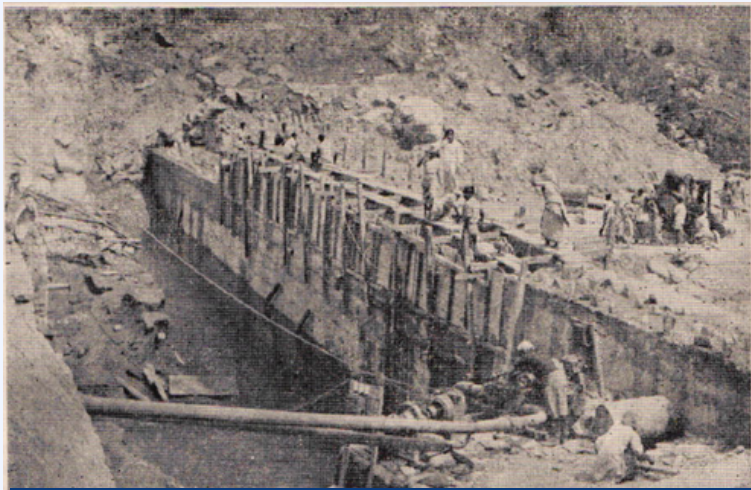
Colony

A modern colony to house the construction staff for the present and the maintenance staff later has been laid out. There will be two colonies – one near the dam site, a smaller one at the power house site. The residential and non-residential buildings are under construction. A modern water supply system and electricity for lighting and power will be supplied to the colonies.

All modern conveniences and facilities like schools, playground, cinema, parks, hospital, telephone exchange, petrol station, post office and shopping centre have been provided.

Power for Works

At the construction site no power was available for the work to be started. Though orders for diesel engines were placed long ago, they did not arrive in time. Some engines available in other power houses of Assam were dismantled and erected in a temporary power house and power was supplied for the various operations from early 1960. The total requirement of power for construction is estimated



COFFER DAM at the Umiyam Dam site is seen under erection.

to be over 2,000 kW. Hence the ultimate installed capacity in this station will be 3,200 kW. Making it the biggest diesel power house in the State. To supply power all over the colony 10 km (6.2 mile) of 11 kV transmission lines with transformer centres has been set up.

Project Power House

The main power house of the Umiyam Project 42 m x 22 m (138 ft x 72 ft), will be a reinforced concrete structure to accommodate four turbo alternators of 9,000 kW each. These machines will consist of vertical Francis turbines with a rated capacity of 10,500 kW at a net head of 145 m (476 ft). The turbine-runner and guide vanes are of stainless steel to minimize corrosion and wear. The turbines are coupled to vertical generators of 10,600 kVA on top of them. The cost of the four turbo-alternators comes to about Rs. 35 lakh. The power house is also designed for the necessary control gear and auxiliary equipment like low-voltage switchgear, control battery and the like. The transformers for stepping up the generation voltage from 11 kV to 132 kV for transmission will be located adjacent to the power house.

Outdoor Structure

The outdoor switching structure will be located about 150 m (492 ft) from the power house. The transformers will be connected to the switch yard.

Three transmission lines at 132 kV will take off to carry power to the load areas as Shillong and Gauhati.

Main Lines

The Umiyam-Gauhati lines, a double circuit 132 kV line approximately 80 km (50 mile) long, will terminate at the Gauhati receiving station where two transformers of 10,000 kVA each have been provided. The Umiyam-Shillong line will be a single circuit 132 kV line approximately 16 km (10 mile) long running into two transformers of 10,000 kVA each. At both the substations the transformers will step down the voltage from 132 to 33 and 11 kV for local consumption. A carrier communication system will be super-imposed on these high voltage lines with provision for carried relaying at a late date. This obviates the need for a separate telephone along the transmission lines. These lines have been designed for hot lime work. The existing Umtru station will be tied to Umiyam on the Umiyam-Gauhati line through two transformers of 7,500 kVA each. It is expected to erect the transmission lines departmentally.

More at Little Expense

Even after the completion of the Umiyam Project, Assam will be the lowest in per capita consumption of electric energy. The creation of a storage reservoir at Umiyam at an elevation of 978 m (3,210 ft) provides for stage development using the tail-water of the scheme down to a level of 123 m (404 ft), the level of the existing Umtru weir, at very little additional cost. In fact, successive tail-race development schemes involve no additional storage, demanding relatively little civil engineering expenditure. In the Third Plan the Assam State Electricity Board proposes to develop two tail-water stations with a total installed capacity of approximately 66,000 kW and stretch about 650 km (404 mile) of 132 kV transmission lines, thus taking power from the Umiyam scheme to all places in lower Assam.

(Source: Bhagirath Volume-VIII April 1962)



Central Water Commission

An attached office of Dept. of Water Resources,
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Ministry of Jal Shakti, Govt. of India

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