



JALANSH



The Monthly Newsletter of Central Water Commission



Message

Arun Kumar Sinha
Chairman, CWC

On 1st July 2019, the Union Jal Shakti Minister, Shri Gajendra Singh Shekhawat announced the commencement of the Jal Shakti Abhiyan - a PAN India campaign for water conservation and water security. The campaign will run through citizen participation from 1st July 2019 to 15th September 2019. An additional Phase 2 will run from 1st October 2019 to 30th November 2019 for States receiving the North-East Monsoon. The focus of the campaign will be on 1592 water-stressed blocks under 256 districts. About 140 Technical Officers of CWC have been deployed to various Water Stressed Blocks under the Jal Shakti Abhiyan.

Two important Bills related to Water Sector viz. Dam Safety Bill, 2019 and The Inter-State River Water Disputes (ISRWD) (Amendment), Bill, 2019 were introduced in the monsoon session of the Parliament. Dam Safety Bill provides for the surveillance, inspection, operation, and maintenance of dams across the country. It also provides for an institutional mechanism to ensure the safety of dams. The ISRWD (Amendment) Bill, 2019 seeks to

streamline the adjudication of inter-State river water disputes and make the present legal and institutional architecture robust. The proposed Bill further seeks to provide for a single standing Tribunal (with multiple Benches) instead of multiple Tribunals, which shall consist of a Chairperson, a Vice-Chairperson, and not more than six Members (three Judicial Members and three Expert Members). ISRWD (Amendment) Bill, 2019 was passed by the Lok Sabha.

In an important decision, the Cabinet Committee on Economic Affairs, chaired by the Prime Minister approved the expenditure on pre-investment activities and various clearances for Dibang Multipurpose Project (MPP) in Arunachal Pradesh for an amount of Rs. 1600 crore. Dibang Multipurpose Project (Dibang MPP) is envisaged as a storage-based hydro-electric project with flood moderation as the key objective. CWC was involved in appraisal of civil work component of this project.

The Revised Cost Estimate (7th) of North Koel Project was accepted by the Advisory Committee of DoWR, RD & GR in its 142nd meeting held on 08.07.2019. Technical Evaluation Committee (TEC) headed by Member (WP&P), CWC is monitoring the progress of the North Koel Project from time to time and 21st meeting was held on 02.07.2019. CWC has been monitoring the water storage position of 91 important reservoirs across the country and nine additional reservoirs have been brought under this monitoring during July 2019. It is proposed to include more reservoirs under such monitoring in future.

(Signature)

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Announcement



Information Bulletin

**2ND INTERNATIONAL CONFERENCE
ON SUSTAINABLE WATER MANAGEMENT**

6-8 November 2019, Pune, Maharashtra, India
Hosted by: Water Resources Department, Govt. of Maharashtra
Under the Aegis of National Hydrology Project (NHP), Ministry of Jal Shakti,
Department of Water Resources, RD & GR, Govt. of India









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Dam Safety Bill

Government has decided to develop uniform procedures for ensuring the safety of existing and new dams through the proposed Dam Safety Bill, 2019. It was introduced in Lok Sabha on 29.07.2019. The Dam Safety Bill, 2019 aims to provide a robust legal and institutional framework under Central & State Governments for the safety of dams.

The Bill envisages prevention and mitigation of dam failure related disasters through proper surveillance, inspection, operation and maintenance. The Dam Safety Bill, 2019 addresses all the issues concerning dam safety including regular inspection of dams, emergency action plans, comprehensive dam safety review, instrumentation and safety manuals. It lays the onus (accountability) of dam safety on the dam owner/ concerned organisations and provides for penal provisions for commission & omission of certain acts against offenders. The Bill provides that every owner of specified dams shall earmark sufficient and specific funds for maintenance and repairs of the dams.

The Bill provides for constitution of a 'National Committee on Dam Safety' to evolve dam safety policies and recommend necessary regulations. It provides for the establishment of 'National Dam Safety

Authority' (NDSA) as a regulatory body to implement the policy, guidelines and standards for dam safety in the country. The Bill also provides for constitution of 'State Committee on Dam Safety' by the State Governments to ensure proper surveillance, inspection, operation and maintenance of dams in the State and to ensure their safe functioning. As per Dam Safety Bill 2019, every State has to establish a State Dam Safety Organisation, manned by officers from the field of dam safety preferably from the areas of dam-designs, hydro-mechanical engineering, hydrology, geo-technical investigation, instrumentation and dam-rehabilitation.

With regard to the provision in the bill, certain Section of media is highlighting that Chairman, CWC heading the National Committee on Dam Safety is a conflict of interest as CWC is designing the project. In this regard, it clarified that CWC is not deriving any benefit from the operation and maintenance of these Dams. Also, Chairman, CWC is heading the existing mechanism since 1982. Bill is only formalizing the existing arrangement and giving it statutory status. Hence, the case of conflict of interest does not arise.

Inter-State River Water Disputes (Amendment) Bill, 2019

The Inter-State River Water Disputes (Amendment) Bill, 2019 was introduced in Lok Sabha on July 25, 2019, and was subsequently passed on July 31, 2019. The bill proposes to amend the Inter-State River Water Disputes Act, 1956 (last amended in 2002) which provides for the adjudication of disputes relating to waters of inter-state rivers. The bill is expected to be taken up in Rajya Sabha soon.

Article 262 of the Constitution deals with adjudication of Inter-State river water disputes. Inter-State River Water Disputes Act, 1956 (ISRWD Act, 1956) was enacted under Article 262 of the Constitution. The Act provides for setting up of ad-hoc water disputes Tribunals for adjudication of disputes relating to Inter-State river when negotiations do not lead to fruitful results. National Water Policy 2012 postulated that a permanent water disputes Tribunal at the Centre should be established to resolve

the disputes expeditiously in an equitable manner. Erstwhile MoWR, RD & GR had a comprehensive relook at the provisions of the ISRWD Act, 1956 and proposed to amend it in line with the above postulation of National Water Policy 2012.

The said amendment bill proposes to introduce a mechanism to resolve the water disputes amicably by negotiations through a Disputes Resolution Committee (DRC) before such dispute is referred to the Tribunal. It also seeks to provide for a single standing Tribunal (with multiple benches) with permanent establishment and infrastructure so as to obviate with the need to set up a separate Tribunal for each water dispute which is invariably a time-consuming process. With the creation of permanent water disputes Tribunal, the delay occurring in the adjudication of water disputes due time taken in making the water disputes functional will be done away with.

Jal Shakti Abhiyan

Jal Shakti Abhiyan (JSA) was launched by the Hon'ble Minister for Jal Shakti on 1st July 2019. It is a time-bound mission-mode water conservation campaign and is a collaborative effort of various Ministries of the Government of India and State Governments, being coordinated by the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti. Under JSA, a total of 1592 groundwater stressed blocks have been selected in 256 districts. Out of 1592 blocks, 312 are critical blocks, 1186 are over-exploited blocks and 94 blocks are with low groundwater availability. In JSA, Government has deputed 256 Additional Secretary / Joint Secretary level officers posted in Government of India as Central Nodal Officers (CNOs) to each of 256 districts, who are being assisted by Director/Deputy Secretary level officers and Technical Officers from Central Government along with the District officials. About 140 Technical Officers of the rank of Director and Deputy Director from CWC have been deployed to provide technical inputs.

JSA is focusing on five interventions namely:

- Water conservation and rainwater harvesting
- Renovation of traditional and other water bodies/tanks
- Reuse and bore well recharge structures
- Watershed development
- Intensive afforestation



Chennai



Tiruchirappalli



Adilabad



Bhilwara

Progress on Major Hydro-electric Projects

Dibang Multipurpose Project

The Cabinet Committee on Economic Affairs, chaired by the Hon'ble Prime Minister approved the expenditure on pre-investment activities and various clearances for Dibang Multipurpose Project (MPP) in Arunachal Pradesh for an amount of Rs. 1600 crore. The estimated total cost of the Project is Rs. 28080.35 at Jun'18 price level. The estimated completion period for the project shall be nine years from receipt of Government sanction. The project shall generate 2880MW (12x240MW) power to produce 11223MU of energy in a 90% dependable year. This is the largest ever Hydro Electric Project to be constructed in India. The dam is 278 metres high and will be the highest dam in India once completed. Dibang MPP is envisaged as a storage-based hydro-electric project with flood moderation as the key objective. The construction of Dibang MPP shall prevent the sizeable downstream area from floods. After the implementation of the master plan of Brahmaputra Board for flood moderation of all rivers contributing to river Brahmaputra, of which Dibang MPP is one of the components, the sizable area will be protected from flooding and help in mitigating the perennial damage due to floods in Assam. CWC is involved in appraisal of civil work component of such Hydroelectric and its cost was vetted by CWC in Sep 2017.



Mangdechhu Hydroelectric Project

Mangdechhu hydroelectric project is a 720 MW run-of-river power plant on the Mangdechhu River in Trongsa Dzongkhag District of central Bhutan. It is being developed by Mangdechhu Hydroelectric Project Authority (MHPA) constituted jointly by Governments of India(GoI) and Royal Govt. of Bhutan(RGoB). It is a flagship project of GoI & RGoB funded fully by GoI. Recently, some of the units of the Project have started commercial power generation.

3rd Revised Cost Estimate of the civil component of the project at 2017 Price Level amounting to Rs.3098.6 Crore was appraised in CWC in Oct 2018.



Advisory Committee Meeting

142nd Meeting of Advisory Committee of DoWR, RD& GR for consideration of techno-economic viability of Irrigation, Multipurpose and Flood Control Projects was held on 08.07.2019 and following projects were considered and accepted:

Project	State	Type of Project	Estimated Cost (Rs. crore)	Benefit
7th Revised Cost Estimate of North Koel Reservoir Project	Bihar and Jharkhand	Major, Irrigation	3042.16 (2018-19)	CCA-125500 Ha AI-114021 Ha
2nd Revised Cost Estimate of Purna Barrage-2 (Ner Dhamana)	Maharashtra	Medium, Irrigation	888.43 (2016-17)	CCA-5954 Ha AI-7024 Ha
Anti-erosion works on Left Bank of River Ghaghara from confluence of River Rapti and Ghaghara up to village Kurah Parasia in District Deoria	Uttar Pradesh	Flood Control	59.22 (2018)	Benefited Area- 9600 Ha Benefited Population- 26415

CCA-Culturable Command Area, AI- Annual Irrigation. Price level has been indicated along with the estimated cost

North Koel Project

The North Koel Reservoir Project is located in the tribal areas in Palamau /Garhwa districts of Jharkhand State. After resolving the issues in the implementation of the project, the approval of Union Cabinet was received in Aug 2017 for completion of balance works of the North Koel Reservoir Project at an estimated cost of Rs. 1622.27 crore. A Contract Agreement amongst CWC, Water Resources Departments of State Govts. Of Bihar and Jharkhand and WAPCOS was signed in September 2017 for execution/completion of balance works of North Koel Project. A Technical Evaluation Committee (TEC) has also been constituted under the chairmanship of Member (WP&P), CWC for completing the balance works of North Koel Project. The 21st meeting of TEC was held on 02.07.2019 wherein the discussion on the 7th Revised Cost Estimate (RCE) of North Koel Project in Jharkhand and Bihar; the matter regarding readiness by WAPCOS to start the work at dam site immediately once the NOC from the State Forest Department is obtained; the process for handing over of all the required land by both the State Govts. of Jharkhand and Bihar to WAPCOS for the execution of works within the stipulated time; Work Plan and Status of balance works being executed by WAPCOS etc. were discussed.



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Meeting of Expert Committee for Scientific Assessment of Flood Prone Areas

The 4th meeting of the Expert Committee for Scientific Assessment of Flood Prone Areas in India was held under the Chairmanship of Shri A K Sinha, Chairman, CWC on 26.07.2019 at CWC, HQ, New Delhi. The participants were from IMD, Sol, GFCC, BB, MHA, NDMA, NRSC, CWC and IIT Guwahati.

CWC presented the study on the maximum aggregated extent of the inundated area of Bihar State delineated by analyzing the Satellite Imageries from Landsat data repository (1989-2017) on Google Earth Engine Application Program Interface. On similar lines, the study has been extended to pan India. The strengths and limitations of various available methodologies (mathematical modeling & remote sensing) were also discussed. The members of the Expert Committee were of the view that

the current methodology adopted by CWC for scientific assessment of the flood-prone area is very similar to that of NRSC with the only difference being non-utilization of microwave satellite data. In view of the above, the following decisions were taken:

1. CWC should augment the study by exploring the use of microwave and multi-spectral data from other sources also, which is available in public domain as NRSC has mentioned that it cannot share microwave data with other Agencies.
2. For delineating inundation maps by analyzing the satellite imageries, recurrence interval shall be calculated and shall be classified rationally since inundation information captured by satellite is two dimensional.

E-flow Monitoring for Ganga

In October 2018, Central Government notified the minimum environmental flows for River Ganga that has to be maintained at various locations on the river. As per the notification, the Central Water Commission will be the designated authority and the custodian of the data, and will be responsible for supervision, monitoring, regulation of flows and reporting of necessary information to the appropriate authority as and when required and also take emergent decisions about the water storage norms in case of any emergency. Maintenance of e-flow at Chaudhary Charan Singh Barrage in Bijnor (U.P), Bheemgoda Barrage in Haridwar and Pashulok Barrage in Rishikesh was inspected by Chairman, CWC and Member (RM), CWC during 27-28 July 2019. During the inspection, Chairman, CWC stressed that the maintenance of required environmental flows is in the top priority of the Government and desired e-flows must be maintained at any cost. Project Authorities at Bijnor and Rishikesh were advised to install the automatic data acquisition and transmission system immediately.



57th Meeting of Upper Yamuna River Board (UYRB)

57th meeting of UYRB was held on 11.07.2019 under the chairmanship of Sh. S.K. Haldar, Member (WP&P), CWC and Chairman, UYRB. It was participated by Principal Secretary, Haryana Irrigation Department, CEO, Delhi Jal Board and other Chief Engineer level officers from Uttar Pradesh, Himachal Pradesh, Rajasthan and Uttarakhand. The main issues discussed in the meeting were:

- Delhi Water Supply Issue
- Short supply of Yamuna water to Rajasthan from Okhla Headworks
- Implementation of Storage Projects in Upper Yamuna Basin
- Water Quality Issues of River Yamuna
- Raw Water augmentation by utilization of effluents as the raw water source of NCT of Delhi
- Administrative reforms of UYRB



Mullaperiyar Supervisory Sub Committee

In compliance to the Hon'ble Supreme Court Judgment dated 07.05.2014 on Mullaperiyar Dam issue, a three-member Supervisory Committee was constituted by erstwhile Ministry of Water Resources, River Development and Ganga Rejuvenation, vide OM dated 01.07.2014. Subsequently, Supervisory Sub Committee was constituted by Chairman of Supervisory Committee vide letter dated 13.08.2014. The Supervisory Sub Committee is headed by Executive Engineer, South-Western Rivers Division, CWC, Kochi and includes representatives of Govt. of Tamil Nadu and Kerala. The Sub-Committee is mandated to scrutinize all data for close monitoring of the safety of the Dam, inspection of the dam periodically, more particularly immediately before the monsoon and during the monsoon and keep close watch on its safety and recommend measures which are necessary and will bring any urgent issues to the notice of the Supervisory Committee.

36th meeting of Mullaperiyar Sub Committee was held on 10.07.2019 at the office of Supervisory Committee on Mullaperiyar at Kumily. The Sub Committee visited the dam and made routine checks such as measuring seepages, working of spillway shutters randomly, measuring pH values etc. During the meeting, matters such as seismic instrumentation, the status of preparation of gate operating schedule, installation of telemetry stations etc. were discussed.



Dam Rehabilitation and Improvement Project (DRIP) State Consultation for Phase-II and III

The State Consultation and Appraisal meetings for DRIP Phase-II and Phase-III were held with Principal Secretary and other officials of Water Resources Departments of Gujarat, Maharashtra, Telangana and Andhra Pradesh on 2nd, 4th, 19th and 20th July 2019 respectively in their respective secretariats. The meetings were attended by officials from State WRD, Central Water Commission (CWC) and World Bank.

Detailed presentations were made by Central Project Management Unit (CPMU) and World Bank team covering budget outlay, spatial coverage, timelines, participating agencies, funding pattern, Implementation and Monitoring mechanism and timelines for Preparatory activities for DRIP Phase-II and Phase-III etc. Sh. Pramod Narayan, Director(DSR), CWC and Project Director, DRIP explained the basic objectives of this new Project as well as initiatives taken in past by Government of India regarding dam safety management. He also informed about the ongoing DRIP activities, its status and achievements in terms of rehabilitation and Institutional Strengthening activities etc.



Inspection of Willingdon and Cholavaram Dams in Tamil Nadu



The expert panel comprising Sh Vivek Tripathi, Director, Embankment (E&NE); Sh Anil Jain, Director, Embankment (NW & S) & Sh. Pramod Narayan, Director, DSR from CWC; Sh K. Aravind, Director, Eng. Geology Division, GSI and Dr. R. Chitra, Joint Director, In-charge soil discipline, CSMRS inspected Willingdon and Cholavaram dams of Tamil Nadu during 25-27th July 2019. These dams are more than 100 years old and experiencing distress in the form of slippage of slope, sinking and cracks. Experts inspected gates and head sluice of supply canal intake at Cholavaram dam. State design team apprised the panel of experts about safety issues and rehabilitation measures undertaken at Willingdon and Cholavaram dams.



Workshop under DRIP

A workshop on Seismic Assessment of Concrete Gravity Dams was organized in CWC on 29th July, 2019. Dr. Ashutosh Bagchi, Professor and Chair, Department of Building, Civil & Environmental Engineering, Concordia University, Montreal, Canada discussed various topics including Seismic response of concrete gravity dams and concepts of structural dynamics, Seismic assessment of old dams.



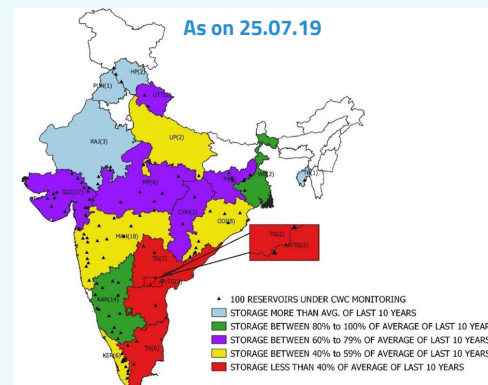
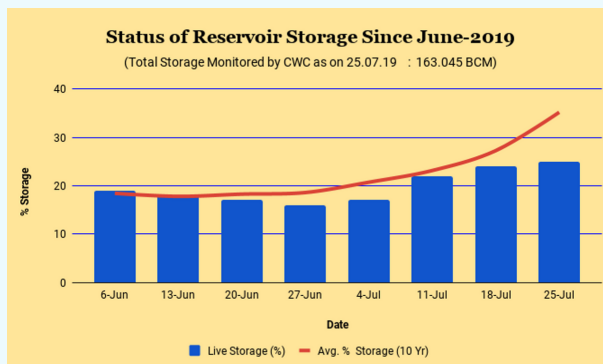
Design Flood Review

Hydrological Studies Organization (HSO) of CWC is entrusted with design flood review studies of Projects under Dam Rehabilitation and Improvement Program (DRIP) of 18 States of India covering about 687 projects. Design flood review of 103 projects was completed by HSO, CWC as on 31st July 2019 against a target of 100 projects.

State	No. of Projects
Rajasthan	56
Andhra Pradesh	35
Telangana	8
Goa	2
Telangana	1
Tamil Nadu	1

Reservoir Monitoring

Central Water Commission included 9 additional reservoirs for storage monitoring. Now, CWC is monitoring live storage status of 100 reservoirs of the country on a weekly basis and is issuing a bulletin on every Thursday. The total live storage capacity of these 100 reservoirs is 163.045 BCM which is about 63.24% 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 25.07.2019, live storage available in these reservoirs is 40.836 BCM, which is 25% of the total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 65.020 BCM and the average of last 10 years live storage was 57.456 BCM. Thus, the live storage available is 63% of the live storage of corresponding period of last year and 71% of storage of average of the last ten years. CWC is in the process to add more number of Reservoirs in its monitoring network.

Inspection of Tivare Dam

Recently a dam called Tivare, which is an earthen dam in district Ratnagiri, Maharashtra breached during the night on 3rd July 2019. Failure of the dam resulted in an uncontrolled release of water into downstream, causing loss of life and property in seven villages in its vicinity.

A Central Team was constituted by Dam Safety Organization, Central Water Commission with the following members:

- Sh Gulshan Raj, CE, DSO, CWC, New Delhi
- Sh Rajeev Singhal, Director, DSM, CWC, New Delhi
- Sh Anil Jain, Director, EMB (NW&S), CWC, New Delhi
- Director, CSMRS, New Delhi

The Central Team visited the Tivare Dam on 22/23.07.2019 along with the officers of the Government of Maharashtra i.e., from State Dam Safety Organisation, State Central Design Office, Project office and Local Administration.



Gallery



Hon'ble Minister of Home Affairs had a meeting on 13th July, 2019 with MHA officials and concerned departments including CWC on the issue of developing flood situation



Chief Engineer, B&BBO, CWC held a meeting with Hon'ble Minister of Water Resources Department, Govt. of Meghalaya on 2nd July 2019 at his office regarding projects in Basin



Sh.R.K. Sinha, Member (RM), CWC in panel discussion on Rajya Sabha TV on 15th July 2019 regarding Flood and River Interlinking



Telemetry system installation by CWC at Doyang reservoir -Doyang River in Nagaland was completed on 06-07-19



Rainwater Harvesting System started in CWC, Kolkata



केंद्रीय जल आयोग, कोलकाता द्वारा IEM पब्लिक स्कूल में जल संरक्षण पर आयोजित हिंदी निबंध प्रतियोगिता के विजेताओं को मुख्य अभियंता श्री ए के खरया द्वारा पुरस्कार एवं प्रमाणपत्र दिया गया और उन्हें जल संरक्षण की आवश्यकता के बारे में बताया तथा इसके लिए प्रोत्साहित किया

प्रशस्ति पत्र

नगर राजभाषा कार्यान्वयन समिति (केन्द्रीय), पटना

कार्यालय प्रधान मुख्य आयुक्त आयुक्त
(बिहार एवं झारखण्ड), पटना

प्रशस्ति पत्र

नगर राजभाषा कार्यान्वयन समिति (केन्द्रीय), पटना के सदस्य कार्यालय प्रबोधन निदेशालय, केन्द्रीय जल आयोग, पटना को 01 अप्रैल-जून, 2018 एवं जुलाई-सितंबर, 2018 तिमाही में शत प्रतिशत पत्राचार हिन्दी में करने के लिए यह प्रशस्ति पत्र प्रदान किया जाता है और इस उत्कृष्ट कार्य की सराहना की जाती है।

दिनांक : 25-07-2019
स्थान : पटना

प्रधान मुख्य आयुक्त आयुक्त (बिहार एवं झारखण्ड) सह अध्यक्ष, न.रा.का.स. (कें.), पटना

नगर राजभाषा कार्यान्वयन समिति (केन्द्रीय), पटना

कार्यालय प्रधान मुख्य आयुक्त आयुक्त
(बिहार एवं झारखण्ड), पटना

प्रशस्ति पत्र

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दिनांक : 25-07-2019
स्थान : पटना

प्रधान मुख्य आयुक्त आयुक्त (बिहार एवं झारखण्ड) सह अध्यक्ष, न.रा.का.स. (कें.), पटना

Water Sector in News

- June sees 33% rain shortfall, most of India under dry spell (The Times of India 01.07.19)
- Water a concern but not as big as Niti said: Shekhawat (The Times of India 02.07.19)
- Govt. Launches water conservation drive (Hindustan Times 02.07.19)
- 14 dead, 9 missing after dam breach in Ratnagiri (The Times of India 04.07.19)
- India Keeping Close Watch on Chinese Dams on Brahmaputra (The Economic Times 05.07.19)

- Kharif sowing at new low due to sluggish monsoon (Hindustan Times 10.07.19)
- Single Tribunal to hear water disputes (The Hindu, 11.07.19)
- In good news for monsoon, EL Nino's fading (The Times of India, 13.07.19)
- Parched Chennai finally gets water- on train from Vellore (The Indian Express, 13.07.19)
- July Revival Washes Away Monsoon Deficit (The Economic Times, 31.07.19)

Around the States

In Chennai, Tamil Nadu, the foundation stone was laid for third major desalination plant (150 MLD) with the objective of augmenting drinking water supply in the southern part of the City. Currently, two major desalination plants each having capacity of 100 MLD are in operation for catering to the needs of the city. In addition to above, there is also proposed to construct 400 MLD desalination plant to augment drinking water supply to southern and western parts of the city.

- Meghalaya State Water Policy 2019 was adopted in July, 2019
- On 26th July, 2019, The Uttar Pradesh Assembly passed UP Groundwater (management and regulation) Act, 2019.
- Bihar to Launch जल, जीवन और हरियाली अभियान

Promotion



Shri Arun Kumar Sinha promoted as Chairman, CWC



Shri Manjeet Singh Dhillon was promoted to Higher Administrative Grade

Training



From History- Indo-Bhutan Cooperation in Water Sector & CWC

India started providing support to Bhutan from 1955 onwards by way of hydro-meteorological data collection, topographical surveys and geological investigations leading to DPRs of major, medium and mini-hydropower projects. For this, a permanent office viz. Bhutan Investigation Division (BID) of the Central Water & Power Commission (now CWC) was created in Bhutan in 1961. Year 1961 also began with the signing of the Jaldhaka agreement. The Jaldhaka project is situated on the Indian side of the Indo-Bhutan border in West Bengal. Completed in 1966, the total capacity of the plant was around 18,000 kilowatts. According to the 1961 pact, Bhutan would receive the free supply of 250 kilowatts electricity.

In 1974, India and Bhutan signed a landmark agreement on Chukha Hydropower Project (CHP). The Project was commissioned in 1987-88 having generating capacity of 336 MW. Bhutan's first mega power project, CHP was fully funded by the GoI. BID took up topographical surveys, hydrological data collection, geological investigation and collection of data for all the necessary studies required for the DPR of the CHP. Every aspect of the Project development was highly challenging on various aspects including data collection, studies & analysis, designing and preparation of DPR. Officials of CWC played the main role during construction also who worked there on deputation at various senior positions and at working levels.



Tala HEP

The resounding success and economic wellbeing brought by CHP made way for newer projects. The 1,020 MW Tala Hydroelectric Project, one of the biggest joint projects between India and Bhutan was also fully financed by the GoI. BID, CWC undertook field investigations and

surveys necessary for the preparation of the DPR which was prepared and submitted by WAPCOS. A unique feature of the project is the fish ladder for migration of fish. The Project was fully commissioned in 2002. Similar efforts were also made for Kurichu HEP (60 MW).

Cooperation in the hydropower sector between India and Bhutan is a true example of a mutually beneficial relationship, providing clean electricity to India, generating export revenue for Bhutan, and further strengthening the bilateral economic linkages. CWC through BID played an active and important role in the success of this cooperation between two countries.



Central Water Commission

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

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