



Shri J. Chandrashekhar Iyer
Chairman, CWC



Message

Ministry of Jal Shakti, Department of Water Resources, River Development & Ganga Rejuvenation, Government of India organises the India Water Week to discuss, talk, strategize with eminent stakeholders through seminars, sessions and exhibitions to build public awareness, to get support to implement key strategies for conservation, preservation and optimum use of available water. The 7th India Water Week (IWW) was organised by the Ministry this year from 1 - 5 November 2022 at India Expo Centre, Greater Noida, NCR of Delhi, which was a grand success. The event was inaugurated by the Hon'ble President of India on 01.11.2022 in the august presence of the Hon'ble Governor of Uttar Pradesh, Hon'ble Chief Minister of Uttar Pradesh, Hon'ble Union Minister of Jal Shakti and Hon'ble Ministers of State for Jal Shakti, Government of India. The theme of this year IWW was "Water Security for sustainable development with equity". The event culminated on 05.11.2022 with the valedictory function,

which was graced by the Hon'ble Vice President of India. I am glad that Central Water Commission officers participated in large numbers and made significant professional contribution for the success of the event.

The Regional Review Meeting-cum-Workshop of National Dam Safety Authority was held on 11.11.2022 and 19.11.2022 in Pune and Guwahati respectively, for reviewing the status of implementation of the various provisions of the Dam Safety Act, 2021 by the dam owners in the western as well as east & north eastern region States/UTs. The Third Technical Seminar to encourage officers and staff to increase the use of Hindi language in official work was organized by CWC in Kochi on 11.11.2022, which was very well received.

The 151st meeting of the Advisory Committee of DoWR, RD&GR for consideration of techno-economic viability of Irrigation, Multipurpose and Flood Control Projects was held on 29.11.2022 under the Chairmanship of Secretary, DoWR, RD&GR. A total of six projects/schemes were accepted by the Advisory Committee.

I take this opportunity to convey my best wishes to all the new CWES Group-A officers who have joined the Central Water Commission after successful completion of their induction training programme.

I wish all the readers a healthy and prosperous New Year.



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ACTIVITIES UNDER D&R WING

Meeting held to discuss the issues related to DRIP-II Scheme and NDSA matters

A meeting was held on 18.11.2022 at Shram Shakti Bhawan, New Delhi under the chairmanship of Secretary, DoWR, RD&GR to review the action taken on the decisions in the meeting of 18.10.2022 on various issues related to DRIP- II

scheme and NDSA matters. Dr. R.K Gupta, Chairman, CWC, Shri J. Chandrashekhar Iyer, Member(D&R), CWC, officials from Ministry and World Bank participated in the meeting.

8th meeting of the committee for "Study on the issue of Flood and Siltation in River Ganga and its Tributaries in the state of Bihar due to Farakka Barrage "

The 8th meeting of Committee for "Study on the issue of Flood and Siltation in River Ganga and its Tributaries in the state of Bihar due to Farakka Barrage" was held under the chairmanship of Dr. R.K Gupta, Chairman, CWC on 29.11.2022 to discuss the progress of the project. In the meeting Shri J. Chandrashekhar Iyer, Member(D&R) and other members from MoJS, CWC, GFCC, Government of Bihar & NIH Patna participated. During the meeting, draft final report of the project was discussed and committee recommended the Consultant to carry out certain



improvements and agreed for extension for completion up to 15.12.2022.

Unveiling the "Design Manual on Hydraulic Hoist"

Dr. Rakesh Kumar Gupta, Chairman, CWC unveiled on 29.11.2022 the "Design Manual on Hydraulic Hoist" for the operation of Hydraulic Gates of Water Resource projects in the presence of Shri J. Chandrashekhar Iyer, Member(D&R), Shri Kushvinder Vohra, Member(WP&P), Shri P.M. Scott, Member(RM) and other senior officers of CWC.



This Design Manual has been authored by Shri Satish Kamboj, Director, Gates Design (N&W) Directorate under the guidance of senior officers. This manual provides a general framework for the design engineering of hydraulic hoists for operating hydraulic gates. Hydraulic hoist which comprises of cylinder, piston and power pack is becoming the first choice of planners and designers because of their cost effectiveness. Unlike the more traditional cranes and lifts, hydraulic hoists rely on an oil-based piston mechanism instead of a large motorized operating system. This piston mechanism allows the hydraulic hoist to lift much larger

loads.

This manual contains the design procedures to be followed for designing hydraulic hoist of gates for various applications in river valley projects. It is intended to provide practical guidance to engineers connected with the field of design, fabrication and erection of such equipment. This manual will be a ready reference for concerned project designers, field engineers and other technical professionals.

Joint visit of officers from CWC and officers from IWRD, UP to the proposed alternative locations of Panchnad Barrage Project

A team of officers from CWC Design Directorate, New Delhi, CWC Planning Circle - Faridabad, along with officers from IWRD, UP jointly visited the proposed locations of Panchnad Barrage Project during 09th to 11th November 2022. During the visit, all the alternative locations of barrage, as given in PFR were inspected to assess the feasibility and three suitable locations were identified for barrage site. Earlier, a reconnaissance survey to explore the alternate sites was conducted by a joint team of officials of CWC, Faridabad and IWRD, UP during 08.09.2022 to 10.09.2022.



Safety inspection of Baglihar Hydro Electric Project, Jammu & Kashmir

A team of CWC officers led by Shri Kayum Mohammad, Director(CMDD (NW&S)) along with Shri Rakesh Kumar Gautam, DD, DSM Dte., Ms. Shachi Jain, DD, Instrumentation Dte. and Shri Ghanshyam Patel, AD, Gates Design (N&W) Dte. inspected the Baglihar Hydro Electric Project, Jammu & Kashmir from 15th to 17th November 2022 for safety inspection of the dam. The team inspected the appurtenant structures, instrumentation and hydro-mechanical equipments of the dam to assess overall safety of the dam.



Regional Review Meeting-cum-Workshop by NDSA

Western Region States/UTs/CPSUs

A Regional Review Meeting-cum-Workshop was organized by National Dam Safety Authority (NDSA) under the chairmanship of Shri J. Chandrashekhra Iyer, Chairman, National Dam Safety Authority (NDSA) & Member(D&R), Central Water Commission on 11.11.2022 at Pune to review the various activities undertaken under the Dam Safety Act, 2021 by the State/UT Governments/dam owners of the western region for safety of dams falling under their jurisdiction as well as sensitize all the stakeholders about the provisions contained in the Dam Safety Act, 2021. Senior officers from Department of Water Resources, RD&GR,



Ministry of Jal Shakti, CWC, NDSA and the heads of SCDS/SDSO and Dam owners falling under the Western Region participated in the meeting.

East & North Eastern Region States/UTs/CPSUs

A Regional Review Meeting-cum-Workshop was organized by the National Dam Safety Authority (NDSA) under the chairmanship of Shri J. Chandrashekhra Iyer, Chairman, National Dam Safety Authority and Member(D&R), Central Water Commission on 19.11.2022 at Guwahati to review the various activities undertaken under the Dam Safety Act, 2021 by the State/UT Governments/dam owners of the Eastern and North Eastern region for the safety of dams falling under their jurisdiction as well as to sensitize all the stakeholders about the provisions contained in the Dam Safety Act, 2021. Senior officers from Department of Water Resources, RD&GR, Ministry of Jal Shakti, CWC, NDSA and



the heads of SCDS/SDSO and dam owners falling under the East & North Eastern Region participated in the meeting.

Submission of weekly report on dam incidents to the Office of Hon'ble MoJS

The weekly situational report on dam incident reported to NDSA is being compiled and submitted to the office of Hon'ble Ministry of Jal Shakti on weekly basis. In the month

of November no incident related to damages to any dam in the country was reported by the regional offices of CWC.

Weekly Report on the Inspection of Dams

The weekly report on dam inspection carried out state wise and constitution/establishment of State Committee on Dam Safety (SCDS) & State Dam Safety organization (SDSO) is being submitted to PMO through DoWR, RD&GR, MoJS every Friday. As on 30.11.2022, it has been reported by the states that Pre-Monsoon inspection of 3916 dams and Post-Monsoon inspection of 487 dams out of 5334 Large Dams

have been carried out in the year 2022.

As per the provisions of the Dam Safety Act, 2021, the State Govt has to constitute/establish State Committee on Dam Safety (SCDS) and State Dam Safety Organisation (SDSO). As on 30.11.2022, all the 28 States/UTs have constituted SCDS and established SDSO.

Monitoring & QC Visit to the dams of Manipur WRD, Kerala WRD and Rajasthan WRD under DRIP Phase II

Joint team of CWC and CSMRS officials undertook Monitoring and Quality Control visit to Singda dam & Imphal Barrage of Manipur WRD during November 9th to 11th November 2022 & Kuttiyadi dam of Kerala WRD during 14th to 17th November 2022 and Bisalpur and Jawai dam of Rajasthan WRD during November 23rd to 27th November 2022. The online briefing was also done before each visit to apprise CWC and CSMRS officials about the ongoing rehabilitation activities under DRIP. Such visits of other dam rehabilitation under execution shall be taken up in phased manner. During these visits, CSMRS, New Delhi has been



Inspection of Kuttiyadi dam of Kerala WRD by joint team of CWC and CSMRS official

entrusted for QC activities and regional field offices of CWC would look after Monitoring activities.

ACTIVITIES UNDER WP&P WING

151st meeting of TAC on Irrigation, Flood Control and Multi-Purpose Projects

The 151st meeting of Advisory Committee of DoWR, RD&GR for consideration of techno-economic viability of Irrigation, Multipurpose and Flood Control Projects was held on 29.11.2022 under the Chairmanship of Secretary, Department of Water Resources, River Development & Ganga Rejuvenation. The meeting was attended by the

the representatives from Govt. of Telangana, West Bengal & Uttar Pradesh besides CWC, GRMB, CGWB, GFCC, MoTA, MoEF&CC, CEA, Niti Ayog, MoF etc.

Total of SIX projects/schemes, as per the details below were accepted by the Advisory Committee in the meeting:

Sl. No.	Name of the Project	State	Type of the project	Estimated Cost	Intended Benefits
1	Mukteshwar (Chinna Kaleshwaram) lift irrigation scheme, Major, Telangana	Telangana	Major Irrigation	Rs. 545.15 cr at March, 2021 PL	CCA- 18211 Ha. BC Ratio: 2.699
2	Rudha (Channaka – Korata) Barrage (Medium) – Inter State Project of Telangana & Maharashtra	Telangana & Maharashtra	Medium Irrigation	Rs. 452.50 cr (Telangana-409.44 & Maharashtra- 43.06)	CCA-6680 Ha. BC Ratio: 1.848
3	Choutpally Hanmanth Reddy Lift Irrigation Scheme (Medium), Nizamabad, Telangana	Telangana	Medium Irrigation	Rs. 48.207 cr	CCA-3359 Ha. BC Ratio: 1.53
4	Anti-erosion work to the right bank of river Padma at AOR of BOP Atrosia and Renu for a total length of 1830.00 m in Block & P.S. – Lalgola, district – Murshidabad, West Bengal	West Bengal	Flood Control	Rs. 73.8298 cr.	Population benefitted- 35000 Area benefitted-2500Ha BC ratio-1.27
5	Construction of embankment of Right Bank of River Ganga at Hastinapur, district- Meerut, Uttar Pradesh	Uttar Pradesh	Flood Control	Rs. 73.3854 cr	Population benefitted- 7915 Area benefitted- 6672.20 Ha BC ratio-8.85
6	Protection for Construction of Marginal Bund in Purkaji Khadar along right bank of River Solani in District – Muzaffarnagar, Uttar Pradesh	Uttar Pradesh	Flood Control	Rs. 113.88 cr.	Population benefitted- 17200 Area benefitted- 3425 Ha BC ratio- 2.70

Meeting to discuss on the Revised Cost Estimate (RCE) proposal for Relining of Rajasthan Feeder and Sirhind Feeder

A meeting to discuss on the Revised Cost Estimate (RCE) proposal for Relining of Rajasthan Feeder (from RD 179000ft to RD 496000 ft) and Sirhind Feeder (from RD 119700 ft to RD 447927 ft) was held on 22.11.2022 under Chairmanship of Shri Kushvinder Vohra, Member (WP&P), Central Water Commission. During the meeting, Chief Engineer (PAO), CWC informed that RCE proposal for

Rajasthan Feeder has been received from Project Authority in e-PAMS, however, proposal of Sirhind Feeder is pending. Project Authority stated that they will submit the proposal of SF within a week. Further, issues regarding relining of the bed portion of the canal from RD 119700 to RD 172500 in SF were also deliberated.

Shahpurkandi Dam Project meeting

The Shahpurkandi Dam Project is a National Project on river Ravi, 11 Km downstream of Ranjit Sagar Dam and 8 Km upstream of Madhopur Headworks. It envisages construction of 55.5 m high concrete dam, 7.70 km long Hydel Channel along the left bank of river, 2 nos. head regulators, one to feed Shahpurkandi Hydel Channel (Left side) in Punjab and the other to feed Ravi Canal (right side) in J&K. The project has irrigation benefit of 37173 ha. (32173 ha. in J&K + 5000 ha. in Punjab) and power potential of 206 MW (2x99 MW + 8 MW).

Physical & Financial Progress of Project (Oct-2022)

- Progress of Main Dam - Excavation- 95.41 % & Concreting- 81.08 %,
- Progress of Power House- Excavation- 95.96% & Concreting- 1.60%.
- Total expenditure incurred on the project is Rs 1764.75 Cr.
- Total Central Assistance released under the National Project is Rs. 282.6498 Cr
- The project is expected to be complete by December 2024.

The 9th meeting of the Monitoring committee was held on 16.11.2022 to discuss the progress regarding

India-EU Water Partnership

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 between the EU and Government of India signed in October 2016.

IEWP aims 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. 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 IEWP Action Phase 2 (1st November 2020 – 31st October 2023) is building upon the learnings and achievements of its Phase I (1st July 2017 – 30th September 2020). In Phase 2, the IEWP Action is being implemented through four thematic areas as presented below:

1) River Basin Management: fostering the holistic management of river basins in India based on EU good practices merged with Indian approaches. In this work area,



implementation and other issues in respect of Shahpurkandi Dam Project (SKDP) under the Chairmanship of Shri Kushvinder Vohra, Member (WP&P), Central Water Commission. The meeting was attended by officers of Govt. of Jammu & Kashmir, Govt of Punjab, Central Electricity Authority and Central Water Commission. Officials from IBO, Chandigarh, CWC attended the meeting though virtual mode. In the meeting, a presentation was given by officials from Govt. of Punjab. Discussions were held on the physical progress (component-wise) of Shahpurkandi Dam Project along with issues raised by the contractual agencies. Status of the examination of proposal on Revised Cost Estimates and Central Assistance for FY 2022-23 was also discussed in the meeting. Further, some of the issues raised by the Govt. of Punjab and Govt. of J&K were deliberated.

the Tapi RBM Plan is being detailed and a mechanism for the gradual implementation of its Programme of Measures will be developed.

2) Environmental Flows Assessment: Working the Ramganga Basin focuses on assessing the ecological needs of the basin and contributes to a stakeholders' consultation process towards identification of E-Flows measures under the Indo-German Support to Ganga Rejuvenation Project.

3) Irrigation and Efficient Water Use: Activities are being pursued to develop a protocol on assessment of irrigation efficiency and performance to support efficient use of water in the irrigation sector and, hence, to counteract water scarcity.

4) Safe Reuse of Treated Water (SRTW): Work in this area aims for the implementing the related National Framework on SRTW (developed under the IEWP Phase 1) and to develop related business models.

Brief Conclusions/Recommendations are as follows:

1. IEWP Action will support the facilitated implementation of key measures in the Tapi Basin (Programme of Measures-PoM) through development of up to 15 problem statements, which will then be transferred into business cases. The related stakeholder discussions will be done through a Solution Forum. These business cases will be presented to relevant clusters of the EU small-medium enterprises,

Indian water authorities and financing organisations to possibly develop mutually profitable business collaborations between EU and India.

2. Horizon 2020 water projects will develop and demonstrate energy efficient and cost-effective technologies relevant for the Indian water sector.

3. To boost-up technological and socially oriented innovations in the water sector there is a strong need for setting up of dedicated incubation centre which may be

Conclave on “Water Security of India” Side Event during the 7th India Water Week-2022

The Indian National Committee on Irrigation & Drainage (INCID), in association with Central Water Commission (CWC) and International Commission on Irrigation and Drainage (ICID), organised the Conclave on “Water Security of India” on 1st & 2nd November 2022 as a Side Event during the 7th India Water Week. The Conclave aimed at discussing the water security issues in a comprehensive manner by addressing various associated topics. Experts from all over the country from various Govt. Departments/Agencies, research institutes, academic institutes etc. were invited to participate and present their views on the various aspects of water security.

The event involved fruitful presentations followed by enriching discussions among the participants. It is planned to bring the discussion of the Conclave in the form of Chapters to bring out a publication.

The following major recommendations have emerged out of the discussions held during the Conclave:

1. New ERM proposals shall necessarily have modernization components. All new projects under the techno-economical stage should have specific focus on water use efficiency.
2. Participatory Irrigation Management Act and WUAs can be real agents of change in rejuvenation of our rivers. To overcome reluctance for formation of WUAs, the Capacity Development programme for WUAs and farmers, on a large scale, is the need of the hour.
3. Construct new ponds and rejuvenate existing ponds/lakes in every district within each meteorological sub-division. At least five to 10 ponds of significant storage capacity be constructed in each district.
4. Urban Management plan of the city should go hand in hand with the Water improvement plan.
5. A detailed understanding of the system (surface water-ground water interactions, wetland restoration, irrigation efficient techniques, wetland-river relationships) critical in deciding on the actions needed for rejuvenation.
6. The assessment of WUE of the irrigation projects in the country is a massive work for which present institutional capacity is inadequate. There is a strong need of developing a cadre of independent Water Auditors, having appropriate

named as “Jal Shakti Incubation Centre”.

4. IEWP Action will serve as a platform to support the dissemination of the relevant technical recommendations from the Horizon 2020 and also flag these within the planned Solution Forum. The IEWP Action aims to flag the learnings from Horizon 2020 Projects to the Indian partners and EU businesses for a possible market uptake.

5. The major focus of the partnership would be for capacity building in all the four thematic areas.

skill set who can be engaged by the Project Authorities for undertaking data collection, analysis and studies and to recommend the appropriate measures for increasing the efficiency which may be basis for ERM projects. The cadre of Water Auditors may also be developed, separately, for undertaking efficiency studies of industries and municipal corporations.

7. Water-related disasters should be a national planning priority given that their frequency and magnitude is increasing.

8. Water security risks to be managed at different spatial scales: from within the household to community, town, city, basin and region.

9. Nature-based solutions, such as wetland restoration, mangrove conservation, and preserving flood plains can increase water availability and quality, and reduce the risks from water-related disasters. They can also play a dual role in tackling climate change, supporting both mitigation and adaptation outcomes.

10. Water resources Management and the Flood/Drought Management must go hand in hand, with Integrated Approach.

11. Proper plan to be evolved for building the Learning Curve for the WRD personnel to counter the inherent lack of capacity.

12. Set up a national level coordination mechanism where stakeholders can participate in the water governance process.

13. WALMI should be supported with adequate financial resources. Each WALMI should be organically connected with India NPIM/CADWM - CWC/NWA and should also have linkages with International PIM.

14. Need to develop a linkage mechanism between the various institutes involved in capacity building and training in water sector. This will promote synergy of efforts with sharing of knowledge and expertise, while avoiding duplicity of efforts. We also need a well knitted programme for creating a pool of Trainers in the Water sector, which may include Certification courses, Faculty Development Programs etc.

ACTIVITIES UNDER RM WING

Establishment of smart laboratory on clean rivers (SLCR) in Varanasi

Shri P. M. Scott, Member(RM), CWC chaired a meeting on the issue of setting up of smart laboratory on clean rivers (SLCR) in Varanasi on 07.11.2022 with IIT-BHU, Denmark Embassy, NMCG and CWC officials. Member(RM) stated that after the meeting, modalities for implementing the project of rejuvenation of River Varuna should be finalized by LGBO and IIT-BHU. This should be shared with CWC HQ, NMCG

and Denmark Embassy. After that, a meeting can be organised again to decide the next course of action. After the deliberations, Dr. Vikas Dubey, IIT- BHU shared with the group that the proposal will be discussed by himself with other faculty members. He also requested a meeting with CWC officials involved in the implementation of the setting up of SLCR.

Meeting by Secretary (WR, RD & GR) to discuss Model Flood Plain Zoning Bill and various aspects of Flood Plain Zoning

A meeting was convened by Secretary (WR, RD&GR) on 18.11.2022 on Flood Plain Zoning. A power point presentation was made by CWC. In the meeting, it was decided that a committee shall be constituted for drafting

the technical guidelines for Flood Plain Zoning, to be headed by Member(RM). The meeting was attended by Chairman, CWC; Member(RM); Chief Engineer(FMO) and Director(River Conservation Directorate).

55th Meeting of CDRC

Date of Meeting	17.11.2022
Total cases considered	06
Commercial Cases	00
Non Commercial	06
No. of cases approved by the committee	06

Flood Situation in the country -November 2022

Regular Flood Forecasting Activity commenced on 01.05.2022 in Brahmaputra and Barak and Jhelum basins. During the period from 1st May to 30th November 2022, 11457 flood forecasts (6779 Level and 4678 Inflow) were issued, out of which 10767 (6476 Level and 4291 Inflow) forecasts were within limit of accuracy with a percentage accuracy of 93.97%. No Red Bulletin (for Extreme flood situation) was issued and 2 nos. of Orange Bulletin (for severe flood situation) were issued in the month of November 2022 from Central Flood Control Room.

Summary of Flood Situation during 01.05.2022 to 30.11.2022

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 16/06/2022	21/05/2022 22/06/2022
2.		Kishanganj	Mahananda	Taibpur	29/06/2022	29/06/2022
3.	Bihar	Supaul	Kosi	Basua	02/08/2022	02/08/2022
4.		Siwan	Ghagra	Darauli	14/10/2022	16/10/2022
5.	Telangana	Bhupalpally	Godavari	Kaleswaram	14/07/2022	15/07/2022
6.		Kumarambheem	Wardha	Sirpur(T)	14/07/2022	17/07/2022
7.	Andhra Pradesh	Alluri Sitharama raju	Sabri	Chinturu	15/07/2022	19/07/2022
8.	Rajasthan	Karauli	Chambal	Manderial	25/08/2022	25/08/2022
9.		Dholpur	Chambal	Dholpur	25/08/2022	26/08/2022
10.	Uttar Pradesh	Balrampur	Rapti	Balrampur	08/10/2022	13/10/2022
11.		Siddharthnagar	Rapti	Bansi	14/10/2022	19/10/2022

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,

Reservoir Monitoring

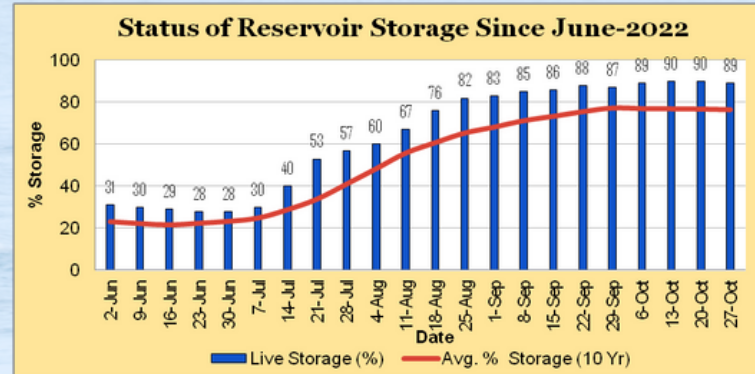
CWC is monitoring live storage status of 143 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 46 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 143 reservoirs is 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 24.11.2022, the total live storage available in these reservoirs is 149.490 BCM which is 84% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding period was 140.948 BCM and the average of last 10

Rajasthan and Karnataka observed Above Normal Flood Situation.

Reservoirs having Inflow above threshold limit

86 reservoirs 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.



years live storage was 125.880 BCM. Thus, the live storage available in 143 reservoirs as per the bulletin dated 24.11.2022 is 106% of the live storage of corresponding period of last year and 119% of storage of average of last ten years.

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	104.249	56.35%
2.	Investigation of Water Resources Development Schemes (IWRD)	08.000	6.6359	82.95%
3.	Flood Management & Border Areas Programme (FMBAP)	23.203	6.2740	27.04%
4.	Direction & Administration(D&A)-Major Works and OE(SAP)	11.15	4.7532	42.63%
5.	National Hydrology Project	44.37 (RE)	11.612	26.17%
6.	Dam Rehabilitation and Improvement Project (DRIP) Phase-II	100.00	1.02	1.02%

OTHER ACTIVITIES

Water Sector-News

- It's time to end all inter-state water disputes, says Dhakhar (The Indian Express, 06.11.2022)
- India's Groundwater Extraction Stage at 60% in 2022, says report (Business Standard, 11.11.2022)
- MSP panel stresses on changing cropping patterns to save water (Millennium Post, 16.11.2022)
- Mamta writes to PM on Ganga erosion, seeks technical study (The Hindu, 18.11.2022)
- Narmada waters creating ripples in arid Kutch despite hiccups (The Indian Express, 22.11.2022)
- Delhi govt. promises to clean Yamuna to bathing standards by 2025 (The Pioneer, 24.11.2022)
- AP seeks Rs. 1,000 cr. grant for flood relief (Telangana Today, 25.11.2022)
- 4 States using only 65% Krishna basin water, finds central panel (The Times of India, 26.11.2022)
- Krishna river row : Telangana decides to move SC (The Morning Standard, 28.11.2022)
- Significant drop in volume of water in Ganga, flags WMO (Hindustan Times, 30.11.2022)

Celebration of Constitution Day

Constitution Day, also known as Samvidhan Divas, is celebrated across the country on 26th November every year to commemorate the adoption of the Constitution of India on that day in 1949 by the Constituent Assembly of India. The Constitution of India came into effect on 26th January 1950. This year the programme started with the reading of the Preamble of Constitution. The officers/staff of Central Water Commission-HQ were assembled and participated in the reading of the Preamble duly following the COVID protocols. The same was also followed in the regional



offices of CWC.

“भारत में जल प्रबंधन” विषय पर तृतीय तकनीकी संगोष्ठी

केंद्रीय जल आयोग (मु.) द्वारा 11.11.2022 को कोच्चि में हिन्दी में तृतीय तकनीकी संगोष्ठी का सफल आयोजन किया गया। संगोष्ठी का विषय ‘भारत में जल प्रबंधन’ था। इस एक पूर्ण दिवसीय संगोष्ठी के मुख्य अतिथि सदस्य, नदी प्रबंध, श्री पी.एम. स्कॉट थे।

श्रीमती रजिन्दर पॉल, उप निदेशक (राजभाषा) ने के.ज.आ. में राजभाषा हिन्दी के प्रचार-प्रसार में हुई निरंतर बढ़ोत्तरी का उल्लेख करते हुए सभी कार्मिकों को भविष्य में भी अपना सरकारी कार्य सरल व सहज हिन्दी में करने की प्रेरणा दी। इस अवसर पर श्री टी.के. शिवराजन, मुख्य अभियंता, कोयंबतूर, श्री आदित्य शर्मा, मुख्य अभियंता, भोपाल, श्री डी. रंगा रेड्डी, मुख्य अभियंता, हैदराबाद ने भी जल प्रबंधन के विभिन्न पहलुओं पर राजभाषा हिन्दी में प्रकाश डाला। तत्पश्चात, मुख्य अतिथि महोदय ने सभी वक्ताओं द्वारा प्रस्तुत किए जाने वाले व्याख्यानों को संकलित कर हिन्दी अनुभाग द्वारा तैयार की गई ‘स्मारिका’ का विमोचन किया। मुख्य अतिथि महोदय ने अपने सम्बोधन में सभी प्रतिभागियों से अपना अधिक से अधिक सरकारी काम हिन्दी में करने का आह्वान



किया तथा जल प्रबंधन के विषय में विस्तृत महत्वपूर्ण जानकारी से सभी को अवगत कराया।

इस तकनीकी संगोष्ठी में केंद्रीय जल आयोग (मुख्यालय) के अलावा विभिन्न क्षेत्रीय कार्यालयों एवं जल शक्ति मंत्रालय के प्रतिनिधियों ने शिरकत की। विभिन्न क्षेत्रीय समाचार पत्रों के प्रतिनिधि एवं मीडियाकर्मी भी संगोष्ठी में उपस्थित रहे।

Completion of 32nd ITP for CWES Group A Officers

Valedictory Session of 32nd Induction Training Programme (ITP) for Central Water Engineering Service (CWES) Group A Officers was held on 07.11.2022 at CWC, HQ, New Delhi. Chairman, CWC and other senior officers graced the occasion. Total 15 newly joined officers participated in 32-weeks long ITP which started on 28.03.2022 and included visits of irrigation and hydroelectric projects. Prizes and completion certificates were distributed to trainee officers on this occasion.

Visit of Hirakud Dam



Training Activity by NWA, Pune during November-2022

Sr. No.	Name of Training Programme	Duration	No. of Trainee per course	Category
1	MCTP Level 4- for SAG (one Week at IIM Ahmedabad)	14-18 Nov 2022	10	Cadre
2	Induction Training Program for Junior Engineers (Batch 1)	14 Nov-02 Dec 22	39	Cadre
3	Webinar on Constitutional Values and Fundamentals of Indian Constitution	25 Nov 2022	195	Non-Technical
4	Workshop on SC/ST Prevention of Atrocities Act 1959	30 Nov 2022	85	Non-Technical

Data Corner- Water Resources of India at a Glance

Sl. No	Items	Quantity	Unit
1	2	3	4
1	Geographical Area	328.74	Mha
2	Annual Rainfall (2020)	1,290	mm
3	Major River Basins (as per Reassessment of Water Availability in India using Space Inputs, June, 2019)	20	Nos.
4	Catchment Area of Major River Basins (as on June, 2019)	32,71,953	km ²
5	Average Annual Precipitation	3,880	BCM
6	Average Precipitation during Monsoon (June to September)	2,500	MM
7	Average Annual Flow (as per Reassessment of Water Availability in India using Space Inputs, June, 2019)	1,999.20	BCM
8	Estimated Utilisable Surface Water Resources	690	BCM
9	Total Annual Ground Water Recharge (as per Ground Water Resources Assessment, 2017)	436	BCM
10	Total Annual Utilizable Water Resources	1,126	BCM
11	Per Capita Water Availability (2011 Census)	1,545	m ³ / per year
12	Gross Irrigated Area (2016-17p)	98,148	Th. Ha
13	Net Irrigated Area (2016-17p)	68,649	Th. Ha
14	Identified Capacity as per Reassessment Study (Above 25 MW) (as on 31.03.2021)	1,45,320	MW
15	Capacity in Operation (Above 25 MW) (as on 31.03.2021)	41,423.6	MW
16	Large Dams Completed (as on 27.06.2019)	5,334	Nos.
17	Live Storage Capacity of Completed Projects of Major River Basins	257.812	BCM

Sources: BP-1 Dte, DSM Dte, WM Dte of CWC; 'Water Resources at a Glance 2021', CWC; Central Ground Water Board; 'India State of Forest Report 2019', Forest Survey of India, M/o Environment, Forests & Climate Change; Central Electricity Authority, M/o Power; M/o Agriculture & Farmers Welfare.

'P': Provisional

Gallery



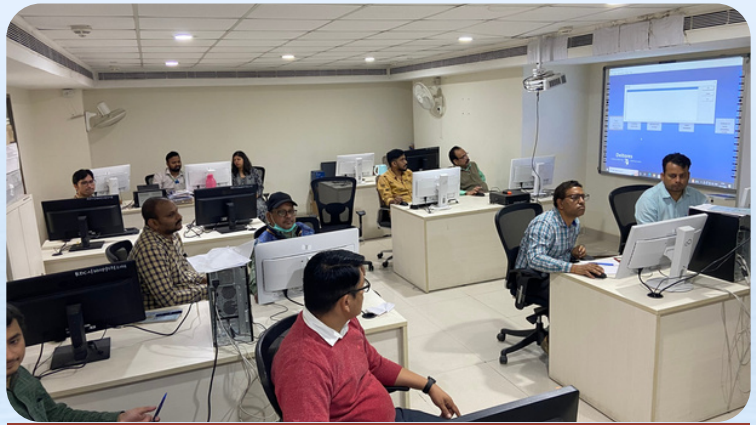
"Agro Vision-2022" Exhibition in Nagpur, Maharashtra



Discussion with delegates from Royal Government of Bhutan (RGoB) on modalities of hydro-meteorological data sharing during their visit to India in BBO, CWC, Guwahati.



Visit of Gandak High-Level Standing Committee (GHSLC) comprising WRD officers of Govt. of Bihar, UP, GFCC, CWPRS to inspect R/B of river Gandak (UP portion) and PP embankment alongwith GH portion (Bihar portion) for the recommendation of flood protection/anti erosion works to be undertaken before Flood 2023.



बेसिन योजना और प्रबंधन संगठन के अधिकारियों की आंतरिक क्षमता निर्माण दिशा में, श्री ऋषि श्रीवास्तव, मुख्य अभियंता (BPMO) के मार्गदर्शन में RIBASIM/रिबासिम मॉडलिंग सॉफ्टवेयर पर 2 दिवसीय प्रशिक्षण कार्यक्रम (15.11.2022 से 16.11.2022) मॉडलिंग सेंटर, बेसिन योजना और प्रबंधन संगठन, केंद्रीय जल आयोग, नई दिल्ली में आयोजित किया गया।

History- Dowleswaram Barrage

The River

The Godavari is the largest river in south India, flowing from the Western Ghats to the Eastern Ghats across the Deccan plateau and the dense Dhandakarnya forest, finally emptying itself into the Bay of Bengal after traversing the States of Maharashtra, Madhya Pradesh, Andhra Pradesh and Orissa. Starting from a trickle at Triambak at the feet of Lord Triambakeshwara, in Western Ghats the river gradually swells in size until it becomes nearly 6.5 km (4 mile) wide at Dowleswaram, from where begin the rich deltaic tracts of East and West Godavari districts. Sacred sports like Triambak, Nasik, Kustapur, Dharmapuri, Bhadrachalam, Rajahmundry and Kotipalli are studded along its 1450 km (900 mile) course like beads in rosary. The holy places are visited by millions, especially during Pushkaram, once in twelve years. The river in its upper reaches is sometimes called the Dakshina Ganga or Vriddha (old) Ganga. The latter is really appropriate, as the Godavari is, geologically, more ancient than the Ganga. The great Godavari, draining about 314000 sq km (121200 sq mile) has an immense potential for beneficial development.

Old Godavari Anicut

Rivers of the Deccan plateau generally flow in channels too deep for irrigation by diversion weirs. The great Royal Engineer of the East India Company, Sir Arthur Cotton, who visualized the need for an Anicut (weir) at Dowleswaram and executed it enthusiastically between the years 1848 and 1852 against great odds. This Anicut, meant to provide irrigation facilities for 124000 ha (306400 acre), has proved so beneficial that the Ayacut has today expanded to the stupendous area of 445000 ha (10.1 lakh acre) beyond all expectations. The work so executed, at nominal cost, to irrigate extensive tracts in the eastern, central and western delta, has spelled so much prosperity to the area that Sir Arthur Cotton is today worshipped as a great benefactor. The great weir spanning four arms of the Godavari in the delta, has outlived its utility after a century of service. It needs replacement, as the ayacut developed beyond the

original estimate has necessitated higher water levels at the site to feed the canals with adequate supplies. The added strain on the Anicut has accelerated the depreciation of the Anicut.

New for Old

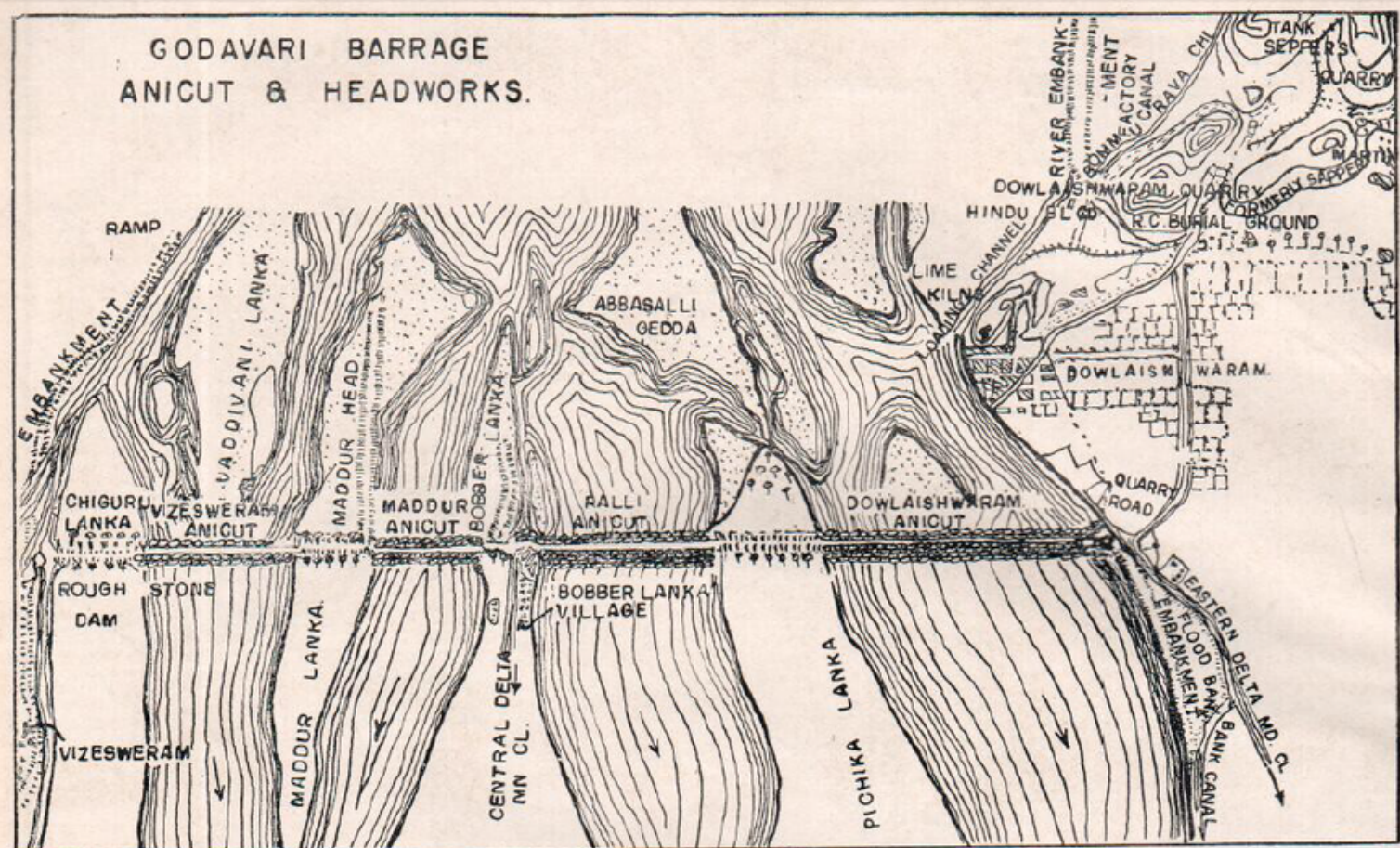
The question of maintaining higher pond levels with the structure in its present condition is ruled out. The damages to the aprons and the undermining of the foundation are alarming. The brick wells supporting the structures have been exposed by damages caused during high floods. At places they are visibly buckling and going to pieces. The Expert Committee which studied protection of irrigation under the scheme has expressed grave concern over the safety of the Anicut and is of the firm opinion that a new barrage above the present Anicut for a higher pond level, to enable transplantation in the entire ayacut by the end of July each year, is essential. The proposal of building an independent barrage, 48 km (30 mile) upstream at Polavaram to cater to some additional ayacut, apart from the ayacut under the Godavari Anicut, has not been found economically feasible in view of the excessive cost of the link canals necessary to connect the present canal system with the Polavaram barrage. The Committee, therefore, recommended the immediate construction of a barrage just upstream of the existing Anicut so as to prevent any breach in the present Anicut and also to ensure timely transplantation in the entire ayacut.

Godavari Barrage

The proposed barrage closely follows the pattern of the existing Anicut built in four sections across the four arms of the river separated by islands. The structure stands 16.5 m (54 ft.) above foundation. The new barrage, about 40 m (131 ft.) upstream of the old Anicut, by virtue of its location, provides additional strength to the barrage. The Anicut also offers considerable constructional facility for building the barrage. As against the present pond level of 12.73 m (41.75 ft.) the new barrage will maintain a level of

13.65 m (44.75 ft.) in order to ensure the completion of transplantation over the entire ayacut by the end of July every year. Timely transplantation helps to boost production besides putting an end to crop loss due to inundation in low-lying areas while the crop is still tender. It also offers a much needed communication facility across the river by a bridge with a 7.5 m (24 ft.) roadway on the barrage, for the operation of the 3.4 m (11.25 ft.) high barrage shutters. By and large, the existing head sluices and scour sluices with slight improvements will continue to serve the purpose.

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GODAVARI BARRAGE

(Features at a Glance)

LOCATION :	At Dowleswaram 40 m (131 ft.) upstream of the old Anicut on the Godavari
Type :	R.C.C. with lift type crest gates
Length :	3 548 m (11 630 ft.)
Maximum Height :	16.5 m (54 ft.)
Quantity :	
Earthwork	--
Concrete	0.28 million 3m (10 million 3ft)
Masonry	--
Steel	15 000 t
Canals :	225 km (140 mile)
Benefits :	
Irrigation	4'45 lakh ha (10'1 lakh acre)
Cost :	Rs. 2 659 lakh

Components	Length m. (ft.)
Dowleswaram Barrage	1,470 (4 817)
Ralli Barrage	856 (2 807)
Maddur Barrage	448 (1 467)
Vizzeswaram Barrage	774 (2 539)
Total length	3,548 (11 630)

(Source: Bhagirath October 1971)



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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