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Dr. R.K. Gupta
Chairman, CWC

Message

The month of November is my last working month. Through this department, I got the opportunity to serve the country for more than 36 years, in which I saw many challenges related to the water sector along with radical changes.

An Inter-State meeting to discuss issues regarding Joint Control of Mayurakshi Dam, unified operation of reservoirs in Damodar valley including Tenughat Dam and status of proposed Balpahari Dam was held under my Chairmanship on 14.10.2022. During the meeting, both States (West Bengal and Jharkhand) put forth their point of view on the projects and their operational aspects. The Special Campaign 2.0 on Disposal of Pending References and Cleanliness was launched on 02.10.2022 to institutionalize Swachhata/cleanliness and reduce pendency in Ministries, Departments, attached & subordinate offices of the Government of India. The month-long campaign concluded on 31.10.2022. The regional offices of CWC have paid utmost attention in making the campaign a huge success. The employees and officers at the Ayodhya site under the Upper Ganga Basin Organization of CWC took an oath to maintain a plastic-free campus by organizing cleanliness and awareness programs. National Water Academy, Pune conducted a cleanliness drive on the bank of Khadakwasla Dam as a part of the

campaign.

I heartily congratulate to Shri Kushvinder Vohra, Member (WP&P) on his election as Vice President of International Commission and Drainage (ICID) for three-year tenure 2022-2025 in the 73rd meeting of International Executive Council (IEC) held at Adelaide on 10.10.2022.

As Vice President of ICID, he will be a member of the Permanent Committee on Strategy and Organization (PCSO), entrusted for developing strategies, building activities and special programmes in irrigation and drainage sector.

The India-EU Water Partnership (IEWP) is an outcome of the 'Joint Declaration on an India- EU Water Partnership (IEWP)' adopted by the EU and Government of India during the 13th EU-India Summit in Brussels in March 2016 and Memorandum of Understanding on Water Cooperation signed between the EU and Government of India in October 2016. The 5th India-EU Water Forum was held on 27.10.2022 at New Delhi under the IEWP between the EU and Ministry of Jal Shakti, Government of India as a one-day in-presence forum. The event was attended by Shri Kushvinder Vohra, Member (WP&P) along with other senior officers from CWC.

I convey my best wishes to CWC for its future endeavours towards water secured and prosperous India. I thank everyone for their cooperation.

R.K. Gupta

ACTIVITIES UNDER D&R WING

Technical issues related to submergence in neighbouring States due to Polavaram irrigation project

A meeting under the chairmanship of Dr. R. K. Gupta, Chairman, CWC was held on 07.10.2022 at CWC regarding the technical issues related to submergence in neighbouring States due to Polavaram irrigation project. Shri J.

Chandrashekhra Iyer, Member D&R also attended the meeting which was done as per decision taken in the meeting held on 29.09.2022 regarding Orders of the Hon'ble Supreme Court dated 06.09.2022.

Technical Paper Presentation in "International Dam Safety Conference" organized by INCOLD on 10-12 October, 2022 in Jaipur

(a) Shri N.S. Shekhawat, Director, Smt. M.S. Harshitha, Deputy Director and Amir Suhail, Assistant Director of HCD (N&W) Directorate submitted technical paper and presented by Shri N.S. Shekhawat, Director HCD(N&W) in "International Dam Safety Conference" organized on 10-12 October, 2022 in Jaipur by INCOLD in association with CBIP and DRIP. The topic of the technical paper was "Dealing with large lateral forces due to creeping slope-A case study of Shongtong Karcham HEP, HP".



Technical Paper Presentation by Director, HCD (N&W), CWC

(b) Shri Sanjay Kumar Sibal, CE, Design (N&W) Unit, Shri Satish Kamboj, Director and Shri Ghanshyam Patel, Assistant Director of Gates Design (N&W) Directorate submitted technical paper and presented by Shri Satish Kamboj, Director, Gates(N&W) in "International Dam Safety Conference" organized on 10-12 October, 2022 in Jaipur by INCOLD in association with CBIP and DRIP. The topic of the technical paper was "Rectification in the operating system of non-functional stoplogs on an inclined track" of Sardar Sarovar Dam, Gujarat. The stoplogs for River Bed Power House (RBPH) intake of Sardar Sarovar Dam, Gujarat were not functioning since 2008. Functioning of these stoplogs was important to tackle any emergency situation during working of 1200 MW power house.



Technical Paper Presentation by Director, Gates (N&W), CWC

(c) HSO officers participated in International Dam Safety Conference held at Jaipur during 10-12 October 2022. A paper on "Sinuosity analysis of Barak River from Fulertal to Badarpur Ghat and its significance in project planning" was presented by Shri Goverdhan Prasad, Director, Hydrology (C), CWC.

(d) Shri Akshat Jain, Deputy Director, Hyd(S) Dte has given a paper presentation on "Analysis of Deviations observed in Design Flood of existing River Valley Projects in India and the

Causative Factors"

(e) Smt. Payal Goyal, Deputy Director, Hyd(S) Dte has given a presentation on "Design Flood Review of Gandhi Sagar Dam using Multi Storm Analysis"

(f) Shri Yogesh Kumar Gupta (Assistant Director), Shri Ankit Kumar (Deputy Director) and Shri Samir Kumar Shukla (Director) had authored a paper titled "A breach modeling of a debris-dammed lake formed aftermath of the flash flood and debris flow on 07.02.2021 in the Rishiganga river valley" for International Dam Safety Conference held in Jaipur from 10-12 October. Shri Yogesh Kumar Gupta, Assistant Director, FE&SA Directorate presented the paper on 12.10.2022 in the above International Conference on Dam Safety.

Committee to assess various issues of Rajasthan Feeder/Indira Gandhi Canal

First meeting of committee constituted to assess various issues of Rajasthan Feeder/Indira Gandhi Canal was held under the chairmanship of Shri. J. Chandrashekhra Iyer, Member(D&R), CWC on 27.10.2022 in the Chamber of Member (D&R), CWC.



24th ICID congress and 73rd IEC

An Indian delegation led by Honorable Minister of Jal Shakti, Shri Gajendra Singh Shekhawat along with other senior officers of Central Water Commission attended 24th ICID congress and 73rd IEC during 03-10 October 2022 at Adelaide, Australia.

During this event Shri N.N. Rai, Director, Hyd(S) presented a paper on "Water Food and Energy Security of India- Challenges and Way Forward" and a team of senior officers of Central Water Commission also exhibited different



programmes of Ministry of Jal Shakti regarding the water resource development of India.

37th meeting of "Standing Technical Advisory Committee (STAC)" of Central Soil and Material Research Station (CSMRS)

37th STAC meeting was held physically on 06.10.2022 at CSMRS, New Delhi under the chairmanship of Shri J. Chandrashekhar Iyer, Member (D&R), CWC.

In the meeting, discussions took place regarding Technical activities and achievements of CSMRS, Infrastructure

Saraswati River Revival Project, Haryana

A meeting to review the progress of the Saraswati River Revival Project and to firm up further course of action on the various issues related to Data/Investigation/Design necessary for the preparation of the tender drawings of the Adi Badri Dam, Somb Saraswati Barrage and Saraswati Reservoir was held on 27.10.2022 under the Chairmanship of Shri J. Chandrashekhar Iyer, Member(D&R), CWC in the CWC Committee room in hybrid mode.

The Action Taken Report (ATR) against the previous discussion held on 27.01.2022 was submitted by the project

Strengthening of CSMRS, Financial Achievements and Staff Position of CSMRS, राजभाषा & e-Governance Activities of CSMRS, Rain Water Harvesting System & Solar Power Generation, Future action plan of CSMRS (i.e. Involvement of CSMRS in Dam Safety Studies, Infrastructure Strengthening of CSMRS etc.)



authority to the chair and further discussion was held upon the same items. The timelines were updated according to the submissions provided by the project authorities and various agencies involved in the work on different items.

Meeting held under the Chairmanship of Secretary (WR) to discuss the issues related to DRIP- II scheme and NDSA issues

A meeting to discuss various issues related to Dam Rehabilitation and Improvement Project (DRIP), Phase-II and National Dam Safety Authority was held on 18.10.2022 at Shram Shakti Bhawan, New Delhi under the chairmanship of Secretary, DoWR, RD & GR. The meeting was attended by Dr. R. K. Gupta, Chairman, CWC, Additional Secretary, Joint Secretary (RD & PP), Joint Secretary & Financial Advisor, DoWR, RD & GR, Project Director, DRIP- II & III and Task

Team Leader, World Bank.

In the meeting, discussions regarding appointment of Engineering and Management Consultant for DRIP-II, setting of Centres of Excellence (CoE) for Dam Safety, Proposal of MNIT Jaipur, additional manpower requirement for the CPMU, Capacity building, advisory to States for earmarking the funds and status of Regulations to be prepared by the NDSA etc took place.

Renukaji Dam Project, Himachal Pradesh- Joint Meeting between CWC, GSI and HPPCL to sort out geological aspects

An online meeting under the chairmanship of Chief Engineer, Designs(N&W), CWC was held between the officers of CWC, GSI, CSMRS, and HPPCL on 20.10.2022 to discuss the issues concerning Renukaji Dam Project.

HPPCL had provided copies of the project DPR, CSMRS test reports, GSI reports, etc to CWC. CWC, based on the examination of these reports, has sought certain clarifications from HPPCL. The clarifications mainly pertain to project geology and its impact on the dam during its construction and operation phase and also on the benefits



envisaged from the project on a long-term basis.

Weekly report

On dam incidents being submitted to Office of Hon'ble MoJS

The weekly situational report on dams is being compiled and submitted to the office of Hon'ble Ministry of Jal Shakti on weekly basis. In the month of October following dam incidents were reported by the regional offices of CWC.

On the Inspection of Dams & Status on Formation of SCDS & SDSO

The weekly report on dam inspections carried out state wise and constitution/establishment of State Committee on Dam Safety (SCDS) & State Dam Safety organisation (SDSO) is being submitted PMO through DoWR, RD & GR, MoJS on every Friday. As on 11.11.2022, it has been reported by the states that inspection of 3907 dams out of 5334 Large

On 13.10.2022, due to rising water level of river Budhi Rapti in Siddharth Nagar district of Uttar Pradesh, breach in Madarahwa-Ashogwa embankment & Ashogwa-Nagwa embankment was reported.

Dams has been carried out in the year 2022.

As per the provisions of the Dam Safety Act (DSA), 2021, the State Govt has to constitute State Committee on Dam Safety (SCDS) and State Dam Safety organisation (SDSO). As on 11.11.2022, 30 States/UTs have constituted SCDS and 28 States/UTs have established SDSO.

7th Meeting of Sub-Committee for framing the draft Rules/Regulations under Section 54 of "Dam Safety Act, 2021"

7th Meeting of Sub-Committee for framing the draft Rules/Regulations under Section 54 of Dam Safety Act, 2021 was held on 28th Oct 2022 under the chairmanship of

Shri Vijai Saran, Member (Policy & Research), NDSA and Chief Engineer (DSO), CWC in his office. Agenda of the meeting was to discuss and finalize draft regulations.



Bhadra Dam, Karnataka

The Bhadra Dam or Lakkavalli Dam, which has created the Bhadra Reservoir, is located on the Bhadra River a tributary of Tungabhadra River. Bhadra Dam is located in the border of Bhadravathi and Tarikere, in the western part of Karnataka in India. The benefits derived from the reservoir storage are irrigation with gross irrigation potential of 162,818 hectares (402,330 acres), hydro power generation of 39.2 MW (three powerhouses, located on the right and left bank main canals), drinking water supply and industrial use. The dam commissioned in 1965 is a composite earth cum masonry structure of 59.13 metres (194.0 ft) height with length of 1,708 metres (5,604 ft) at the crest level, which submerges a land area of 11,250.88 hectares (27,801.5 acres).

ACTIVITIES UNDER WP&P WING

4th meeting of the Screening Committee for PMKSY-AIBP project

The 4th meeting of the Screening committee was held under Chairmanship of Secretary (WR) on 18.10.2022, for inclusion of projects under PMKSY-AIBP scheme. The meeting was attended by Member (WP&P), CWC and Chief Engineer, PMO, CWC.

During the meeting, discussions were held for inclusion of

Jamrani Multipurpose Project of Uttarakhand State under PMKSY- AIBP for implementation during 2021-2026.

After deliberations, committee recommended for appraisal of Jamrani MPP by Public Investment Board followed by approval of Cabinet Committee on Economic Affairs for inclusion of the project under PMKSY- AIBP.

Inter-State meeting to discuss issues regarding Joint Control of Mayurakshi Dam, unified operation of reservoirs in Damodar valley including Tenughat Dam and status of proposed Balpahari Dam

An Inter-State meeting was held under Chairmanship of Dr. R.K. Gupta, Chairman, CWC on 14.10.2022 to discuss issues regarding Joint Control of Mayurakshi Dam, unified operation of reservoirs in Damodar valley including Tenughat Dam and status of proposed Balpahari Dam.

In the meeting, senior officers of CWC, Principal Secretary, Irrigation & Waterways Department, Govt. of West Bengal, Secretary, WRD, Govt. of Jharkhand along with senior officers from both concerned party States (West Bengal and Jharkhand) and Officers from Damodar Valley Corporation participated.

During the meeting, both States put forth their point of view on the projects and their operational aspects. Govt. of West Bengal assured during the meeting to provide relevant data of Mayurakshi dam requested by CWC earlier, within 20 days for further deliberation. It was further decided that DVC will complete simulation study of Damodar valley projects including proposed Balpahari dam within next 10 days.



During the meeting, water resource assessment of Mahananda river at Mahananda barrage was also discussed for sharing of cost of Mahananda barrage at Phulbari. Govt. of Bihar made their point of view through presentation and Govt. of West Bengal assured to supply relevant data available with them to CWC for firming up water resource assessment. HSO, CWC was advised to arrange a meeting through VC within 10 days with officers of West Bengal and Bihar to firm up relevant data availability with Govt. of West Bengal to finalize water resource assessment of Mahananda river at Mahananda barrage.

Shri Kushvinder Vohra, Member(WP&P), CWC elected as Vice President of ICID

Shri Kushvinder Vohra, Member(WP&P), CWC has been elected as Vice-President of International Commission and Drainage (ICID) for a three-year tenure 2022-2025 in the 73rd meeting of International Executive Council (IEC) held at Adelaide on 10.10.2022.

As Vice President of ICID, Shri Kushvinder Vohra, Member(WP&P) will be a member of the Permanent Committee on Strategy and Organization (PCSO), entrusted

for developing strategies, building activities and special programmes in irrigation and drainage sector. He will also act as the Strategy Theme Leader of one of the Strategic Theme Areas. Additionally, he will be working on promoting regional cooperation amongst the National Committees, promote international programmes in irrigation and drainage sector and represent ICID in international events.

5th India – EU Water Forum

The India-EU Water Partnership (IEWP) is an outcome of the 'Joint Declaration on an India – EU Water Partnership (IEWP)' adopted by the EU and Government of India during the 13th EU-India Summit in Brussels in March 2016 and Memorandum of Understanding on Water Cooperation signed between the EU and Government of India in October 2016. IEWP aims to contribute to the shared vision by India and the EU for a more sustainable management of water resources and tackling the challenges posed by water management in the context of growing population,

competing water demands and climate change.

The 5th India – EU Water Forum was held on 27.10.2022 at New Delhi under the IEWP between the EU and Ministry of Jal Shakti, Government of India as a one-day in-presence forum. The 5th India - EU Water Forum on Water Cooperation aimed to bring together a wide range of stakeholders from both India and the EU and its EU Member States with the objective to exchange views on good practices, regulatory approaches, business solutions and research and innovation opportunities in the water field in

India and the EU. The event was attended by Shri Kushvinder Vohra, Member(WP&P) & Ex-officio Additional Secretary to Gol, along with other senior officers from CWC.

Participation of CWC officials in 24th ICID and 73rd IEC meeting in Adelaide, Australia

International Commission and Drainage (ICID) headquartered in New Delhi, is a global network of professional's from irrigation and drainage sector which is in existence for more than 7 decades, and over the years its mandate has evolved from a purely engineering perspective of canal irrigation to the integrated water resources management approach by embracing the technical, agronomic, socio-economic and environmental perspectives of agriculture water management. Presently, ICID have 80 member countries.

Shri Kushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to Gol, along with other senior officers of CWC participated in the 24th Congress and 73rd IEC of ICID during 3-10 October 2022, to accompany Hon'ble Minister of Jal Shakti during his participation in the conference from 5-6 October 2022 and to lead the Indian delegation to assess the facilities and other logistics needed for holding the similar event (25th Congress and 75th IEC) at Visakhapatnam in November, 2023.

During the event, Hon'ble Minister and Member(WP&P), CWC held a number of meetings with foreign delegates participating in the event viz. delegation from Saudi Arabia, Uzbekistan, Australia. A roundtable meeting with Australian industry operating in India 'Austrade' was also held by Hon'ble Minister and Member(WP&P), CWC.

Further, Member(WP&P) presented the country paper titled "Performance of Irrigation Infrastructure" during the

The Forum served as a wonderful platform to showcase the achievements of the IN-EU Water partnership and to reflect on its future developments.



Symposium-I on Integrated Approaches for Irrigation Management in the Future. He also attended various presentations in subgroups and participated in technical discussions. Papers were also presented by Shri Nitya Nand Rai, Director, CWC and Shri Sunil Kumar, Director, CWC on "Water, Food and Energy Security of India –Challenges & Way Forward" and "Prospects of Subsurface Drip Irrigation using Non-conventional Water in Drought Prone Areas of Maharashtra" respectively.

Member(WP&P) (and also the Chairman of the Organising Committee for 25th Congress) gave a presentation about the proposed 25th Congress and 75th IEC of ICID, highlighting the technical details of the Congress, facilities available at Vishakhapatnam and Technical Tour details.

During the event, he was nominated as chairperson of C-Congr, a committee of ICID, for next term of three years.



या: सूर्यो रश्मिभिराततान याम्य इन्द्रो अरदद् गातुभूमिम्।
तो सिन्धवो वरिवो धातना नो यूयं पात स्वस्तिभिः सदा नः॥

हिंदी अर्थ:- जिस जल को सूर्यदेव अपनी रश्मियों (किरणों) के द्वारा बढ़ाते हैं एवं इन्द्रदेव के द्वारा जिन्हें प्रवाहित (प्रवाह) होने का मार्ग दिया गया है, आप उन जलधाराओं से हमें धन-धान्य से परिपूर्ण करें तथा कल्याणप्रद साधनों से हमारी रक्षा करें।

ACTIVITIES UNDER RM WING

Workshop on Ion Chromatograph

A workshop was organized on Ion Chromatograph on 20.10.2022 in the Committee room, Sewa Bhawan, New Delhi for determining the suitability of Ion Chromatograph for the laboratories of CWC and accessories that would be required in CWC.

Shri P.M. Scott, Member(RM), in his inaugural address stressed upon the focus on Water Quality monitoring due to challenges posed by increasing urbanization and industrialization. These challenges require modernization of water quality monitoring network from site to lab, all levels. The first presentation on Ion Chromatograph instrument was given by Thermo Fischer Scientific. The second



the second half, after presentation of CWC, the presentations related to use of Ion Chromatograph in chemical analysis were also given by organisations i.e. NIH Roorkee, CGWB, NPL.

Financial Progress of Schemes as on 31.10.2022

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

Sl. No.	Scheme/Component Name	BE 2022-23	Expenditure	Expenditure (in %)
1.	Development of Water Resources information System (DWRIS)	185.00	87.8386	47.48%
2.	Investigation of Water Resources Development Schemes (IWRD)	08.000	6.2907	78.63%
3.	Flood Management & Border Areas Programme (FMBAP)	23.203	5.5163	23.77%
4.	Direction & Administration(D&A)-Major Works and OE(SAP)	11.15	4.746	42.56%
5.	National Hydrology Project	44.37 (RE)	10.7157	24.15%
6.	Dam Rehabilitation and Improvement Project (DRIP) Phase-II	100.00	0.940	0.94%

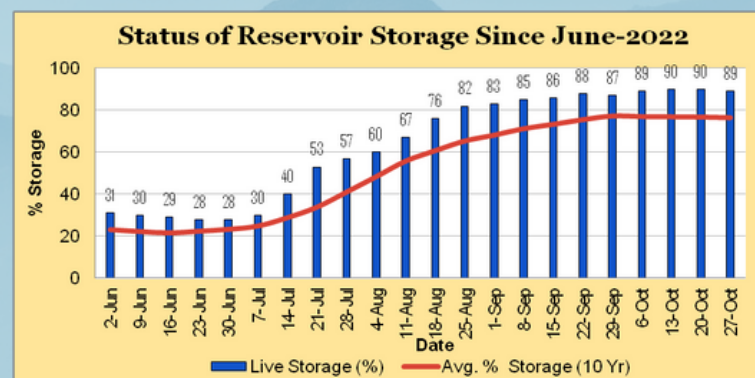
Reservoir Monitoring

CWC is monitoring live storage status of 143 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 46 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 143 reservoirs is 177.464 BCM which is about 68.83% 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 29.09.2022, the total live storage available in these reservoirs is 154.181 BCM which is 87% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding period was 142.371 BCM and the average of last 10

Flood Situation in the country -October 2022

Regular Flood Forecasting Activity commenced on 01.05.2022 in Brahmaputra and Barak and Jhelum basins. During the period from 1st May to 31st October 2022, 11344 flood forecasts (6773 Level and 4571 Inflow) were issued, out of which 10669 (6471 Level and 4198 Inflow) forecasts were within limit of accuracy with a percentage accuracy of 94.02%. 116



years live storage was 136.859 BCM. Thus, the live storage available in 143 reservoirs as per the bulletin dated 29.09.2022 is 108% of the live storage of corresponding period of last year and 113% of storage of average of last ten years.

nos. of Red Bulletin (for Extreme flood situation) and 121 nos. of Orange Bulletin (for severe flood situation) were issued till 31st October 2022 from Central Flood Control Room.

Summary of Flood Situation during 01.05.2022 to 31.10.2022

Extreme Flood Situation

Eleven FF station observed Extreme Flood Situation

Sl. No.	State	District	River	Station	Period From	To
1.	Assam	Nagaon	Kopili	Kampur	15/05/2022 1600hrs	21/05/2022 2000hrs
2.	Bihar	Kishanganj	Mahananda	Taibpur	29/06/2022 0400 hrs	29/06/2022 0800hrs
3.		Supaul	Kosi	Basua	02/08/2022 1900 hrs	02/08/2022 2200 hrs
4.		Siwan	Ghagra	Darauli	14/10/2022 0600 hrs	16/10/2022 2200hrs
5.	Telangana	Bhupalpally	Godavari	Kaleswaram	14/07/2022 0600hrs	15/07/2022 1200hrs
6.		Kumarambheem	Wardha	Sirpur(T)	14/07/2022 0300 hrs	17/07/2022 0200hrs
7.	Andhra Pradesh	AlluriSitharamapuram	Sabri	Chinturu	15/07/2022 0100hrs	19/07/2022 1000hrs
8.	Rajasthan	Karauli	Chambal	Manderial	25/08/2022 0400 hrs	25/08/2022 1100 hrs
9.		Dholpur	Chambal	Dholpur	25/08/2022 0600hrs	26/08/2022 0700hrs
10.	Uttar Pradesh	Balrampur	Rapti	Balrampur	08/10/2022 1100 hrs	13/10/2022 1900 hrs
11.		Siddharthnagar	Rapti	Bansi	14/10/2022 1600hrs	19/10/2022 0900 hrs

80 flood monitoring station observed Extreme flood situation.

Severe Flood Situation for FF Stations

95 FF Stations observed Severe Flood Situation in the States of Assam, Bihar, Jammu & Kashmir, West Bengal, Tamilnadu, Andhra Pradesh, Telangana, Chhattisgarh, Odisha, Uttar Pradesh, Maharashtra, Jharkhand, Madhya Pradesh, Uttarakhand, Rajasthan, NCT Delhi and Gujarat.

Above Normal Flood Situation

46 FF Stations in Assam, Bihar, Uttar Pradesh, Tripura, West Bengal, Uttarakhand, Maharashtra, Andhra

Pradesh, Tamilnadu, Kerala, Odisha, Telangana, Rajasthan and Karnataka observed Above Normal Flood Situation.

Reservoirs having Inflow above threshold limit

86 reservoir received inflows above their threshold limit in Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamilnadu, Telangana, Jharkhand, Kerala, West Bengal, Uttarakhand and Uttar Pradesh.



Meeting with IIT Director's on submission of Research Papers

A meeting was held under the chairmanship of Member(River Management), CWC at New Delhi as well as through video conferencing on 31.10.2022 to discuss on:

- "Data Utilization certificate" to be furnished by the indenting Agency as per the timeline indicated in the data request.
- "Data Deletion certificate" to be furnished by the indenting Agency that the raw data received from CWC has been DESTROYED.

During the meeting, Director, CWC initiated interaction/discussion with the representatives of different IITs case by case. The several points on submission of previous research papers/data utilization certificate / Data deletion certificate were discussed.

At the end, it was suggested to the IITs that even if the studies are still ongoing, an Interim report should be submitted to the CWC, so that it can be ensured that proper use of the requested data is being made and studies shall be completed in a timely manner.

Water Sector-News

- 14 projects worth Rs. 1,145 cr approved for Clean Ganga (Millennium Post, 02.10.2022)
- 74% rural households receive water on 7 days, 8% once a week: Study (Millennium Post, 03.10.2022)
- UP provides 1.07 lakh tap water connections on Gandhi Jayanti (Millennium Post, 04.10.2022)
- Jal Shakti Ministry to promote natural farming along Yamuna (The Tribune, 07.10.2022)
- Himachal Pradesh gets Rs. 2,168 crore projects for flood protection (Millennium Post, 08.10.2022)

- Not the competent authority to give nod for drawing groundwater in Delhi:CGWB (The Times of India, 11.10.2022)
- Mann, Khattar fail to reach agreement on SYL canal row (Hindustan Times, 15.10.2022)
- Bengal demands joint regulation of Tenughat dam with Jharkhand (Millennium Post, 18.10.2022)
- As India, Pak differ on Indus water pact, WB brings in experts (The Times of India, 19.10.2022)
- Dolphins return to the Ganga in U.P. (The Hindu, 31.10.2022)

OTHER ACTIVITIES

Data Corner- CWC Basin



Gallery



Cleaning of Hesaragatta lake and Surroundings as a part of Swachhata special Campaign 2.0 on 18/10/2022



Inspection of KC valley Project in Kolar (Tank filling schemes with secondary treated water for PMKSYHKKP-SMI) on 20/10/2022.

Rashtriya Ekta Diwas Pledge



Bhopal



Bhubaneswar



Kalindi Bhawan, New Delhi



Lucknow



Joint visit of Forest Officials, Govt. of Sikkim and CWC, North Sikkim for Installation of Snow Gauges stations at Yumesamdong (Near by Zero Point) at an altitude of 17000 ft and Gurudongmar Lake (altitude of 18000 ft.)



दिनांक 18.10.2022 प्रो. रीता बहुगुणा जोशी जीकी अध्यक्षता में संसदीय राजभाषा समितिने अहमदाबाद में उपमंडलीय अभियंता का कार्यालय, केंद्रीय जल आयोग, अहमदाबाद के साथ निरीक्षण बैठक की।

History- MAHANADI RESERVOIR PROJECT

Mahanadi Reservoir Project (now known as Pt. Ravishanker Sagar) is a major multipurpose project across the river Mahanadi which originates in Pharsia village in south-eastern corner of Raipur district in Madhya Pradesh. A small pond with stagnant water, a temple nearby and cultivated land around marks the origin of this great river. The project is located at Gangrel village about 5 km upstream of the existing Rudri weir in Dhamtari district. The project site is 93 km from Raipur by road. It has a catchment area of 3670 sq km and impounds 909 million cum of water.

There are two existing reservoirs viz., Murumsilli and Dudhawa, upstream of the project in the Mahanadi basin. These three reservoirs together shall have a gross storage capacity of 1315 MCM which is nearly equal to the 75% dependable yield of the total catchment up to Mahanadi Reservoir Project.

Phased Programme of Construction

Phase-I of the project comprises construction of composite Dam having a maximum height of 32 m above the lowest foundation level and a Feeder Canal of 42 km length connecting the head-works with the existing Tandula Main Canal. It has a water carrying capacity of 20 cum per sec to cater to the needs of the Bhilai Steel Plant for its proposed expansion from the 2.5 million t to 4 million t. The project was estimated to cost Rs. 15.34 crore as per the 1969 estimates. Phase II of the project comprises remodeling new construction of canals in the existing Mahanadi Canal System and construction of distributaries and minors taking off from the Feeder Canal to enable the additional irrigation of new areas under the two systems. This was augmented the existing 1.414 lakh ha in the area by 0.8888 lakh ha. The Foundation stone for the dam was laid by the Prime Minister Smt. Indira Gandhi on 5 June 1972. Skeleton organization for planning the pre construction works for phase I of the project was approved by the State Government in January 1973.

Main Earth Dam

The earth dam comprises a homogenous section, and it has been designed considering the properties of soil available in the project vicinity within economical leads. A vertical chimney drain has been provided downstream of the central core. Horizontal sand filters have been provided at 4 m vertical intervals upstream of the central core to add stability to the upstream slopes. Proper drainage of an earth dam is its life line and not only it should function well when the reservoir is full but when it is depleting, such works are very important. The total earth work is about 22 lakh cum and has been completed departmentally with the help of heavy earth-moving equipment comprising scrapers, dozers and vibratory compaction equipments.

Model Studies

Model studies for confirming the adequacy of the design of the spillway profile and the energy dissipater (roller bucket) have been completed in the Hydraulic Research Station of the State Irrigation Department, Bhopal.

MAHANADI RESERVOIR PROJECT (Features at a Glance)			
Location : A dam in two phases across the river Mahanadi at Dangrel village about 5 km upstream of the existing Rudri Weir in Tehsil Dhamtari of Raipur districts in Madhya Pradesh.			
Masonry Dam			
LENGTH OF SPILLWAY PORTION	:	252.25 m	
LENGTH OF NON-OVERFLOW PORTION	:	222.50 m	
MAX. HEIGHT	:	32.00 m	
SPILLWAY GATES	:	14 (15 m x 10 m)	
TOP WIDTH OF DAM	:	7.5 M/6.5 M	
Hydrology			
CATCHMENT AREA	:	3670 sq km	
AVERAGE ANNUAL RAINFALL	:	1430 mm	
Earth Dam			
LENGTH OF MAIN DAM	:	1245.75 m	
LENGTH OF SADDLE DAM	:	1110.00 m	
MAX. HEIGHT	:	30.50 m	
Rock-Fill Dam			
LENGTH	:	130.00 m	
MAX. HEIGHT	:	10.00 m	
Reservoir			
GROSS STORAGE CAPACITY	:	909.30 million cum	
LIVE STORAGE	:	765.70 million cum	
Feeder Canal : LENGTH	:	42 km	
Canals : LENGTH	:	51.2 km	
Benefits			
PHASE – I			
(i) ANNUAL WATER SUPPLY TO BHILAI STEEL PLANT	:	255 million cum (9 000 million cuft)	
(i) RABI IRRIGATION	:	40469 ha (one lakh acre)	
PHASE – II			
(i) UNDER EXISTING MAHANADI CANAL SYSTEM/TANDULA	:	1.414 lakh ha (3.5 lakh acre)	
(i) UNDER FEEDER CANAL : 0.32724 lakh ha (0.8 lakh acre) Under Phase-I an annual revenue of Rs. 96 lakh is envisaged from water supply to Bhilai Steel Plant and its ancillary industries.	:		
Cost : PHASE-I	:	Rs. 15.34 crore	
PHASE-II	:	Rs. 10.00 crore	
DATE OF START	:	1972-73	
DATE OF COMPLETION	:	1978	

Main Spillway

The Spillway comprises 14 bays each of 15 m clear width. Fourteen radial crest gates each of size 15 m x 10 m shall be installed above the crest. The spillway has been designed to cater to a peak design flood of 23 500 cu m per sec. The moderated design flood over the spillway works out to 17890 cum per sec. The maximum height of the spillway upto the crest over the lower founding level is about 16 m. The spillway foundation consists of predominantly quartzite and quartzitic sand stone with frequent occurrence at close intervals of weak shale seams. Weathered bedding planes carrying fillings of clayey materials.

Progress (As on October 1975)

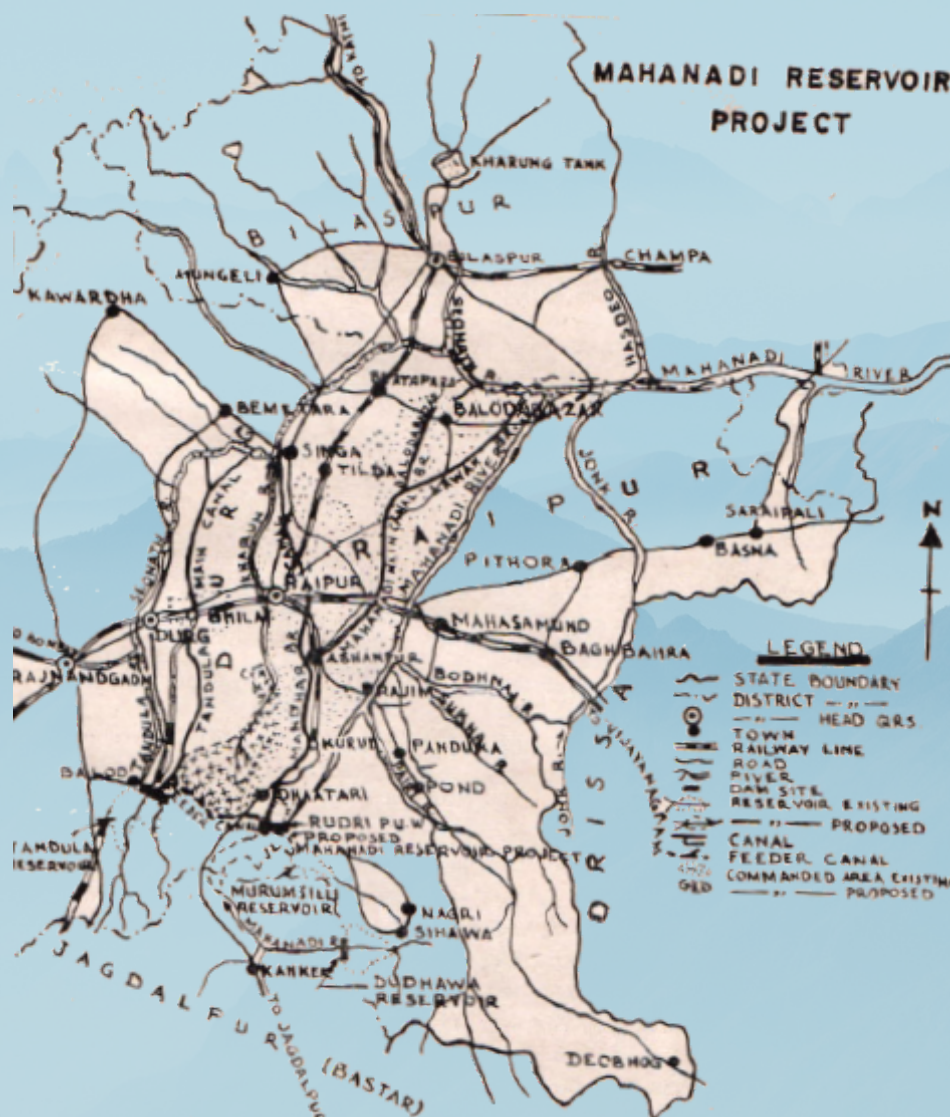
Approach road to Dam site from Rudri in a length of 5 km, four bridges and culverts have been completed in record

time of one working season. Project Colonies for Rudri and Dam site have come up for regular and workcharged staff. Control Room has been commissioned. School, hospital, internal transport, ambulance etc. have been arranged at the project site. Construction of this project was started in 1973. No pre-construction time was allowed looking to the high priority attached to this project by the Government of India since expansion programme of the Bhilai Steel Plant was tied up with its timely completion. Design and construction had, therefore, to be proceeded with almost simultaneously. Excavation for the spillway foundation and non-overflow masonry dam foundation was nearing completion. Excavation in the spill channel is completed. Earth-work on the main earth dam was in progress departmentally with the help of heavy earth-moving machines and about 3000 cum

of earth work was being done every day in the limited area available on the left flank. Alignment for the entire length of 42 km of Feeder Canal has been surveyed out of which the alignment has been approved for 36 km length. Work is in progress in a length of 33 km. Thus works have been started on a large scale on the whole project by employing agencies departmentally, piece-workers and contractors. Expenditure incurred to the end of March 1975 was gross Rs. 9.87 crore and net Rs. 7.53 crore. This will give an idea of the fast pace of construction and turn over at site.

Efforts are being made to initiate works of Phase-II also simultaneously so that the canal system can carry water for irrigating additional areas which may also be ready as far as possible with the minimum time lag after the completion of Phase I of the project. The target date for completion of phase-I have been kept as December 1975. Completion of this project shall obviously usher in an era of prosperity for the people in Raipur and Durg districts in Chhattisgarh, the rice bowl of the State, besides helping in the production of Steel in the country.

(Source: Bhagirath October 1975)



Central Water Commission

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