



R. K. Sinha
Chairman

Message

The International Commission on Irrigation and Drainage (ICID), established in 1950 is a leading scientific, technical, international not-for-profit, non-governmental organization. CWC and ICID have been closely associated since their inception. In fact, the founding President/Chairman of both organizations was Shri A. N. Khosla. ICID also collaborated with CWC and others to organize a very successful 9th International Micro Irrigation Conference in India during 2019. The 25th ICID International Congress and 75th IEC (International Executive Council)

meeting is scheduled in November, 2023 at Vishakhapatnam (A.P.) which are being organized in India after about 56 years. Indian National Committee on Irrigation and Drainage (INCID) headed by Chairman, CWC is coordinating the activities in this regard as well.

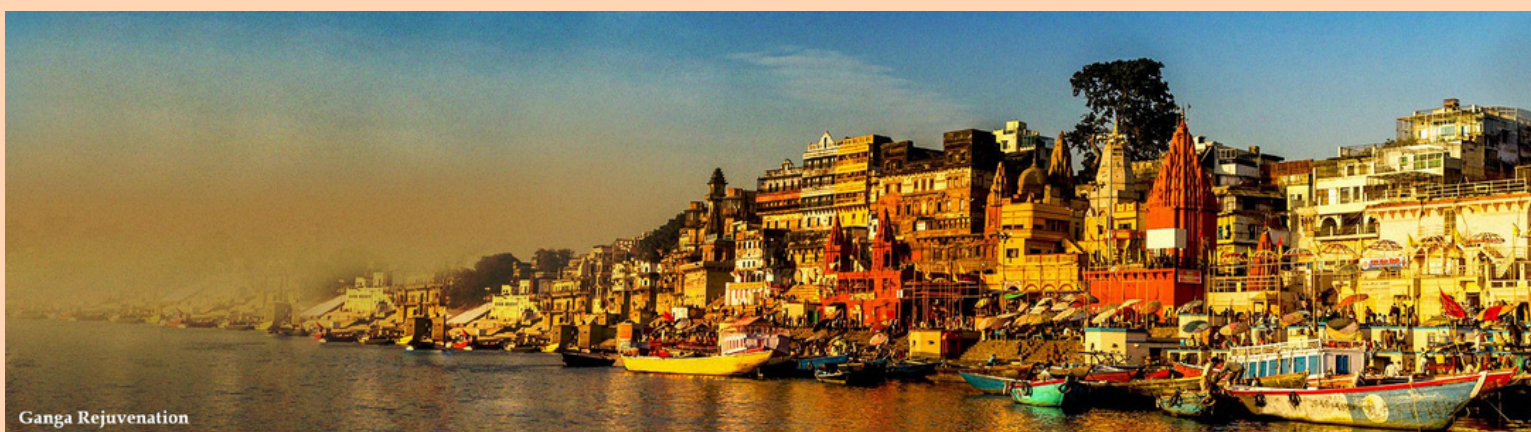
India is a large country and has a rich history of irrigation structures. I also take this opportunity to create awareness among State Govts for sending nominations for ICID awards namely World Heritage Irrigation Structure (WHIS) and WatSave awards. Such steps will increase the visibility of our rich history related to Irrigation as well as best practices can be shared for adoption at wider scale.

CWC is monitoring live storage status of reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Over the period, CWC is expanding its network to include additional major reservoirs

under monitoring. During October, 2021, three (3) more reservoirs were added to this monitoring system. Now, total 133 reservoirs are being monitored by CWC having live storage capacity of 172.463 BCM.

Shri S. K. Haldar, my predecessor has been appointed as the first regular Chairman of Cauvery Water Management Authority (CWMA). He has been associated with CWC for around three decades in various capacities. I, on behalf of CWC, wish him a successful tenure at CWMA as well.

This is the very first issue of this newsletter under my tenure as Chairman, CWC. I would request readers for their suggestions for its continual improvement. Other organizations related to Water Sector are also encouraged to contribute any relevant input for the publication.

CONTENTS

- The 8th Meeting of INCSW
- Inspection of BBO, Guwahati and BOBO, Shilong.
- The 50th meeting of CDRC
- The Town Official Language Implementation Committee (TOLIC) meeting
- 32nd meeting of Ghaggar Standing Committee under the chairmanship of Member (RM)
- Inspection of LGBO
- Meeting regarding Ujh MPP

- Session on Importance of Irrigation in Indian Agriculture: Overview of Prime Minister's Krishi Sinchayee Yojana (PMKSY)
- The 15th meeting of the "Task Force for Interlinking of Rivers"
- Opening Remarks by Member (WP&P) in the event on "Drought proofing and water security framework" organised by IWMI
- Revised PFR of "Diversion of surplus water of Sabarmati basin for filling of Jawai Dam, Rajasthan"
- Ken-Betwa link project
- Meeting regarding IEWP

- 2nd INCID meeting
- 36th Standing Technical Advisory Committee (STAC) Meeting of CSMRS
- Training Activity during Oct-2021
- Flood Situation in the Country
- DRIP
- Financial Progress of Schemes
- IMCT Visit of Assam
- Data Corner
- Reservoir Monitoring
- Water Sector-News
- Gallery
- History- Rihand Dam

The 8th Meeting of INCSW

The 8th Meeting of the Indian National Committee on Surface Water (INCSW) was held on 04.10.2021 through Video Conferencing (VC) under the chairmanship of Chairman, CWC. The meeting was held to review the proposal for the continuation of the Invited Research Scheme, "Research Chair on Water Sector Conflicts

and Governance at Centre for Policy Research". The meeting was attended by Member (WP&P), CWC; Member (D&R), CWC along with other officers of CWC and committee members of Indian National Committee on Surface Water (INCSW).

Inspection of BBO, Guwahati and BOBO, Shilong

Shri S. K. Haldar, Chairman, CWC visited Barak & Other Basins Organization (B&OBO), CWC, Shillong from 08.10.2021 to 10.10.2021 to review and inspect various works being undertaken by B&OBO. Shri PM Scott, Chief Engineer (BOBO), Shri Abhishek Sinha, (SE NEIC/ Director, M&A and SE, Meghna Circle, Silchar) along with other officials of B&OBO joined Chairman, CWC during the site visits and discussions.



Chairman, CWC visited the land allotted to the Water Resources Department for construction of the Regional office of CWC at New Shillong along with other officers of CWC and WRD, Govt. of Meghalaya on 08.10.2021. It was informed by CE B&OBO that the New Shillong Township Agency has approved the allotment of 3 Acres of land at New Shillong for construction of the Regional office of CWC which includes an area of 1500 sqm for Central Ground Water Board.

and other required clearances may be obtained from remaining directorates of CWC within a fortnight so that these two projects may be processed for techno-economic clearance at an early date as the Govt. of Assam has accorded high priority for taking up construction of Rukni and Sonai Irrigation projects.

Chairman CWC inspected the Therriaghat GDQ site on river Umsohrynkiw (Meghna) near the Indo-Bangladesh border on 09.10.2021. Chairman appreciated the cleanliness and maintenance of the site and the work of installation of the gauge posts. Further, He suggested shifting the site to U/S and upgrading the method of discharge observation by the Current Meter.

Further, it was apprised to Chairman, CWC that at present DPRs of 6 nos. of Irrigation Projects in Jharkhand are under preparation by NEID I Silchar and the date for submission of DPR as already agreed of 15.10.2021 cannot be adhered to in spite of best efforts due to the intricacies involved which are time taking. The latest revised date for preparation and submission of DPRs is 31.12.2021. He emphasized that the timeline of for preparation and submission of DPRs should be strictly adhered to and a collaborative and unified approach may be adopted by all units at CWC HQ and CWC Field set up with a single objective of preparation and submission of a bankable DPR within the stipulated timeline for which all necessary measures may be taken forthwith.

Chairman, CWC, enquired about the status of appraisal of DPR of Rukni and Sonai Irrigation projects of Assam for which DPRs have been prepared by NEID I, CWC Silchar. He emphasized that the cost estimate of both the projects may be updated at the current price level

The Town Official Language Implementation Committee (TOLIC) meeting

दिनांक 28.10.2021 को अध्यक्ष, केंद्रीय विद्युत प्राधिकरण एवं अध्यक्ष, नराकास की अध्यक्षता में दक्षिणी दिल्ली-2 कार्यालयों की नगर राजभाषा कार्यान्वयन समिति की ऑनलाइन बैठक आयोजित की गई। उक्त बैठक में केंद्रीय जल आयोग से अध्यक्ष, के.ज.आ. महोदय, संयुक्त सचिव एवं राजभाषा प्रभारी, के.ज.आ. एवं उप निदेशक (रा.भा.) ने भाग लिया। इस बैठक में 01 अप्रैल, 2021 से 30 सितंबर, 2021 छमाही अवधि के दौरान हिन्दी प्रगति रिपोर्ट की समीक्षा की गई। सदस्य-सचिव, नराकास ने उक्त छमाही के दौरान के.ज.आ. में राजभाषा नीति एवं नियमों के पालन किए जाने तथा हिन्दी में मूल पत्राचार व हिन्दी टिप्पण में हुई प्रगति पर संतोष व्यक्त किया।



32nd meeting of Ghaggar Standing Committee under the chairmanship of Member (RM)

The 32nd meeting of Ghaggar Standing Committee was held under the chairmanship of Member (RM), CWC on 12.10.2021 through video conferencing in order to discuss the final CWPRS Technical report No.5950 titled "Mathematical model studies to safely pass flood in river Ghaggar in the States of Haryana and Punjab."

In this meeting, it was concluded that:

- Technical report No.5950 titled "Mathematical model studies to safely pass the flood along river Ghaggar in Haryana and Punjab States" was submitted by CWPRS,

Pune on 21.09.2021 and soft copies were given to the States and hard copies will also be received by them shortly.

- Short term measures, recommended in case 2(d), which involves widening of the river from 60m-90m at some feasible reaches along with limiting water level rise to 2 m at both banks by constructing embankments, in model study report is an optimal solution and needs to be adopted by State Govts.
- State Governments may act appropriately and in a time-bound manner as per the recommendations made in the final model study report by CWPRS, Pune.

Inspection of LGBO

Shri Ranjan Kumar Sinha, Member (RM), Central Water Commission along with officials of Upper Punpun, Phalgu, Lower Kiul (U.P.P.L.K.) Sub Division, CWC, Gaya under LGD-2, CWC, Patna inspected following H.O sites & local Sub-Division offices.

S.No.	Site	Division	River	District	State
1.	GDQ Site, Gaya	LG-2, CWC, Patna	Phalgu	Gaya	Bihar
2.	GDSQ Site, Dobhi	LG-2, CWC, Patna	Phalgu	Gaya	Bihar

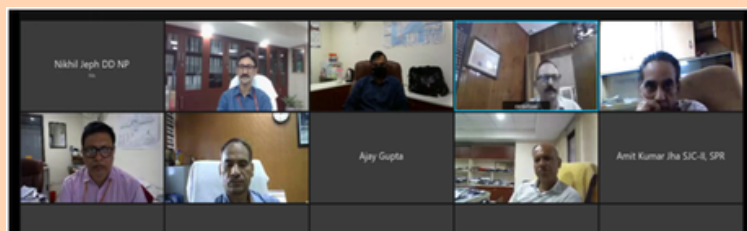
He suggested that telemetry information should be shared with the Sub-Division office. He also emphasized about installation of Retro reflective signboard,

Meeting regarding Ujh MPP

In continuation to series of earlier meetings on Benefit Cost (BC) aspects of the Ujh Multipurpose Project (J&K) and to ensure the progress on proposed changes in its design, another meeting was held under the Chairmanship of Shri Kushvinder Vohra, Member (WP&P), Central Water Commission on 01.10.2021 through video conferencing. Officials from SPR & Indus Wing (DoWR, RD & GR) MoJS, Central Water Commission, Central Electricity Authority, Water Resources Department (WRD), Govt of J&K and WAPCOS attended the meeting. During the meeting, all the



maintenance of office building, timely payment should be made by the contractor to DEO, support staff, MTS and supervisory staff, disposing of unserviceable items and maintaining CWC norms for H.O. sites and Sub-Division.



issues related to finalizing of draft TAC note were resolved. Draft TAC note to be finalized soon and put up for consideration of Advisory Committee of DoWR, RD & GR after receiving the consent of Jal Shakti Department (J&K).

Revised PFR of "Diversion of surplus water of Sabarmati basin for filling of Jawai Dam, Rajasthan

A meeting regarding Revised PFR of "Diversion of surplus water of Sabarmati basin for filling of Jawai Dam, Rajasthan" was held under the chairmanship of Member, WP&P, CWC on 11.10.2021 through Video conferencing. Member (WP&P) requested Govt. of Rajasthan to exchange the hydrological and other related data as per the decision taken in the meeting

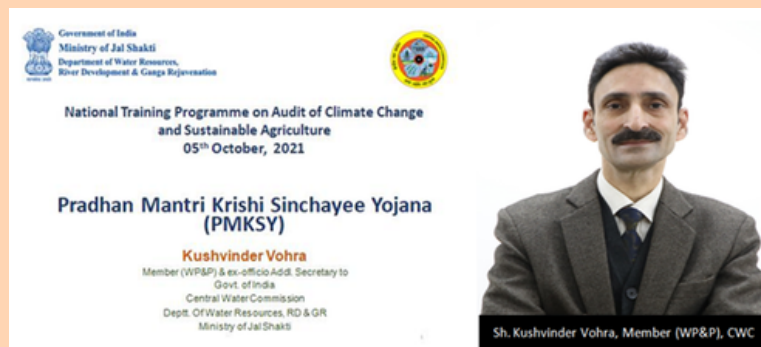
dated 26.06.2021 chaired by Chairman, CWC. Officials from Govt. of Gujarat expressed their concern regarding reduced yield at the Dharoi Dam if the current proposal of Govt. of Rajasthan is accepted. However, they have agreed to share the requisite data within a week with CWC as well as Govt. of Rajasthan.

Session on Importance of Irrigation in Indian Agriculture: Overview of Prime Minister's Krishi Sinchayee Yojana (PMKSY)

Shri Kushvinder Vohra, Member (WP&P), CWC was invited to deliver a session on 05.10.2021 as guest faculty on the topic "Importance of Irrigation in Indian Agriculture: Overview of Prime Minister's Krishi Sinchayee Yojana (PMKSY)" as part of National Training Programme (NTP) on "Audit of Climate Change and Sustainable Agriculture" organized by International Centre for Environment Audit and Sustainable Development (ICED) for officers of Indian Audit and Accounts Department (IA&AD). The aim of the NTP was to enhance the overall productivity and performance of participants on the subject of Climate Change and Sustainable Agriculture.

During the session, Member (WP&P) gave a brief background and status of water resources scenario, irrigation development and food production in the country. Related issues were discussed in detail. Thereafter, he gave an overview of the Accelerated Irrigation Benefits Programme (AIBP) launched in 1996-97, its achievements and bottlenecks followed by the launch of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) in 2015-16.

Further, participants were informed in detail about the 99 priority projects which were taken on Mission mode under PMKSY for fast pacing of works. Details of projects completed and achievements of the scheme along with issues faced by the Government during the implementation of schemes and steps taken by Govt to mitigate the hindrances were presented to the participants. Various innovative and latest



methods/techniques like the use of the underground pipeline, canal automation etc. undertaken in the PMKSY scheme was informed.

He elaborated about the methods adopted to monitor the progress of works done under the PMKSY scheme like the creation of PMKSY-AIBP dashboard, generation of MIS reports, geo-tagging of projects. Further, brief of other schemes viz. PMKSY-Har Khet ko Pani Command Area Development (CAD), Surface Minor Irrigation (SMI), Repair, Renovation and Restoration (RRR) of water bodies scheme, PMKSY-per drop more crop and PMKSY-Watershed Development was also presented.

After the presentation, an interactive session was held with participants. Participants wanted to know various nitty-gritty involved in the processes. Shri Kushvinder Vohra, Member (WP&P), CWC explained the processes in detail. He also elaborated on the issues where performance audit should focus and at the same time mentioned certain factors which should not be attributed to management.

The 15th meeting of the "Task Force for Interlinking of Rivers"

The 15th meeting of the "Task Force for Interlinking of Rivers" on constitution of National Interlinking of Rivers Authority (NIRA) under the Chairmanship of Shri SriramVedire, Advisor, DoWR, RD & GR, Ministry of Jal Shakti and Chairman of the Task Force for Interlinking of Rivers was held on 22.10.2021 at 16.30 Hrs in the Committee Room, Ministry of Jal Shakti, Shram Shakti Bhawan, New Delhi in Hybrid mode (Physical as well as virtual mode).

The Director-General, NWDA apprised the members about step by step progress done regarding NIRA formulation. Department of Legal Affairs is of the opinion that there is no bar to establish a body through an Executive order. Therefore, DG, NWDA proposed to constitute NIRA by executive order with approval of



Union Cabinet.

Members of Task Force expressed their views on the proposed structure of NIRA. Chairman, Task Force proposed to include Ministry of External Affairs in Project Coordination Wing as NIRA would work with MEA for many link projects.

Opening Remarks by Member (WP&P) in the event on “Drought proofing and water security framework” organised by IWMI

Shri Kushvinder Vohra, Member (WP&P), CWC addressed the conference on ‘Drought Proofing and Water Security Framework’. The conference was organized by IWMI (International Water Management Institute) and ITC Ltd. on 08.10.2021.

Member (WP&P), CWC commended the initiative taken by IWMI and ITC for organizing the conference and highlighted the interrelation between drought-proofing and water security framework and it will be of great relevance in our country, at present and in future. He emphasized that a complete and fair evaluation of the resources, sustainability at all parts of the hydrologic cycle and an equitable and cooperative sharing of water resources are an integral part of any successful water security framework and water security framework can be built successfully only if it can address the issues of non-availability of requisite water at a micro-scale.

As regard to Drought proofing, he mentioned that water availability, water use and entitlements are the three basic elements for comprehensive drought-proofing. Water availability has to be assessed and developed, water use has to be monitored and conserved, and entitlements have to be ensured for the vulnerable sections of the population. He mentioned about the role of various schemes such as the watershed development component of PMKSY, MGNREGS, Jaljyukt Shivar Abhiyan (Maharashtra) etc. The role of effective participation by the stakeholder community for successfully managing droughts was stressed upon. He also mentioned that



any such work should invariably have a component of capacity building as ultimately it is the community who has to take care of such works in the long run.

He also highlighted the achievements made under the PMKSY-AIBP scheme wherein 48 out of 99 priority projects have been completed resulting in the creation of additional irrigation potential of 2.2 million ha. He also informed that CWC is monitoring the live storage status of 130 reservoirs which covers almost 2/3rd of the total live storage capacity across the country and the reservoir storage status can be taken as one of the indices while assessing the situation of drought.

He hoped that discussions on the interrelation between drought-proofing and water security framework in the workshop would be comprehensive and useful in further understanding of these aspects and measures to be taken to tackle the same.

2nd INCID meeting

The first part of the 2nd meeting of INCID was held on 20.07.2021 under the chairmanship of the Chairman (CWC). Further, the remaining agenda items were discussed in the second part of the 2nd meeting of INCID held on 18.10.2021 under the chairmanship of Shri Kushvinder Vohra, Member (WP&P), CWC to deliberate on an action plan to take forward the Terms of Reference of INCID as well as to discuss about the preparedness for organizing 25th ICID International Congress and 75th IEC (International Executive Council) meeting scheduled in November' 2023 at Vishakhapatnam (A.P.) being organized in India after about 56 years. The meeting was attended by officials from ICID, INCID, CWC, States, CGWB, CADWM wing of D/o WR, RD & GR, NRAA (National Rainfed Area Authority) of M/o A&FW, and CWPRS.

In the first part of the 2nd meeting of INCID, Shri A. B. Pandya, Secretary-General (ICID) made a presentation on “World Register of Irrigation Projects” and emphasized upon the need for such a register, as no such database exists at the world level.

In the second part of the 2nd meeting, it was decided that a quarterly magazine may be published detailing about various schemes/ projects pertaining to water resource development and management undertaken by Central and State Governments. Further, it was desired by Member (WP&P) that steps should be taken toward making INCID more relevant at the National and International level.

Regarding holding of 75th IEC and 25 Congress, Dr. Yella Reddy, Hon Vice President of ICID and coordinator for Congress from A.P. Govt, was requested to furnish an indicative estimate for holding the events so that the same could be processed by INCID.

During the meeting, it was also emphasized upon to create awareness among State Govts for sending nominations for ICID awards namely World Heritage Irrigation Structure (WHIS) and WatSave awards as India is a large country and has a rich history of irrigation structures.

Ken-Betwa link project

A meeting to assess the status of appraisal of Projects of Ken-Betwa Link Project (KBLP), Phase-II was held on 11.10.2021 under the chairmanship of Shri Kushvinder Vohra, Member (WP&P), CWC. KBLP (Phase-II) consist of three projects, namely Kotha Barrage Project, Bina Complex Project and Lower Orr Project. Officials from the National Water Development Agency (NWDA), Officials from the Water Resource Department of Madhya Pradesh and CWC attended the meeting. During the meeting, detailed discussions were held on all the issues related to clearances pending with these three projects. Member (WP&P), CWC directed that all the issues related to clearances pending with three projects must be settled as soon as possible.

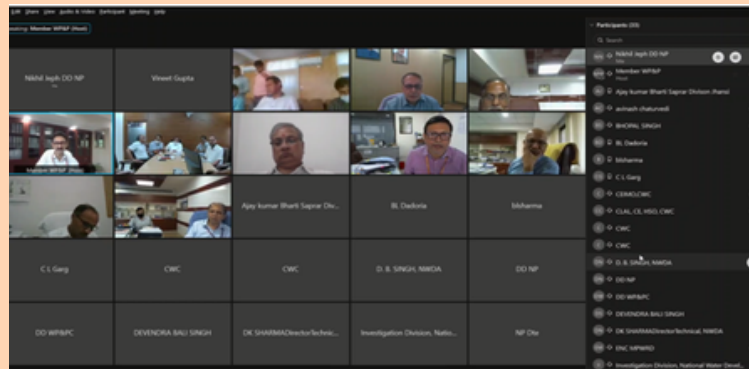
In continuation to the earlier meeting, another meeting was also held on 22.10.2021 wherein it was informed that most of the aspects of KBLP, Phase-II have been cleared except Irrigation Planning and Cost in respect of Lower Orr Dam Project. The Cost in respect of Kotha Barrage and Bina Complex was firmed up by CWC but after the request of Project Authority for consideration of essential structures, same has been considered for revision. The aspects pending for above clearances including fixation of B. C. Ratio of all three Projects of Ken Betwa Link, Phase-II were deliberated. Member (WP&P), CWC directed that all the aspects and issues

Reservoir Monitoring

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

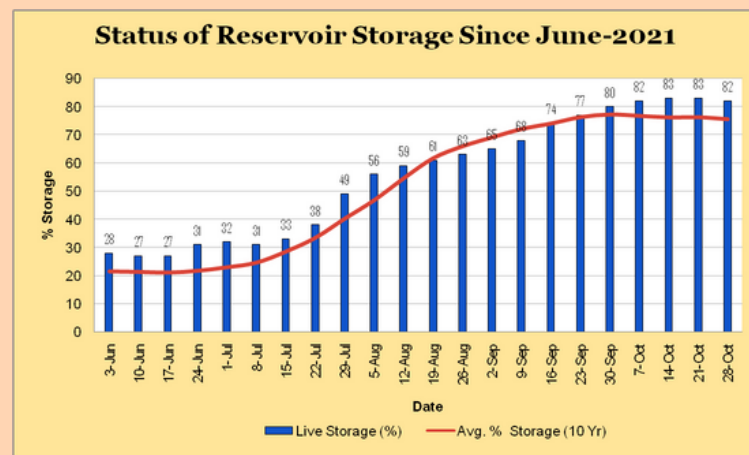
Name of Reservoir	State	Live Storage Capacity (BCM)
Jawai Dam	Rajasthan	0.193 BCM
Chandan Dam	Bihar	0.140 BCM
Nanak Sagar	Uttarakhand	0.176 BCM
Total		0.509 BCM

CWC is monitoring live storage status of 133 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 44 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 133 reservoirs is 172.463 BCM which is about 66.89% of the live storage capacity of 257.812 BCM which is estimated to have been created in the country.



related to these three projects to be resolved at the earliest.

A meeting to assess the status of appraisal of Projects of Ken-Betwa Link Project (KBLP), Phase-II held on 11.10.2021 under the chairmanship of Shri Kushvinder Vohra, Member (Water Planning and Projects), Central Water Commission KBLP (Phase-II) consist of three projects, namely Kotha Barrage Project, Bina Complex Project and Lower Orr Project. Officials from National Water Development Agency (NWDA), Officials from Water Resource Department of Madhya Pradesh and Central Water Commission attended the meeting. During the meeting, detailed discussions were held on all the issues related to clearances pending with these three projects. Member (WP&P), CWC directed that all the issues related to clearances pending with three projects must be settled as soon as possible.



As per reservoir storage bulletin dated 28.10.2021, the total live storage available in these reservoirs is 141.724 BCM which is 82% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding period was 150.515 BCM and the average of last 10 years live storage was 130.097 BCM. Thus, the live storage available in 133 reservoirs as per the bulletin dated 28.10.2021 is 94% of the live storage of corresponding period of last year and 109% of storage of average of last ten years.

Meeting regarding IEWP

Member (WP&P), CWC convened a meeting on 14.10.2021 with the IEWP Action/GIZ Project Management Team to discuss the feasibility, challenges and possible solutions to implement the suggested activities during the IEWP Action Phase 2. Broad decisions taken in the meeting are as follows:

RBM KWMI-2: suggested topic: Pollution mapping from source area through isotope mapping in the Ramganga Basin. It was decided that IEWP Action will cover exclusively one Key Water Management Issue (KWMI) on 'Alternations of River Hydrology/Water Quantity' and additional four KWMI's towards Ramganga River Basin Management Plan will be jointly undertaken by the National Mission for Clean Ganga and the Indo-German Development Cooperation's Support for Ganga Rejuvenation Project (SGR-II Project).

RBM KWMI-3: suggested topic: Consider hydrology at key locations addressing current and future demands addressing existing water resource infrastructure; identify future development needs through scenarios; undertake Water Accounting study; address and estimate non-ET consumption (drinking water; Industrial consumption)–baseline; future projections/scenarios;

Tapi Basin RBM Studies: GIZ will investigate and estimate possible consultancy costs to steer the joint undertaking of the estimation of non-ET consumption and water allocation modelling.

The possibility of including these important aspects (non-ET demands and water allocation modelling) may be explored in tender process.

36th Standing Technical Advisory Committee (STAC) Meeting of CSMRS

36th meeting of Standing Technical Advisory Committee (STAC) of CSMRS was held on 07.10.2021 under the chairmanship of Dr. R. K. Gupta, Member (D&R), CWC through Video Conferencing. The meeting was attended by the Members of the Committee. Shri O. P. Gupta, Director (Instrumentation), CWC also attended the meeting. At the outset, Chairman of the Committee welcomed all the members present and invited Dr R. Chitra, Director, CSMRS & Member Secretary STAC to present the Agenda items before the Committee.

Director, CSMRS made a brief presentation before the Committee on various activities being handled by CSMRS followed by Agenda items for discussion. During the meeting, Director, CSMRS appraised the Committee on follow up actions taken as per the suggestions in the 35th STAC

Ramganga Basin RBM Studies: In first phase of IEWP (Tapi Basin), total five KWMI's were analyzed for risk assessment. However, for Ramganga basin only the risk assessment (as done in Tapi basin) in respect of KWMI3: Alterations of River Hydrology/Water quantity will be undertaken under IEWP Action Phase-2. Other KWMI's (Point and Area source pollution, Alteration in Groundwater quality and quantity etc.), may be taken up under the SGR-II project and by NMCG.

RBM KWMI-4: suggested topic: Isotope Study to understand dynamics of deep aquifer recharge. The activities were jointly agreed between GIZ and CGWB for implementation during the IEWP Action Phase 2.

Environmental Flows: It was discussed and agreed that NMCG will steer the E-Flows assessment in the Ramganga Basin as well NMCG will arrange the needed manpower for the assessment (e.g. cross-section assessment). CWC will provide guidance towards the E-Flows assessments as one of the members of the Committee.

Irrigation and Efficient Water Use: It was decided to continue with the three irrigation projects selected in the IEWP Phase 1 to develop the protocol to assess the irrigation efficiency. For which Office of Chief Engineer, POMIO will coordinate with the State Government Officials to arrange the datasets needed by the EU Experts to develop the protocol. Any other irrigation project may be considered, for which requisite data is available, in case the requisite datasets are not available in respect of presently selected three projects (Lower Panzara, Mahuar, and Golavagu).



meeting, Technical activities and achievements of the CSMRS mentioning important projects, Technical Reports, Research Papers, Publications, Client/Self sponsored Schemes, Rajbhasha, Information Technology Activities Seminars/Conferences/Workshops/Trainings Organized by CSMRS, future Action Plan of CSMRS and other activities. Director, CSMRS also made a brief technical presentation on Polavaram Irrigation Project, Andhra Pradesh.

Training Activity during Oct-2021

Sr. No.	Name of the Program	Dates & Duration	No of participants	Category
a)	Distance Learning Programme on "Overview of Water Resources Sector in India" for School Teachers	04th Oct-27th Oct 2021	3059	Mass awareness
b)	MCTP for Senior Research Assistants of CWC	20th Oct- 29th Oct 2021	33	Cadre
c)	Training on the topic of "River Analysis System (HEC-RAS)	25th Oct- 29th Oct 2021	120	Purpose Oriented

Flood Situation in the Country

Regular Flood Forecasting Activity by CWC commenced on 01.05.2021 in Brahmaputra and Barak and Jhelum basins. During the period from 1st May to 31st October 2021, 10214 flood forecasts (6626 Level and 3588 Inflow) were issued, out of which 9694 (6422 Level and 3272 Inflow) forecasts were within the limit of accuracy with a percentage accuracy of 94.90%. 130 nos. of Orange Bulletin (for Severe Flood Situation) and 31 number of Red Bulletin for Extreme Flood Situation were issued in August from Central Flood Control Room.

Summary of Flood Situation during 01.05.2021 to 31.10.2021

Extreme Flood Situation

Seven No. FF station observed Extreme Flood Situation.

Sl. No	State	District	River	Station	Period	
					From	To
1.	Bihar	Patna	Ganga	Hatidah	13/08/2021	19/08/2021
2.		Bhagalpur	Ganga	Bhagalpur	16/08/2021	19/08/2021
3.	Uttar Pradesh	Auraiya	Yamuna	Auraiya	06/08/2021	07/08/2021
4.		Buduan	Ganga	Kachlabridge	23/10/2021	23/10/2021
5.		Siddarthnagar	Rapti	Bansi	02/09/2021	04/09/2021
6.	Odisha	Balasore	Subarnarekha	Mathani Road Bridge	22/09/2021	22/09/2021
7.	West Bengal	Coochbehar	Teesta	Mekhliganj (R/B)	20/10/2021	20/10/2021

31 Flood Monitoring Stations observed Extreme Flood Situation.

Severe Flood Situation for FF Stations

87 FF Stations observed Severe Flood Situation in the States of Arunachal Pradesh, Assam, Odisha, Bihar, Uttar Pradesh, Uttarakhand, West Bengal, Maharashtra, Rajasthan, NCT Delhi, Andhra Pradesh, Telangana and Jharkhand.

Above Normal Flood Situation

38 FF Stations in Assam, Bihar, Jharkhand, Uttar Pradesh, West Bengal, Andhra Pradesh, Telangana, Maharashtra and Odisha observed Above Normal Flood Situation.

Pradesh, West Bengal, Andhra Pradesh, Telangana, Maharashtra and Odisha observed Above Normal Flood Situation.

Reservoirs having Inflow above threshold limit

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



(Amount in Rs Crore)

Financial Progress of Schemes

Sl. No.	Scheme/Component Name	RE (2020-21)	Expenditure	Expenditure (in %)
1.	Development of Water Resources information System (DWRIS)	175.000	71.369	40.78%
2.	Investigation of Water Resources Development Schemes (IWRD)	12.000	3.866	32.22%
3.	Flood Management & Border Areas Programme (FMBAP)	27.320	4.806	17.59%
4.	Infrastructure Development (ID) Schemes	04.500	2.848	63.30%
5.	National Hydrology Project	23.950	4.605	19.27%
6.	Dam Rehabilitation and Improvement Project	25.000	9.00	36.00%

DRIP

Meeting to review the progress of Karnataka WRD under DRIP Phase II

A meeting to review the progress of Karnataka WRD under DRIP Phase II was held on 11.10.2021. During the meeting, Karnataka WRD was requested to expedite the tendering and award of contracts amounting to Rs. 225 crore to fulfil the readiness criteria of DEA for joining the Scheme. The meeting was attended by officials of the World Bank, CPMU and Karnataka WRD.



Training cum Workshop on "Environmental and Social Safeguards" under externally aided Scheme DRIP Phase II

Two day Training Cum Workshop on Environmental and Social Safeguards was organised by CPMU for DRIP Phase II Implementing Agencies in batches during 11th-12th October and 4th-5th October 2021. CPMU and World Bank experts deliberated upon various topics of Environment and Social (E&S) Safeguards including Environment and Social Management Framework (ESMF), Environment and Social Commitment Plan (ESCP), Stakeholder Engagement Framework (SEF) and two dam specific documents viz. Environment and Social



Due Diligence (ESDD) and Environment and Social Management Plan (ESMP). The programme combined lectures, case studies and interactive sessions.

Training cum Workshop on "Financial Management" under externally aided Scheme DRIP Phase II

Training Cum Workshop on Financial Management was organised by CPMU for DRIP Phase II Implementing Agencies on 25.10.2021. CPMU deliberated upon various topics of "Financial Management" inter alia Booking of Expenditure, Preparation of IUFR, Maintenance of Physical and Financial Status, Inspection of existing Cash Book and methods of reporting etc. The workshop saw active participation of almost 250 participants from various states.



IMCT Visit of Assam

Various Inter-Ministerial Central Team (IMCT) are constituted by the Ministry of Home Affairs (MHA) for on-the-spot assessment of the situation in the wake of the floods/landslides damages in irrigation, drinking water, embankment and flood control structures due to monsoon season. CWC Officers are nominated to represent DoWR, RD&GR, Ministry of Jal Shakti in these IMCTs.

During October, 2021, IMCT visited flood affected state of Assam. They had meetings with District Officials and visited the affected districts for assessing the damage.



Shri Sanjay Kumar Singh, SE, CWC, Guwahati was part of the Team and visited Lakhimpur District.

Water Sector News

- ✦ KRMB urged to stop AP from modifying GNSS (Telangana Today, 01.10.2021)
- ✦ Chacha Chaudhary is now mascot of Namami Gange programme (Indian Express, 02.10.2021)
- ✦ Sikkim to ban packed mineral water next year (Hindustan Times, 06.10.2021)
- ✦ Globally, India recorded the highest loss in terrestrial water storage (Down to Earth, 08.10.2021)
- ✦ GRMB proposes to supervise Pedda Vagu (Telangana Today, 12.10.2021)
- ✦ Over 75% of Households have piped drinking water in Delhi (Times of India, 19.10.2021)
- ✦ KRMB's operation protocols for Srisaillam in violation of KWDI-I : TS (The Hindu, 22.10.2021)
- ✦ 291 hectares of forest land set to be diverted for Kondhane dam (Hindustan Times, 24.10.2021)
- ✦ Southwest monsoon withdrawal from country this year seventh-most delayed since 1975 : IMD (Millennium Post, 26.10.2021)
- ✦ Mullaperiyar dam : old dispute between TN & Kerala, revived after recent rains (The Indian Express, 29.10.2021)

Data Corner

Central assistance (CA) released/Allocation of funds and Budget Estimated/Allocation for current year: under components of PMKSY during the last five years,

(Rs. in crore)

Central Assistance/ Allocation of funds	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (Budget Estimated/ Allocation)
Accelerated Irrigation Benefits Programme (AIBP)	3,307.88	3,593.61	2,849.07	1,738.76	1,510.04	*
Har Khet Ko Pani (HKKP)*	1,001.91	1,678.13	1,343.23	1,217.97	976.53	899.00
Per Drop More Crop (PDMC)	1,991.24	2,819.49	2,918.38	2,700.01	2,562.18	4000.00
Watershed Development	1,471.72	1,691.81	1,780.55	1,472.33	990.23	2000.00

* For AIBP as well as CAD component of HKKP, funding arrangements are being made through Long Term Irrigation Fund (LTIF) with borrowings from NABARD. Central assistance is released through LTIF as and when eligible proposals are received from States.

(Source: PIB Released-02.08.2021)

Gallery



संसदीय राजभाषा समिति की दूसरी उप-समिति द्वारा दिनांक 27.09.2021 को केंद्रीय जल आयोग(मुख्यालय) के हैदराबाद स्थित निचली कृष्णा मंडल कार्यालय का राजभाषा निरीक्षण किया गया। समिति की माननीय संयोजक महोदया ने राजभाषा कार्यान्वयन की प्रगति पर संतोष व्यक्त किया तथा प्रशंसनीय उपलब्धियों के लिए आयोग की सराहना की।



Shri J. Harsha, Director(Mon) visited Hindustan Aeronautics Ltd as a member of Joint Team of Officers (JTO) for ground truth verification for nomination of National Water Award under best industry-CSR



A meeting with NHPC officials under the chairmanship of Chief Engineer, Designs (N&W) was held on 07.10.2021 to discuss the major issues of Dagmara HE Project (130.1MW). The meeting was attended by CWC officers from HCD, BCD and Embankment Directorate of Designs (N&W) unit.

The 50th meeting of CDRC

Date of Meeting	11.10.2021
Total cases considered	17
Commercial Cases	5
Non Commercial	12
No. of cases recommended by the committee	15
No. of deferred cases	2



History- Rihand Dam

Rihand or Renuka Dam

Rihand, the largest and first concrete dam of Uttar Pradesh is constructed across the Rihand River. Creating one of the largest artificial lakes in the country, the concrete wall plugs the exit of the Rihand, a tributary of the Sone, near Pipri. Though only half as high as the Bhakra Dam in the Punjab- one of the highest in the world-the Rihand dam has formed a Reservoir with a water spread over three times the area of Gobindsagar and hold 740 MCM of water.

Mainly intended for power, the ultimate installed capacity at the Rihand Dam was 300 MW. Water let down from Rihand picked up down the river at Obra for generating additional power. Further downstream, it is utilized for irrigation in the neighbouring State of Bihar.

The River

The Rihand, or the ancient Renuka, rises in the Manipat Hills of the Hazaribagh range in the Sarguja district of Chhattisgarh. Like its twin river, the Kanhar, the Rihand runs northward and enters Uttar Pradesh half way down, flows past Pipri, the present dam site and Gaharwargaon to join the Sone at Sindhuria near Chopan. The Sone in turn feeds the Ganges. In its total run of about 193 km, the Rihand collects as much as 6537 million cum of water every year from a catchment of 13333 sq km.

Rihand Dam Project

History

The first recorded mention of possibilities of power generation in the Rihand valley is by Messrs G.T. Barlow and J.W. Meares in their report on the Water Power Resources of India in 1919. But it was Shri A. P. Watal who pin-pointed the Pipri Dam site-as the project was called in the investigation stages-25 years later. The Rihand here flows in a deep, narrow gorge of hard granite, which offers scope for one of the most capacious artificial lakes in the country, from this, production of a large block of hydro-power would automatically follow.

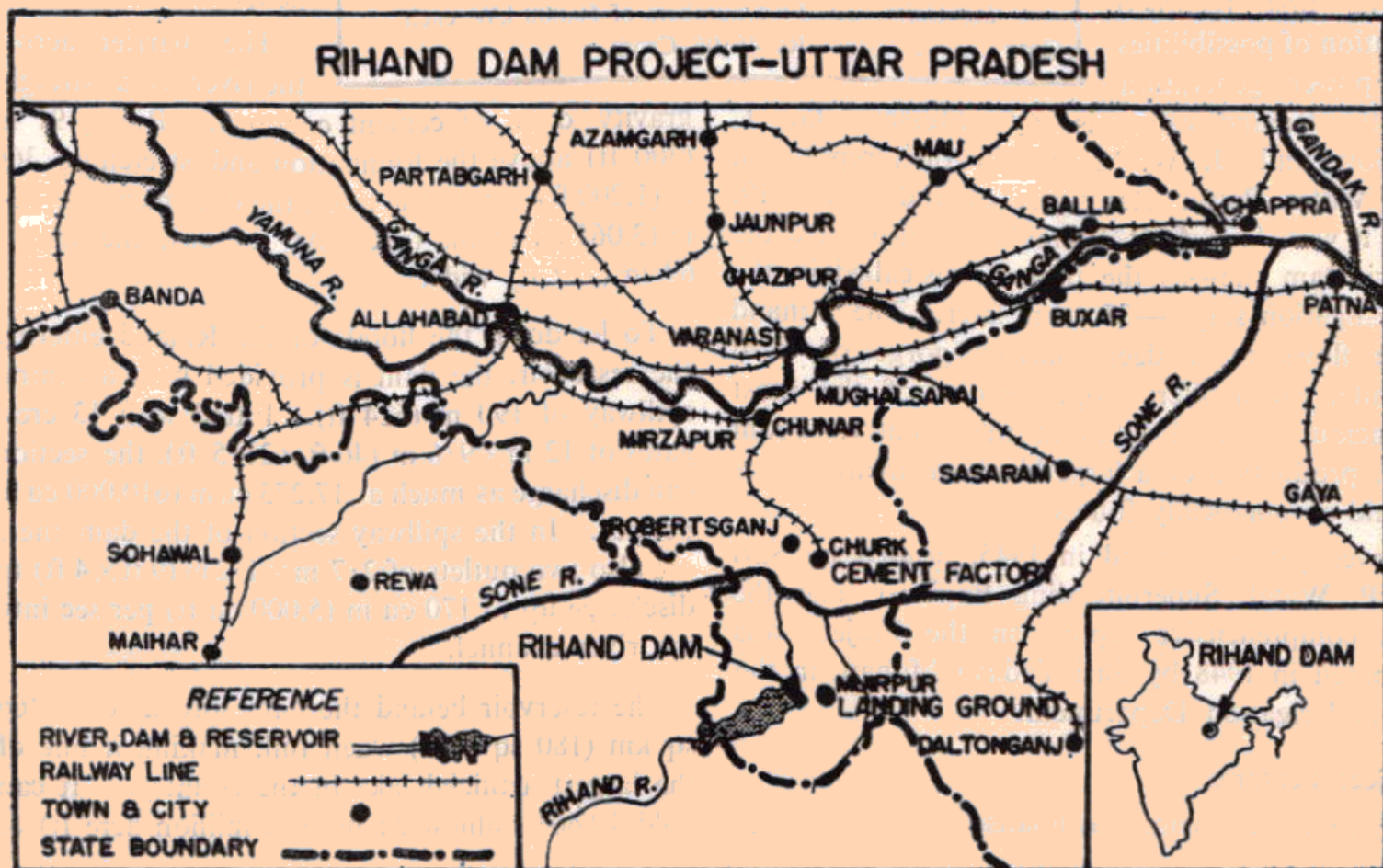
Investigations started in 1945, headed by Shri A. P. Watal, Superintending Engineer and the first comprehensive report on the Project was prepared in 1948 by Shri Yadava Mohan, in the U.P. Irrigation Department.

Project Features

By 1952 the scheme was finalized. It comprised a concrete dam to store 10608 million cum of the Rihand water and a power station at the foot of the dam. The Project was sanctioned by the U.P. Government at an estimated cost of Rs. 46 crore.

Dam

The site of the Rihand Dam lies near Pipri 56 km above its entry into the Sone. Here it collects the rainfall of a little more than 12950 sq Km, which averages 142 cm a



year. The steep fall of 732 m from the source to the dam site is a great natural advantage for power generation.

The barrier across the river is a straight gravity dam of cement concrete. Rising 91 m above the foundation and stretching 366 m across the river, the dam measures 934 m at the top. At its base the dam is 69 m wide.

Power House

The power Station downstream of the dam on the right side of the spillway have an initial total installed capacity of 250 MW and ultimate capacity of 300 MW. Water from the Reservoir comes through six 4.88 m dia penstocks to run six giant generating units of 50MW each. Of these, only five was installed initially. The power transmitted to the various centers through 829 km of 132 kv transmission lines and 383 km of nearly 7828 km of distribution lines bring the benefits of electricity directly to interior areas.

Construction Progress

Work on the Project started as early as 1954 and the progress in the beginning was slow for lack of preliminaries such as access roads, drinking water, medical aid and housing facilities. An 80km approach road from Robertsgunj, the nearest railhead and a 1006 m prestressed concrete by October 1956. Simultaneously a permanent bridge was flung across the Rihand close to the dam site for ready transport of men and material to the work sites on either side of the river.

Pre-cooling of Concrete

An interesting part of the concrete processing is the pre-cooling of concrete, so as to keep down the reaction temperature during the setting in the body of the dam. For this, the ingredients of concrete were refrigerated before batching, then mixed and churned and poured into trolleys.

Benefits

Electricity is the direct fruit of the Rihand River Valley Scheme. The power output of 250MW was proposed to be shared between Madhya Pradesh (now Chhattisgarh)

RIHAND DAM in Uttar Pradesh rises across the Rihand River to create one of the largest lakes in India. With a waterspread nearly three times that of Bhakra, it stores enough water to irrigate 2 lakh ha (5 lakh acre) in Bihar and generate 300,000 kW of hydro-power, which will be used mainly for industry, lift irrigation and rural electrification. The 934 m (3,065 ft) long dam has a 190 m (624 ft) long spillway with 13 steel gates, at the crest, two sluices lower down, and a power house at the foot of the dam adjacent to the spillway.

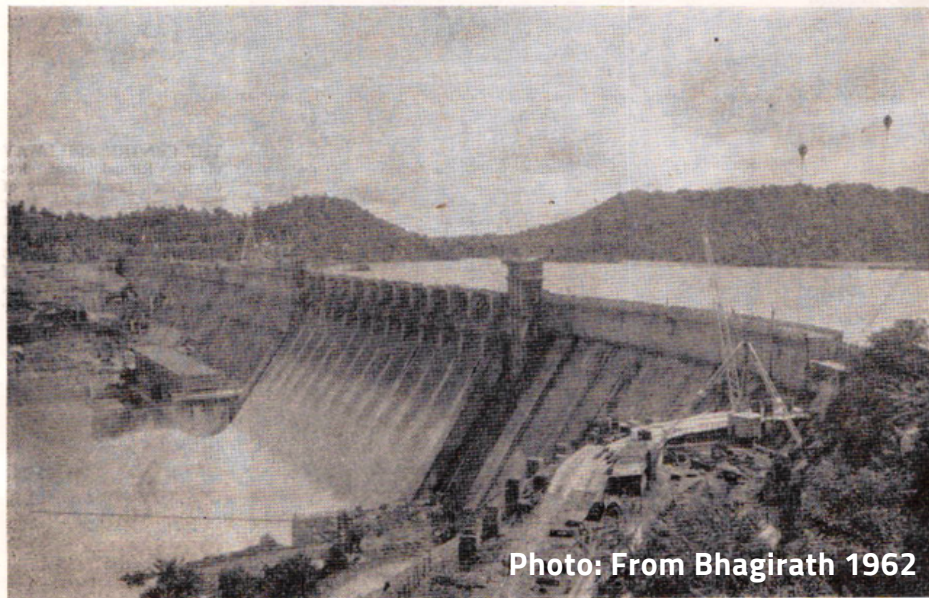


Photo: From Bhagirath 1962

Locations :	Near Pipri across Rihand river 56 km upstream of her confluence with Sone river.
DAM :	
Type	Straight gravity, Concrete
Height	91 m above deepest foundation
Length:	
Dam Section	744 m
Spillway Section	190 m
Total:	934 m
Flood Disposal:	
Spillway Crest Gates	Thirteen 12 X 9.6 m radial gates
Sluices	Two of 2.7 m X 1.2 m
Reservoir	
Catchment Area	13333 sq km
Storage capacity	10608 MCM
Water spread	466 sq km
Power Station	
Installed Capacity	
Present	250 MW
Ultimate	300 MW
COST :	Rs. 46.05 crore

and Uttar Pradesh. Principally intended to feed new industries, the power also helped agriculture. The churk cement factory and an aluminium factory was the immediate beneficiaries of Rihand power.

Source: Bhagirath



Central Water Commission

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

Editorial Board

- Dr. Samir Chatterjee, CE(HRM)- Editor-in-Chief
- Shri Amrendra Kumar Singh, CE(EMO)- Member
- Shri Yogesh Paithankar, CE(PMO)- Member
- Shri Deepak Kumar, Director(RMC)- Member
- Shri S. K. Rajan, Director(TC)- Member

- Shri Bhupinder Singh, Director(WP&P-C)- Member
- Shri S. K. Jha, Director(WSE)- Member
- Shri A. K. Madhok, DD(WSE)- Member
- Shri R. K. Sharma, DD(D&R-Coordination)- Member
- Shri Shiv Sunder Singh, DD(WSE)- Member-Secretary

Designed & Published by

Water Systems Engineering Directorate
Central Water Commission

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

