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JALANSH

The Monthly Newsletter of Central Water Commission

Message

R. K. Jain

Chairman, CWC

The month of December is my last working month. In my 35 years of journey in the water sector, I have witnessed several proud moments for the country as well as challenges and changes. I have observed that CWC has been in the centre stage to provide its services in the implementation of water resources projects in the country as well as in the neighbouring countries and also implementation of international treaties and handling various other facets of water sector.

Year 2020 was marred with an extreme challenge in the form of COVID-19. However, I am happy to note that CWC as an organization showed resilience and courage to discharge its field activities and other functions efficiently utilizing various IT/E-Governance tools duly complying COVID-19 protocols/guidelines issued by Government of India from time to time.

Large dams and reservoirs are national assets. Regular assessment of their storage capacity is needed for any remedial action required in the matter. Recently, a compendium on silting of reservoirs in India containing data of 369 reservoirs was brought out by CWC. CWC has also been striving to increase the number of reservoirs monitored for live storages, under its weekly monitoring activity. Five more reservoirs have been added to the existing list of reservoirs being monitored, recently. Now, the total live storage capacity of 128 reservoirs being monitored is about 66.77% of the estimated live storage capacity created in the country.

CWC is entrusted with the monitoring of notified minimum environmental flows to be maintained in river Ganga at identified stretches up to Unnao. In this regard, I visited the selected projects and sites of CWC in Uttarakhand and issued necessary directions for strengthening of monitoring arrangements and compliance.

I am also happy to share that this year four structures from India have been recognized as World Heritage Irrigation Structures (WHIS) by ICID (International Commission on Irrigation and Drainage). ICID recognizes various historical irrigation structures as "World Heritage Irrigation Structures" on the lines of World Heritage Structures, as recognized by UNESCO. The structure shall be at least 100 years old and can fall under any of the categories – dams, tanks, barrages, canal systems, old waterwheels, etc. Entries from WHIS were processed by INCID (Indian National Committee on Irrigation and Drainage) Secretariat in CWC. Such recognitions are also the testimony to our traditional knowledge about irrigation.

Vigorous and multi-pronged efforts are needed to achieve water security & sustainability for the country which is crucial for food & energy security as well as overall economic and social development of the country. Big and bold multi-purpose water resources projects in the transboundary basins are the need of the hour. Further delays would not be in the best interest of the nation. Further, proposed key legislations for Dam Safety, Inter-State Water Disputes, River Basin Organization (RBO) are equally important for shaping the water sector of India. Role of CWC is very important in this context. I convey my best wishes to CWC for its future endeavours as its success would be closely linked with the water secured and prosperous India. Indeed, it was an honour to lead this apex institution which was envisioned by Dr. B. R. Ambedkar.

I thank everyone for their cooperation and wish everyone a happy, prosperous and healthy New Year 2021.

Contents

Compendium on Silting of Reservoir in India-2020

Large dams and reservoirs are national assets. Regular assessment of their storage capacity is needed for any remedial action required in the matter. A compendium on silting of reservoirs was published by CWC in April, 2015 containing sedimentation data of 243 reservoirs. Recently, the new edition of the Compendium has been updated with the data of 369 reservoirs. Of these 369 reservoirs 272 reservoirs have been hydrographically surveyed and remaining 97 have been surveyed by remote sensing technique. Out of the 272 reservoirs surveyed hydrographically, 36 reservoirs have been surveyed by CWC and the data of remaining 236 have been provided by the respective State Govts. For the first time, the data of Satellite Remote Sensing survey has been analyzed and incorporated in the Compendium. This may be accessed from the given link: http://www.cwc.gov.in/sites/default/files/compendium1122020.pdf

Director WS&RS Dte giving presentation to Chairman, CWC , Member WP&P , CWC and CE EMO on the latest edition of Compendium on Sedimentation of Reservoirs in India.

43rd Classified Data Release Committee (CDRC) Meeting

Erstwhile Ministry of Water Resources, River development & Ganga Rejuvenation (MoWR, RD&GR), Government of India had approved revised Hydro-meteorological Data Dissemination Policy, 2018 for implementation by CWC & CGWB. From the point of view of data dissemination, the country has been divided into the following three regions;

- Region-I: Indus basin & other rivers and their tributaries discharging into Pakistan;
- Region-II: Ganga-Brahmaputra-Meghna basin & other rivers and their tributaries discharging into Bangladesh/Myanmar; and
- Region-III: Remaining rivers and their tributaries.

Data for Region-I and Region-II is classified. Classified data is released for specific purpose/ study only and will be non-transferable. Such data requests are placed before a Classified Data Release Committee (CDRC) headed by Chairman, CWC and having representation from MEA, IB, RAW, MoD, DoWR, RD&GR and NWDA.

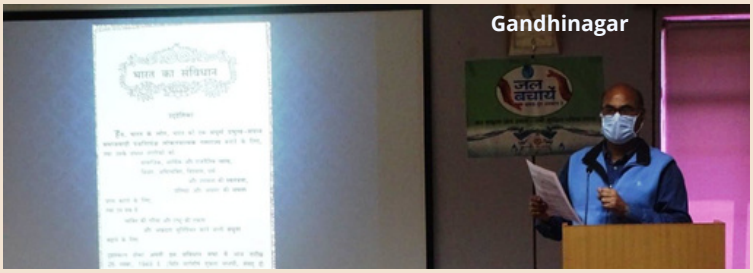
The 43rd meeting of the reconstituted "Classified Data Release Committee" was held on 03.11.2020 under the Chairmanship of Chairman, CWC to consider the cases for release of classified data. 5 numbers of cases were received with recommendation from concerned field Chief Engineers of CWC (4 New Cases and 1 Old Case). After detailed deliberation on individual cases, the Committee authorized to release the data for all the 5 Cases.

Right Bank Slope Stability Issue of Shongtong-Karcham Hydro Electric Project (450 MW), Himachal Pradesh

CWC designers team led by Shri S.K. Sibal, Chief Engineer Designs (N&W) had a detailed discussion with M/s AF consult India Pvt. Ltd. to finalize the Basic Concept Design Report of Right Bank Slope stability issue of Shongtong-Karcham Hydro Electric Project (450 MW), Himachal Pradesh on 12.11.2020. Final Clearance of Design Creep Rate Report and Basic Concept Design Report dealing with anticipated large creep forces through Barrage Structure itself was accordingly cleared by CWC.

It is to underline that both of these reports have been prepared with continuous interaction between CWC and M/s AF Consult. Considering the complexity of the problem, an interactive mode was adopted for addressing the issue. The final reports, as cleared, are the culmination of the technical interactive process of CWC & M/s AF Consult.

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 at 11 AM, led by the President of India which was live cast from Rashtrapati Bhawan. 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.

Panel Discussion/Doordarshan's Programme, "आपदा का सामना" on 27th November on Glacial Lake Outburst Flood Risk Reduction.

A Glacial Lake Outburst Flood (GLOF) is a type of flood occurring when water dammed by a glacier or a moraine is released. When glaciers melt, the water in these glacial lakes accumulates behind loose naturally formed 'glacial/moraine dams' made of ice, sand, pebbles and ice residue. A catastrophic failure of the dam can release the water over periods of minutes to days causing extreme downstream flooding. Peak flows as high as 15,000 cubic meters per second have been recorded in such events.

Glacial retreat due to global warming occurring in most parts of the Hindu Kush Himalaya, has given rise to the formation of numerous new glacial lakes which bear the potential for disastrous glacial lake outburst floods (GLOFs).

Major Issues:

GLOF events have killed thousands in many parts of the world and some of the largest events of landslide lake outburst floods have occurred in the Himalayas such as Chorabari lake outburst known as Kedarnath disaster in Uttarakhand in 2013, Parechu River flash floods in Himachal Pradesh in 2015 etc.

Natural disasters like GLOFs integrated with other hazards are not mainstreamed into policies and programmes in our country.

People residing at considerable distances downstream from unstable lakes are facing serious threats to their lives and property.

Stakeholders need to take serious action for preparedness, prevention, mitigation, response to GLOFs with awareness, capacity building, rehabilitation and reconstruction of the areas affected.

A panel discussion was telecasted on Doordarshan on 27.11.2020 about Glacial Lake Outburst Flood Risk Reduction with following experts.

Sl. No.	Name and Designation	Department/Agency
1.	Lt. Gen. Syed Ata Hasnain (Retd.), PVSM, UYSM, AVSM, SM, VSM & BAR Member	National Disaster Management Authority (NDMA)
2.	Shri R. K. Sinha, Member(RM)	Central Water Commission (CWC)
3.	Dr. Sanjay Kumar Jain, Scientist-G and Head	Water Resources System Division, NIH-Roorkee

Satellite remote sensing-based mapping and monitoring of the glacial lakes and water bodies, covering Indian Himalayan region, is being taken up by Central Water Commission (CWC). The inventory of 2028 glacial lakes /water bodies having water spread area more than 10 ha has been prepared by NRSC and published in June 2011. The information in inventory includes location of the lake (Latitude, Longitude and Elevation), name of lake (if available) and water spread area. The monitoring of 477 glacial lakes & water bodies in the Indian Himalayan region using satellite remote sensing has been done earlier in collaboration with NRSC and later since 2016, solely by CWC. The activity is carried out every year from June to October.

Media Interaction regarding recently approved new DRIP Scheme

Official Program on Lok Sabha TV- Debate on recently approved new DRIP Scheme

A special programme "बांधों से संवरेगा जीवन" on new DRIP Phase II & Phase III was recorded on 03.11.2020 and telecasted on Lok Sabha TV at 5 PM on 04.11.2020. Deliberations were made on ongoing Dam Rehabilitation and Improvement Project (DRIP) Phase II & Phase III and the importance of effective Dam Management for sustainable growth of the country. The panelists of the discussion were Shri R. K. Jain, Chairman, CWC, Shri G.V.V. Sharma, Member Secretary, NDMA, Smt. Debashree Mukherjee, Additional Secretary, DoWR,

RD&GR and Shri A. B. Pandya, Secretary General, ICID.

Discussion on new DRIP Phase II & Phase III on DD URDU

A special programme "YEH HAI INDIA- DAM REHABILITATION INITIATIVES: HOPE and CHALLENGES" on new DRIP Phase II & Phase III was recorded on 05.11.2020 and telecasted on DD URDU at 12:30 PM on 09.11.2020. Deliberations were made on the objective of the new Scheme and its four components namely Rehabilitation of Dams, Dam Safety Institutional Strengthening, Project Management and Incidental Revenue Generation for sustainable operation and maintenance of dams. The panelists of the discussion

were Shri Sanjay Awasthi, Joint Secretary, DoWR, RD & GR; Shri Gulshan Raj, Chief Engineer, DSO & Project Director DRIP II, CWC and Prof. N. K. Goel, IIT Roorkee.

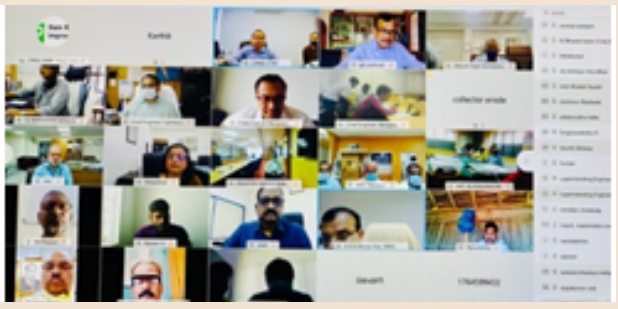
Presentation to Hon'ble Minister MoJS on DRIP Phase I & II

A review meeting was taken by the Hon'ble Minister of Jal Shakti, Shri Gajendra Singh Shekhawat on the progress of DRIP Phase II & Phase III. Shri Gulshan Raj, CE, DSO and Project Director DRIP Phase II & Phase III gave a presentation on the new Scheme. He apprised the Hon'ble Minister about the important milestones of the new Scheme and briefed about the Loan Negotiation meeting with the World Bank. The meeting was attended by the Additional Secretary, DoWR, RD&GR and CWC delegation led by Member(WP&P), CWC.

Activities under DRIP

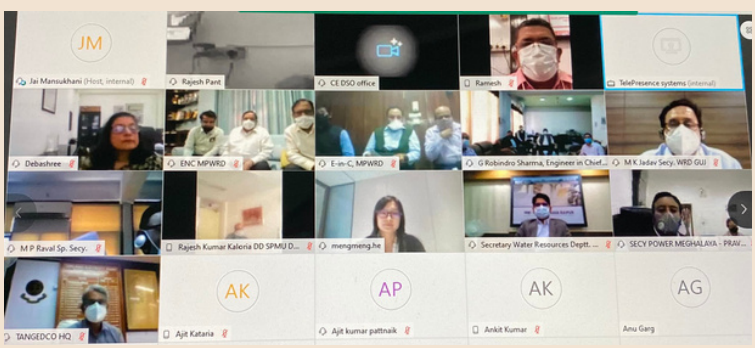
Stakeholder Consultation Meeting for the dams of Tamil Nadu WRD

Stakeholder Consultation Meeting on "Implementation of Emergency Action Plan (EAP)" for the dams of Tamil Nadu, WRD was held on 03.11.2020. EAPs pertaining to 9 Dams of Tamil Nadu, WRD were disseminated in the concerned Districts of Tamil Nadu. The meeting was attended by the officials of Ministry, CWC, NDMA, SDMA, IMD, NRSC, GSI, District Authorities and villages in the downstream of the dam.



Loan Negotiation Meeting for DRIP Phase II

A Loan Negotiation Meeting was held on 10.11.2020 for the loan of US $250 Million from World Bank for financing the DRIP Phase II. The meeting was attended by the representatives of the World Bank, DEA, Ministry of Jal Shakti, CWC, the State of Chhattisgarh, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Rajasthan, and Tamil Nadu. All important terms and conditions of loan were deliberated and other documents were negotiated and finalised.



New Publication under DRIP

During the month, following three important publications were released.

Operational Procedures for Assessing and Managing Environmental Impacts in Existing Dam Projects

The "Operational Procedures for Assessing and Managing Environmental Impacts in Existing Dam Projects" would provide valuable guidance to the dam authorities for obtaining statutory social and environmental clearances required for taking up various dam rehabilitation activities. This document is the compilation of relevant regulations and statutes pertaining to the environmental safeguards in India. It's a guide for the dam owners and other stakeholders in implementation and monitoring of mitigation measures during the project execution. It has been approved by the MoEF&CC on the recommendations of their Expert Appraisal Committee (EAC) for River Valley and Hydroelectric Projects. This document can be downloaded from:
https://damsafety.in/ecm-includes/PDFs/Assessing_and_Managing_Environmental_Impacts_in_Existing_Dam_Projects.pdf

Guidelines for Classifying the Hazard Potential of Dams

The "Guidelines for Classifying the Hazard Potential of Dams" is to provide a simple, concise, adaptable and reliable approach to identify those projects whose failure or disruption could potentially lead to most severe consequences and to assist dam authorities to take appropriate measures to deal with such critical issues. This guideline will help dam owners to switch over to risk based decision system. The dams having high-consequences could be assigned higher priority to address safety concerns, preparation of detailed emergency action plans or detailed risk assessments and re-orientation of financial resources, accordingly. This document can be downloaded from:
https://damsafety.in/ecm-includes/PDFs/Guidelines_for_Classifying_the_Hazard_Potential_of_Dams.pdf

Manual for Assessing Structural Safety of Existing Dams

The "Manual for Assessing Structural Safety of Existing Dams" deals with various aspects related to review of structural safety of existing dams including stability during unusual/extreme events like floods and earthquakes. It has been prepared based on contemporary global practices with contributions and value addition from renowned international and national experts. This Manual can be used as a reference material by engineers/dam owners while carrying out comprehensive safety review for their dams. This document can be downloaded from:
https://damsafety.in/ecm-includes/PDFs/Manual_for_Assessing_Structural_Safety.pdf

IMCT Visits

Various Inter-Ministerial Central Teams(IMCT) have been constituted by the Ministry of Home Affairs (MHA) for an on-the-spot assessment of the situation in the wake of the floods/landslides, damages in irrigation, drinking water, embankment and flood control structures during Monsoon-2020. CWC Officers were nominated to represent DoWR, RD&GR, Ministry of Jal Shakti in these IMCTs.

They had meetings with District Officials and visited the affected districts for assessing the damage. The details of their visit are summarized as under.

Sl. No	State	Duration of Visit	Officer representing MoJS	Visited Districts
1	Uttar Pradesh	05th-06th November (2nd Visit)	Shri B. C. Vishwakarma, Director, CWC, Lucknow	Basti, Maharajganj, Siddharth Nagar, Gonda, Balrampur, Shrawasti
2	Andhra Pradesh	09th–11th November (1st Visit)	Shri P. Devender Rao, Director, CWC, Hyderabad	Krishna, Guntur, Anathpur, East Godavari, West Godavari
3	Assam	23rd-25th November (2nd Visit)	Shri Sudhir Kumar, Director, CWC, Guwahati	Hojai, Nagaon, Kamrup, Goalpara and Bongaigaon


Uttar Pradesh


Andhra Pradesh


Assam

Flood Situation in the Country

Regular Flood Forecasting Activity commenced on 01.05.2020 in Brahmaputra and Barak basins which was extended to other basins subsequently. During the period from 1st May to 30th November 2020, 11691 flood forecasts (8243 Level and 3448 Inflow) were issued, out of which 11178 (8132 Level and 3046 Inflow) forecasts were within limit of accuracy with a percentage accuracy of 95.61%. 18 nos. of Orange Bulletin (for Severe Flood Situation) and 74 number of Red Bulletin for Extreme Flood Situation were issued in the month of November from Central Flood Control Room.

Summary of Flood Situation during 01.05.2020 to 31.11.2020

Extreme Flood Situation

Seven FF station observed Extreme Flood Situation.

Sl. No.	State	District	River	Station
1.	Assam	Sivasagar	Dikhow	Sivasagar
2.	Bihar	Gopalganj	Gandak	Dumariaghat
3.		Muzzafarpur	Gandak	Rewaghat
4.		Samastipur	Burhi Gandak	Rosera
5.	Odisha	Balasore	Subarnarekha	Mathani Road Bridge
6.	Andhra Pradesh	East Godavari	Godavari	Chinturu
7.	Karnataka	Gulbarga	Bhima	Deongaon Bridge

39 Flood Monitoring Stations observed Extreme Food Situation.

Severe Flood Situation for FF Stations

88 FF Stations observed Severe Flood Situation in the States of Arunachal Pradesh, Assam, Bihar, Odisha, Uttar Pradesh, West Bengal, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Uttarakhand, Andhra Pradesh, Telangana, Kerala, Chhattisgarh and Gujarat.

Above Normal Flood Situation

34 FF Stations in Assam, Bihar, Uttar Pradesh, Gujarat, Rajasthan, Andhra Pradesh, Jharkhand, Odisha, Telangana, Uttarakhand, Karnataka and West Bengal observed Above Normal Flood Situation.

Reservoirs having Inflow above threshold limit

88 reservoirs received inflows above their threshold limit in West Bengal, Chhattisgarh, Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Telangana, Rajasthan, Uttar Pradesh and Uttarakhand.

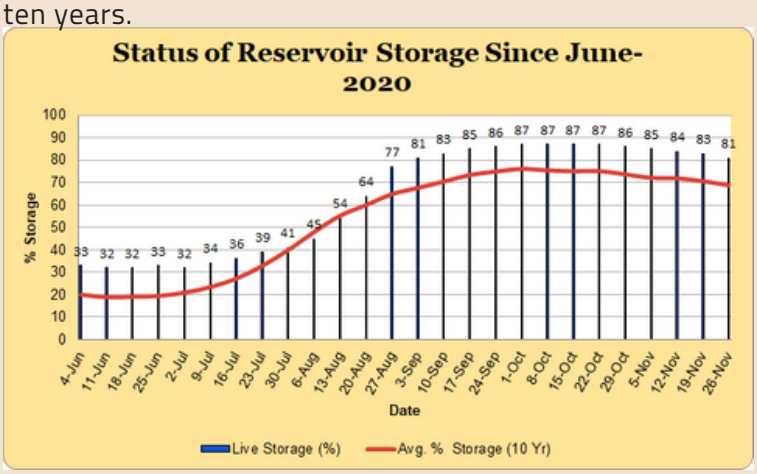
Reservoir Monitoring

Five more reservoirs, named below have been added in the month of November 2020 in CWC's Reservoir Storage Monitoring System (RSMS).

Name of Reservoir	State
Sirsi Maudaha Rangawan Meja	Uttar Pradesh
Getalsud	Jharkhand

The cumulative live storage capacity of the above five reservoirs is 1.04 BCM. Now, CWC is monitoring live storage status of 128 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 128 reservoirs is 172.132 BCM which is about 66.77% 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 26.11.2020, the total live storage available in these reservoirs is 139.348 BCM which is 81% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding period was 149.003 BCM and the average of last 10 years live storage was 117.531 BCM. Thus, the live storage available in 128 reservoirs as per the bulletin dated 26.11.2020 is 94% of the live storage of corresponding period of last year and 119% of storage of average of last ten years.



Training

Training Organized by NWA, CWC, Pune

S. No.	Topic of Programme	Date	Venue	Participants
1.	Webinar 4* :National Water Policy https://youtu.be/-m4PiaZihRU	02.11.2020	Cisco Webex	180 Water Res. Professionals of State/Central Govt. including Officers of DoWR, RD&GR
2.	Webinar 5 : Interstate River Water Dispute Tribunals https://www.youtube.com/watch?v=DOGHMEpTs24	09.11.2020	Cisco Webex	140 Water Res. Professionals of State/Central Govt. including Officers of DoWR, RD&GR
3.	Induction Training Program for Junior Engineers of Central Water Commission - Batch 2	09th Nov-06th Dec 2020	DL Mode	54 Junior Engineers of CWC
4.	Webinar 6 : International River Water Sharing Doctrine / Principles adaptable to Interstate River Water Disputes https://youtu.be/t-g96w50pek	18.11.2020	Cisco Webex	95 Water Res. Professionals of State/Central Govt. including Officers of DoWR, RD&GR
5.	Webinar 7 : Interstate River Water Disputes in India – Challenges : Godavari Water Dispute – a case study https://youtu.be/Qmdg4WDbTXQ	23.11.2020	Cisco Webex	135 Water Res. Professionals of State/Central Govt. including Officers of DoWR, RD&GR
6.	Integrated Water Resources Management	23rd -27th Nov 2020	DL Mode	80 Water Res. Professionals of State/Central Govt. including Officers of DoWR, RD&GR
7.	Distance Learning Program on Water Resources Sector of India for School Teachers - Batch A	23rd -25th Nov 2020	DL Mode	220 State, Central Govt. and Private Schools
8.	Distance Learning Program on Water Resources Sector of India for School Teachers - Batch B	24th-26th Nov 2020	DL Mode	220 State, Central Govt. and Private Schools
9.	Distance Learning Program on Water Resources Sector of India for School Teachers - Batch C	25th-27th Nov 2020	DL Mode	220 State, Central Govt. and Private Schools

13th Emergency meeting of Polavaram Project Authority

The Emergency (13th) meeting of Polavaram Project Authority (PPA) was held on 02.11.2020 at Hyderabad physically as well as through virtual platform, under the Chairmanship of Chief Executive Officer (CEO), PPA. Shri S. K. Haldar, Member(WP&P), Shri R. K. Pachauri, CE (PPO), Shri A. S. Goel, CE(PAO), Shri Munni Lal, CE, Design(NW&S) along with other officers from CWC attended the meeting.

Main agenda of this emergency meeting was to discuss the matter related to the reimbursement proposals submitted by Water Resources Department (WRD), Govt. of Andhra Pradesh (GoAP) to Government of India, Report of the Revised Cost Committee (RCC) on 2nd Revised Cost Estimate (RCE) of the project and Government of India decisions/directives in respect of Polavaram Irrigation Project.

29th Technical Coordination Committee (TCC) meeting for Punatsangchu-I HEP

29th TCC meeting for Punatsangchu-I HEP was held on 10.11.2020 through Video Conferencing (VC). Shri Dinesh Chandra, Member(Hydro), CEA chaired the meeting and Dr. R. K. Gupta, Member(D&R), CWC was co-chairperson. Officers of CWC, NHPC, CEA, WAPCOS and senior officers of Royal Government of Bhutan (RGOB) attended the meeting to discuss all the issues regarding the design of Dam Complex of PHEP-I project. Rigorous brain storming has been done to choose best possible method to stabilize the dam right bank slope which had undergone multiple Slope Failures in past.

National Water Awards

The Ground Water Augmentation Awards and National Water Awards were launched in the year 2007 with an objective to encourage all stakeholders including the Non-Governmental Organizations (NGOs), Gram Panchayats, Urban Local Bodies, Water User Associations, Institutions, Corporate Sector, Individuals etc. The awards were awarded for adopting innovative practices of ground water augmentation by rainwater harvesting and artificial recharge, promoting water use efficiency, recycling & re-use of water and creating awareness through people's participation in the targeted areas resulting into the sustainability of ground water resources development, adequate capacity building amongst the stakeholders etc.

Considering the fact that surface water & ground water are integral part of the water cycle, it was felt necessary to institute unified National Water Awards with the objective of encouraging the stakeholders to adopt holistic approach towards water resources management in the country.

The National Water Awards 2019 was launched in September 2019 on MyGov portal and entries were also invited by Central Groundwater Board. The Jury Committee was headed by Shri Shashi Shekhar, Former Secretary, Department of Water Resources, River Development and Ganga Rejuvenation. Two Screening Committees with members from CGWB and CWC assisted the Jury Committee in studying the applications and selecting the winners. National Water Awardees, delegates and audience joined LIVE through the virtual platform.

Ministry of Jal Shakti organized the 2nd National Water Awards on 11th & 12th November 2020, to honour the excellence in Water Management and Conservation across the Nation.

The Vice President of India, Shri M. Venkaiah Naidu inaugurated the Award distribution ceremony of National Water Awards in the presence of Shri Gajendra Singh Shekhawat, Union Minister of Jal Shakti, Shri Rattan Lal Kataria Minister of State for Jal Shakti, Shri U.P. Singh, Secretary, Ministry of Jal Shakti and other officials were also present on the occasion.

Out of 1112 valid applications, a total of 98 winners were selected in the 16 categories given in table.

Few of these categories have sub-categories in different zones of the country. The winners were felicitated with trophies/ citation. Except for three categories - 'Best State', Best District' and 'Best Water Regulatory Authority', winners from the rest thirteen categories were awarded cash prizes.

Sl.	Award Category
1	Best State
2	Best District
3	Best Village Panchayat
4	Best Urban Local Body
5	Best Research/ Innovation/ New Technology
6	Best Education/Mass Awareness effort
7	Best TV show
8	Best Newspaper
9	Best School
10	Best Institution/ RWA/ Religious Organisation
11	Best Industry
12	Best Water Regulatory Authority
13	Best Water Warrior
14	Best NGO
15	Best Water User Association
16	Best Industry for CSR Activity

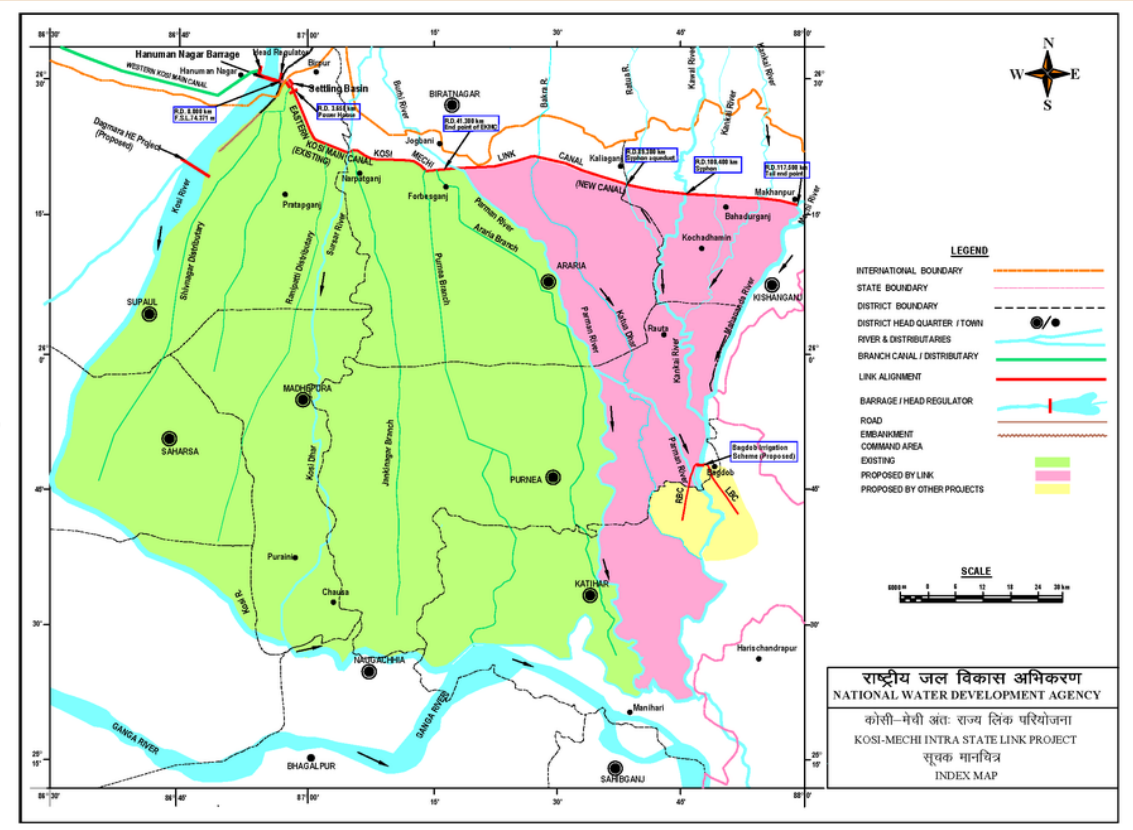
The Best State Awards for 1st, 2nd and 3rd positions have gone to Tamil Nadu, Maharashtra and Rajasthan. Mizoram won the first prize in the special category States. Best District Award was sub-divided into six zones – North, South, West, East, Northeast and Aspirational and into two sub categories – Revival of Rivers and Water Conservation. In the North, the Award for Best District in Revival of Rivers and Water Conservation was given to Ayodhya and Almora. In the South, Vellore and YSR Kadapa, in the West Sangli and Kachchh, in the East, Bilaspur and Surajpur, in the Northeast, West Tripura (WC) and in Aspirational district category to Khandana and Vizianagaram respectively.

With continued focus on creating mass awareness and motivating more number of people for working towards water conservation/management, 3rd National Water Awards 2020 is now being launched by the Department of Water Resources, RD & GR on 10.12.2020 to recognise the efforts of people/organisations working in this field throughout the country across various categories to cover maximum area possible. The details can be accessed from following URL:

https://www.mygov.in/campaigns/national-water-awards/

12th HPSC meeting – National Projects

The review and progress of 16 National Projects were discussed during the twelfth (12th) meeting of High Powered Steering Committee (HPSC) for implementation of National Projects which was held under the chairmanship of Shri U. P. Singh, Secretary, DoWR, RD&GR on 24.11.2020 through video conferencing. Out of the 16 projects declared as National Projects so far, five projects viz. Gosikhurd Irrigation Project (Maharashtra), Teesta Barrage project (West Bengal), Shahpur Kandi Dam Project (Punjab), Indira Sagar Polavaram Project (Andhra Pradesh) and Saryu Nahar Pariyojana (Uttar Pradesh) are under execution.



The appraisal of three projects has been completed, five projects are under appraisal and three are at DPR/PFR stage. The Committee was apprised about the latest status of all the 16 National Projects. After deliberations, necessary directions were given to the project authorities for expediting the projects.

Inclusion of new projects in the scheme of National Projects

The committee also considered and recommended inclusion of proposal of KOSI – MECHI LINK SCHEME (BIHAR) in the scheme of National Projects. This project proposes to divert surplus water of Kosi River to Mahananda basin from existing Hanuman Nagar Barrage through 117.50 km Link canal. The Project envisages remodelling of existing Eastern Kosi Main Canal (EKMC) up to 41.30 km and further its extension as a new one up to 117.50 km. Existing CCA of EKMC is 4,40,000 Ha and after completion of this link, additional proposed CCA of the project is 2,14,812 Ha (Additional annual irrigation: 2,10,516 Ha).

The DPR of this project was accepted by Advisory Committee of DoWR, RD&GR in its 129th meeting held on 08.07.2016 for an Estimated Cost – Rs. 4900 crore (PL 2015-16). Investment Clearance has also been recommended by Investment Clearance Committee of DoWR, RD & GR in its 14th meeting held on 22.10.2020.

Environmental Flow Monitoring for river Ganga

The Gazette Notification dated 09.10.2018 and its amendment dated 14.09.2019 have specified the minimum environmental flows to be maintained in river Ganga at identified stretches up to Unnao. Central Water Commission has been designated as the authority for supervision, monitoring, regulation of flows and reporting on quarterly basis to National Mission for Clean Ganga. Accordingly, e-flow in Upper Ganga river basin is being monitored by UGBO, CWC, Lucknow since 01.01.2019. Presently the inflow and outflow for identified 11 projects is being monitored through existing HO sites of CWC and by collecting inflow and outflow data from the concerned project authorities.

Chairman, CWC visited Maneri Bhali-I HEP and Maneri Bhali-II HEP on river Bhagirathi belonging to Uttarakhand Jal Vidyut Nigam Ltd, Alaknanda HEP of M/s GVK Power and Vishnuprayag HEP of M/s Jaypee Power Ventures Ltd. on river Alaknanda to monitor e-flow in the river and CWC Hydrological Observation stations opened for monitoring of e-flow during 07th – 10th November 2020. Chairman, CWC also visited the power house of these hydro-electric projects and discussed the issue of maintaining the e-flow as per the target issued by the field office at Dehradun with the project authorities. He also visited H.O. stations of CWC like Harshil, Gangotri, Uttarkashi, Badrinath, Joshimath, Nandprayag, Rudraprayag, Srinagar and Devprayag in the route and suggested to install a cableway at Pinder site to observe discharge by current meter. He also suggested to install radar based discharge observation equipment suited for hilly regions on suitable sites to monitor the e-flow effectively.

Financial Progress of Various Schemes

(Amount in Rs. Crore)

Sl. No.	Scheme/Component Name	RE (2020-21)	Expenditure	Expenditure (in %)
1	Development of Water Resources information System (DWRIS)	130.00	76.047	58.50%
2	Investigation of Water Resources Development Schemes (IWRD)	9.00	5.387	59.86%
3	Flood Management & Border Areas Programme (FMBAP)	10.576	6.525	61.70%
4	Infrastructure Development (ID) Schemes	5.00	2.769	55.38%
5	National Hydrology Project	9.561	2.8173	29.47%
6	Dam Rehabilitation and Improvement Project	37.00	12.00	32.43%

Arjun Sahayak Pariyojna

Arjun Sahayak Pariyojna envisages use of surplus water of river Dhasan during rainy season to fill Arjun, Chandrawal and Kabrai Dams through feeder channels from existing Lahchura Dam. The capacity of Kabrai Dam is being augmented by raising its height by 9.23 m. The project will provide additional irrigation to 44381 ha land out of which Kharif irrigation is 18,963 ha and Rabi irrigation is 25,418 ha.

A team of Monitoring and Appraisal Directorate, CWC, Agra comprising of Shri G. L. Bansal, Director, Shri Mayank Suhirid, Deputy Director and Shri Siddharth Kumar, Junior Engineer had carried out 1st monitoring visit to PMKSY priority project "Arjun Sahayak Pariyojna" in Bundelkhand region for the year 2020-21 alongwith the officials of Irrigation & Water Resources Department, Govt. of Uttar Pradesh during 23rd to 26th Nov 2020.

Overall physical progress of the project is about 96% and financial progress is 95% upto Nov 2020. The target for completion of Project is March 2021.

Data Corner-Basin wise details of HO, Met and WQ sites (1774)

*As on September 2020

Sl.No	Basin Name	G	GD	GDQ	GDS	GDSQ	GQ	SG&Met	WQSS	Grand Total
1	Brahmani-Baitarni	12				11	1	1	14	39
2	Cauvery		13	17		24				54
3	East Flowing rivers between Mahanadi and Pennar	13	2			5				20
4	East Flowing rivers between Pennar and Kanyakumari		19	10		8		1		38
5	Ganga/Brahmaputra/Meghna/Barak	250	206	72	24	164	91	95	5	907
6	Godavari Basin	48	43	13		32	4	17		157
7	Indus Basin	23	16	3	11	8		33		94
8	krishna	14	14	12		29	3	18		90
9	Mahanadi	30	2	1		22		6	8	69
10	Mahi	10	4	2		3		1		20
11	Minor rivers draining into Myanmar and Bangladesh	3	7		3	4				17
12	Narmada	18	37	5		10	1	2		73
13	Pennar		4	4		4				12
14	Sabarmati	7	4	1		1		5	1	19
15	Subarnarekha	6	2	1		6			5	20
16	Tapi	17	18	1	1	3		7		47
17	West Flowing rivers from Tadri to Kanyakumari		16	9		26				51
18	West flowing rivers from Tapi to Tadri	7	6	4		5		3		25
19	West flowing rivers of Kutchh and Saurashtra including Luni	3	10	2		3		4		22
20	Areas of Inland Drainage in Rajasthan									0
	Grand Total	461	423	157	39	368	100	193	33	1774

ICID-World Heritage Irrigation Structure /Watsav Awards

INCID (Indian National Committee on Irrigation and Drainage) is a representative body at national level in ICID (International Commission on Irrigation and Drainage). INCID has members from central government (CWC, CGWB, ICAR, Ministry of agriculture, Ministry of Jal Shakti, etc), state water resources/ irrigation departments and, NGOs, private sector, academic institutes, WALMIs, etc with Chairman, CWC as Chairman of the committee and CE(EMO), CWC as its Member-Secretary. Remote Sensing Directorate, CWC serves as INCID secretariat. The objectives of the INCID include:

1. Stimulating and promoting the development and application of irrigation, drainage, river training, and flood control techniques within India;
2. Integrating the efforts of Central Government, State Governments, academic institutions, and private sector in the field of agriculture water management; and
3. Co-operating with the International Commission on Irrigation and Drainage (ICID) for the distribution and interchange of information concerning irrigation, drainage, river training, and flood control between the National Committees of the participating countries.

ICID presents awards in various categories every year. Nominations for these awards were invited by INCID. Post screening (through state governments/site visits by cwc field officials) for various eligibility criteria and scope of these awards, they were forwarded to ICID for consideration.

World Heritage Irrigation Structure(WHIS)

ICID (International Commission on Irrigation and Drainage) recognizes various historical irrigation structures as "World Heritage Irrigation Structures" on the lines of World Heritage Structures, as recognized by UNESCO. The structure shall be atleast 100 years old and can fall under any of the category – dams, tanks, barrages, canal systems, old waterwheels, etc. This year following four structures from India have been awarded in this category:

1. Cumbum Tank, Andhra Pradesh
2. Dhamapur Lake, Maharashtra
3. KC Canal (Kurnool-Cuddapah Canal), Andhra Pradesh
4. Porumamilla Tank (Anantharaja Sagaram), Andhra Pradesh

WatSave award(s) is/are presented to an individual or a team for an innovation that contributes to water conservation/water saving for increasing the beneficial and/or efficient use of water to develop and improve the sustainable use of the critical resource.

1. Watsave Technology Award
2. Watsave Innovative Water Management Award
3. Watsave Young Professional Award
4. WatSave Farmers' Award

WatSave award under Farmer category for the year 2020 has been awarded to Mr. Mekala Siva Shanker Reddy, Andhra pradesh for 'Micro Irrigation with fertigation'.

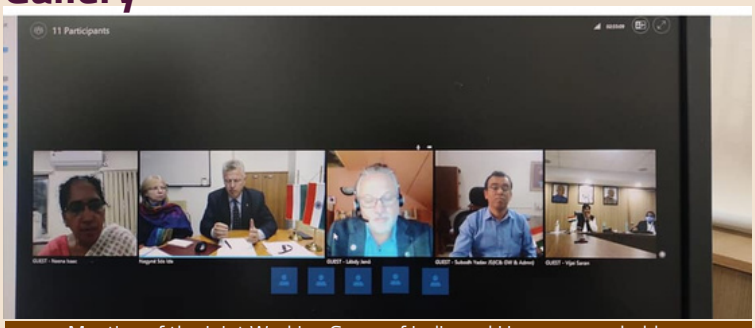
'Best Paper Award' was started in 2006 to recognize the outstanding papers contributed to the journal 'Irrigation and Drainage', annually. Irrigation and Drainage, the flagship publication of ICID is a prestigious, peer-reviewed publication, publishing original papers on scientific, engineering, environmental and socio-economic issues associated with irrigation and drainage.

'Best Paper Award 2020' of ICID Journal has been awarded to "Adaptation to Climate Change: Impact of Capacity Building, India" by Krishna Reddy Kakumanu (India); Yella Reddy Kaluvai (India); M. Balasubramanian (India); Udaya Sekhar Nagothu (Norway); Gurava Reddy Kotapati and Sunitha karanam from India (Volume 68, Issue 1).

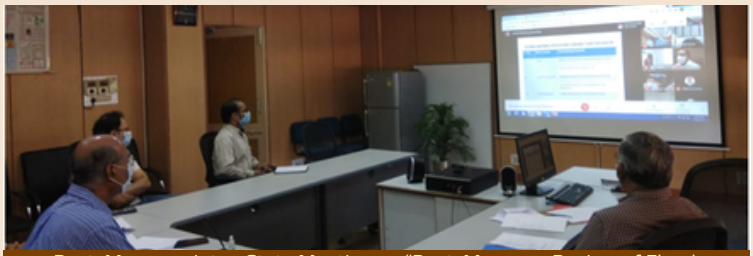
Water Sector News

- Frothing in Yamuna : Detergents in untapped sewage a major reason (Millennium Post, 02.11.2020)
- Delhi, Jaipur among 31 cities facing grave water risk : Study (Hindustan Times , 03.11.2020)
- Chhattisgarh cancels Rs. 10,000-crore work orders under Jal Jeevan Mission (Indian Express, 04.11.2020)
- Centre approves 210 MW power project on Sutlej (The Tribune, 05.11.2020))
- Jal Shakti Minister dedicates integrated water supply project to Arunachal villages (Assam Tribune, 07.11.2020)
- Rs. 76 cr check dam to come up across Kottakudi river (New Indian Express, 08.11.2020)
- On mission clean Ganga, UP govt fines co Rs. 3 cr for polluting river (Times of India, 10.11.2020)
- Parliamentary panel to mull int'l water treaties next week (The Hans, 16.11.2020)
- Agencies Dither, Yamuna Full of Toxic Froth (Times of India, 17.11.2020)
- Storage levels at dams, lakes being monitored (New Indian Express, 18.11.2020)
- NGT directs States, UTs to set up nodal agencies to protect, restore water bodies (The Hindu, 22.11.2020)
- Modi lays foundation stone of rural drinking water projects in Uttar Pradesh (The Statesman, 23.11.2020)
- India to build new Dam in Afghanistan (New Indian Express, 25.11.2020)
- Rs. 5k-cr water supply projects launched in 2 UP districts (Financial Express, 30.11.2020)

Gallery



Meeting of the Joint Working Group of India and Hungary was held on 20.11.2020. The Indian delegation was led by Sh. Subodh Yadav JS (Admin, IC-& GW), DoWR, RD&GR. Other members of Indian delegation included Sh Vijai Saran, CE, CWC and D.P. Mathuria, UYRB.



Post-Monsoon Inter-State Meeting on "Post-Monsoon Review of Flood Forecasting & Management" for Tapi, Lower Narmada and Damanganga Basins was held on 18.11.2020 through Video Conferencing (VC) under the Chairmanship of Shri M.P. Singh, Chief Engineer, Mahi & Tapi Basin Organization, CWC, andhinagar with the concerned officers of CWC, Surat and representatives of Government of Gujarat, Government of Maharashtra, SVNIT(GoI), Surat.

History- D.V.C.- A National Experiment

The Damodar Valley Project in India was a venture as unique in conception with unlimited possibilities for the economic and industrial betterment of the Damodar Basin. The statutory body entrusted with the integrated development of the resources of the valley as a whole- the Damodar Valley Corporation(DVC) – was endowed with large powers and responsibilities.

The DVC was established in 1948 by an Act of the Central Legislature. Apart from such functions as flood control, irrigation and power generation, it had been entrusted with duties connected with navigation, afforestation, soil conservation, land uses, resettlement of displaced population, sanitation and public health as well as the industrial, economic and general well-being of the people in the valley and its area of operation.

Although the whole of the funds of the Corporation were provided in different proportions by the three Governments interested in the Scheme, they were styled participating Governments in the Act. The Corporation was a semi-autonomous body having perpetual succession and a common seal. It functions under a Chairman and two members, all of whom were appointed by the Government of India in consultation with the State Governments.

The Background

The establishment of the DVC was the result of a long and harrowing record of floods, famine pestilence caused by that "river of sorrow", the Damodar. As rivers go in India, the Damodar was but a small stream; for it hardly runs for little more than 300 miles from the hills of Chhota Nagpur in Bihar to its entry into the Hooghly, south of Kolkata. But being a hill stream, it often resultant to sudden and frequent floods destruction and misery that it had brought on Bengal during the centuries is incalculable.

It was about 1863 that flood control by means of reservoirs was considered and the following year Lieut. Garnault surveyed the Damodar river with a view to locate sites for storage reservoirs. Another survey was undertake in 1866. In 1902 the construction of a reservoir on the Barakar river just above its confluence with the Damodar was recommended. This recommendation was again supported after the 1918 record floods. Similar recommendations were also made in 1918 and 1919.

Features	Tilaiya	Konar	Maithon	Panchet
Inauguration	21.02.1953	15.10.1955	27.08.1957	06.12.1959
River	Barakar	Konar	Barakar	Damodar
District	Koderma	Hazaribagh	Dhanbad	Dhanbad
State	Jharkhand	Jharkhand	Jharkhand	Jharkhand
Power Installed Capacity	4 MW	Nil	63.5 MW	80 MW
Durgapur Barrage				
Year of Construction			1955	
Length			692 m	
No. of Gates			34 (Including under sluice)	
Details of Canal Network				
	Length	Discharge at Head Regulator (in cumec)		
LBMC (Left Bank Main Canal)	136.8 km	260		
RBMC (Right Bank Main Canal)	88.5 km	64.3		
Total length of Main and branch canals	2494 km	--		

In 1943, a moderate flood of the order of 350000 cusec peak flow caused damage of around Rs. 8.0 crore. Since, then many bigger floods have been arrested by the reservoirs operated by DVC. DVC as one of the first Inter-state organizations of the Independent India has played a considerable part in the development of Damodar valley.

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