



# JALANSH



The Monthly Newsletter of Central Water Commission



## Message

Arun Kumar Sinha  
Chairman, CWC

India and Bhutan reached a major milestone in long standing cooperation in water sector. Hon'ble Prime Ministers of India and Bhutan jointly inaugurated the 720 MW Mangdechhu Hydroelectric Project in Bhutan. This project shows how the two nations working together can bring development and prosperity in the lives of the people of the two countries.

Jal Shakti Abhiyan launched by Ministry of Jal Shakti has been able to generate awareness on water related issues and it is now being widely discussed and debated. In a countrywide effort to enhance water security, especially in water stressed districts, Jal Shakti Abhiyan (JSA) has so far delivered over 3.5 lakh water conservation measures in 256 districts. About 4.25 crore saplings were planted as a part of the efforts. An estimated 2.64 crore people have participated in the Abhiyan making it a true Jan Andolan. More than 140 officers of Central Water Commission are providing their technical support for this Abhiyan.

The Hon'ble Prime Minister addressed the nation from the ramparts of the Red Fort on the 73rd Independence Day and announced that in coming days, Centre and States will together take forward the Jal-Jeevan Mission to provide piped drinking water to all and

an amount of more than Rs. 3.5 lakh crores has been earmarked for the same.

Very severe flood situation was faced during the month of August. CWC observation network showed that rivers at 25 stations flowed above the previously recorded Highest Flood Level (HFL). This has caused great loss to life and property across country specially in Maharashtra, Karnataka and Kerala. The main reason for this deluge was extreme rainfall events. 11 Inter-Ministerial Central Teams (IMCTs) have been constituted by the Ministry of Home Affairs to assess the damages caused in 12 States by Flood and landslide during the ensuing monsoon season. On the other hand, these events eliminated the monsoon deficiency of 9% at the end of July and average rainfall at the end of August became more than normal. The live storage of major reservoirs being monitored by CWC increased from 33 % to 76 % in this one month period. Several States are embarking upon innovative solutions such as usage of floating Solar Panel on reservoirs to generate power as well as reduce evaporation losses. Govt. of Uttar Pradesh has approved one such plan for Rihand Reservoir.

NITI Ayog released the Composite Water Management Index (CWMI) 2.0 on 23.08.2019 in presence of Hon'ble Union Minister of Jal Shakti. CWMI provides a framework for ranking the States/UT for their water management efforts and a guide for further improvement. Gujarat ranked first among all the States/UTs. This report can be accessed from <https://www.niti.gov.in/sites/default/files/2019-08/CWMI-2.0-latest.pdf>

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Prime Ministers of India and Bhutan jointly inaugurated the 720 MW Mangdechhu Hydroelectric Project in Bhutan



Hon'ble Minister for Jal Shakti inaugurating 31st Induction Training Programme for CWES Group A officers

Upcoming Event

## 6th INDIA WATER WEEK 2019

Water Cooperation-Coping With 21st Century Challenges

September 24th-28th, 2019, Vigyan Bhawan, New Delhi

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## Jal Shakti Abhiyan

In a countrywide effort to enhance water security, especially in water stressed districts, the Centre initiated Jal Shakti Abhiyan (JSA) has delivered over 3.5 lakh water conservation measures in 256 districts. Out of these, 1.54 lakh are of water conservation and rain water harvesting measures, 20000 relate to the rejuvenation of traditional water bodies, over 65000 are reuse and recharge structures and 1.23 lakh are watershed development projects. An estimated 2.64 crore people have already participated in the Abhiyan making it a Jan Andolan. About 4.25 crore saplings were planted as a part of the efforts. More than 140 officers of Central Water Commission are providing their technical support for this activity. The outcome of the first phase of the Jal Shakti Abhiyan was reviewed by Cabinet Secretary in New Delhi.

A ranking system for various Districts has been also evolved under JSA. Top 3 districts for the programme and their associated Technical Officers/office as on 30.08.2019 are as under.

National Rank	District Name	State Name	Total Score	Technical Officers from
1	KASGANJ	UTTAR PRADESH	87.41	CSMRS
2	BANAS KANTHA	GUJARAT	83.31	Roopesh D, DD & Abishek Gupta, DD, CWC
3	MAHABOBNAGAR(14)	TELANGANA	82.13	Kaushal Kumar, DD, CWC



## केंद्रीय जल आयोग के निदेशक ने किया विकास कार्यों का निरीक्षण, जानकारी ली



रटलाई, वाटरवेल के उपयोग की जानकारी लेते केंद्र जल आयोग के अधिकारी।

रटलाई, केंद्रीय जल आयोग के निदेशक शरदचंद ने क्षेत्र में चल रहे विभिन्न प्रकार के विकास कार्यों का निरीक्षण किया। उन्होंने रटलाई करने के बड़े तालाब पर महानरेगा के जलशक्ति अभियान के तहत करवाए जा रहे पौधरोपण और अन्य कार्यों का निरीक्षण किया। उन्होंने 2 साल पूर्व ग्राम पंचायत द्वारा सोमद कोष द्वारा स्वीकृत 12 लाख रुपए की लागत से पेयजल के लिए बनाए गए ओपनवेल का भी निरीक्षण किया। बकानी, केंद्रीय टीम ने यहां सलाबद और करलगांव में

जलशक्ति अभियान का निरीक्षण किया। ग्राम पंचायत करलगांव के मोलकाकरला में सोकता गड्डा निर्माण सहित अन्य के बारे में जानकारी ली।



## Induction Training Programme

Induction Training Program (ITP) for Central Water Engineering Services 'Group A' officers (newly appointed Assistant Directors / Assistant Executive Engineers through UPSC) is one of the flagship programs of NWA conducted every year.

The 31st ITP commenced from 20 August 2019 and will conclude on 07 February 2020. Forty-Four newly recruited Assistant Directors / Assistant Executive Engineers are attending this 24 Weeks ITP. The ITP was inaugurated by Shri Gajendra Singh Shekhawat, Hon'ble Union Minister of Jal Shakti at NWA, Pune on 20th August, 2019. The Inaugural Program was also graced by Shri Upendra Prasad Singh, Secretary (WR, RD & GR) and Shri Arun Kumar Sinha, Chairman, Central Water Commission.

On this occasion, Hon'ble Minister emphasized the need for inculcating innovative thinking

amongst the young officers with a holistic approach for water management. He stressed that the water resources availability is facing stress due to competing demand, increase in population, urbanization and over exploitation. He advocated that water conservation is to be taken as a revolution by all and initiatives like Jal Shakti Abhiyan (JSA) can play an extremely important role in this regard.

He further mentioned that in order to attain the challenges of making India a Five Trillion Economy in the next five years, strengthening of Water Infrastructure by synchronizing the efforts of water resources development and management as well as water conservation by all is extremely important. In order to attain this goal, he mentioned that the Central Water Engineering Services Group (A) officers can play a catalytic role



## Indo-Bangladesh Cooperation

A Secretary level meeting between India and Bangladesh was held in Dhaka on 08.08.19. Indian delegation was led by Sh. Upendra Prasad Singh, Secretary, DoWR, RD&GR and included Sh. J.C. Iyer, Commissioner (Flood Management), DoWR, RD& GR and Sh. S.K. Sinha, Director, CWC etc.

India and Bangladesh have agreed to set up a Joint Technical committee for optimum utilisation of Ganges water as being received by Bangladesh under the Ganga Water Sharing Treaty 1996. It was also agreed to prepare a framework for interim water-sharing agreement for seven rivers namely Feni, Gumti, Manu, Khowai, Muhuri, Torsa and Jaldhaka.

Both the countries also discussed issues related to pollution of trans boundary rivers. It will enhance bilateral cooperation in the water resources sector between India and Bangladesh.



## Meeting with Nepal on Flood Forecasting

A Joint Team was constituted with three Members each from India and Nepal for finalizing Flood Forecasting Network on rivers common to India and Nepal. The Joint Team held its 1st meeting on 22nd August 2019 at Patna. The following recommendations were made.

- A Network of 281 stations in Nepal has been proposed by India the data of which will be used for Flood Forecast Modeling.
- Real-time Hydro-meteorological data of these stations shall be shared with India through File Transfer Protocol (FTP).

This will benefit India for better Flood Management and taking preventive measures during floods in the States of Bihar and Uttar Pradesh. Officers from both the country visited Hajipur and Gandhighat observation stations of CWC.





## Flood Situation in the Country

Due to above normal rainfall in the month of August, several parts of the country reeled under floods.

25 CWC stations observed **Extreme Flood Situation** in State of Karnataka, Kerala, Tamil Nadu, Maharashtra and Rajasthan. Some of the Stations observed this phenomenon for more than two days. In fact, River Panchganga at Terwad in Kolhapur district of Maharashtra flowed above HFL from 7th to 14th August 2019.

**Severe Flood Situation** was observed on 70 CWC Stations in the States of Arunachal Pradesh, Assam, Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Himachal Pradesh, Kerala, NCT Delhi, Odisha, Uttarakhand, Uttar Pradesh and West Bengal up to August, 2019 during this monsoon season.

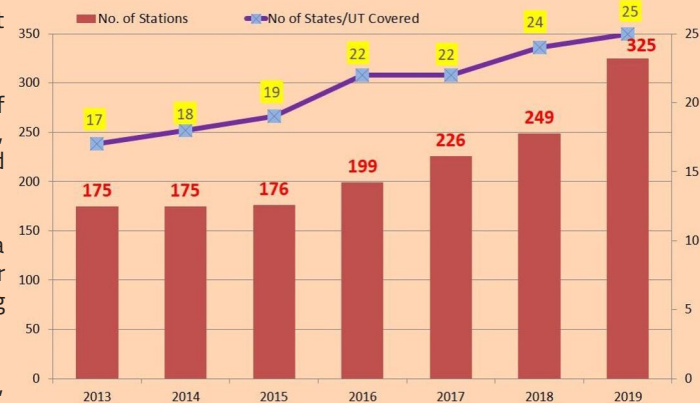
41 CWC Stations in State of Assam, West Bengal, Bihar, Maharashtra, Madhya Pradesh, Haryana, Odisha, Kerala, Telangana, Gujarat, Uttarakhand, Uttar Pradesh and Jammu & Kashmir observed **Above Normal Flood Situation** during this monsoon season up to August, 2019.

**Inflow Forecasts** have been issued to 61 Reservoirs and Dams up to August, 2019.



## Expansion of FF Network

CWC has expanded its Flood Forecasting (FF) network to encompass 325 stations out of which 197 are Level forecast stations whereas 128 are Inflow forecast stations. During year 2019, a total of 76 additional stations have been brought under this network against targeted completion year of 2020.



State/UT	Level Forecast Station	Inflow Forecast Station	Total
Andhra Pradesh	10	9	19
Arunachal Pradesh	03	0	03
Assam	30	0	30
Bihar	40	3	43
Chhattisgarh	01	2	03
Gujarat	06	7	13
Haryana	01	1	02
Himachal Pradesh	01	0	01
Jammu & Kashmir	03	0	03
Jharkhand	02	15	17
Karnataka	01	14	15
Kerala	03	2	05
Madhya Pradesh	02	9	11
Maharashtra	08	15	23
Odisha	12	7	19
Rajasthan	02	11	13
Sikkim	03	5	08
Tamil Nadu	04	11	15
Telangana	05	7	12
Tripura	02	0	02
Uttar Pradesh	39	4	43
Uttarakhand	04	2	06
West Bengal	12	4	16
NCT Delhi	02	0	02
Daman & Diu	01	0	01
<b>Total</b>	<b>197</b>	<b>128</b>	<b>325</b>

## Ghaggar Standing Committee

29th meeting of the Ghaggar Standing Committee (GSC) was held on 29.08.19 under the chairmanship of Member (RM), CWC at CWC (HQ), New Delhi. In this meeting, the following decisions were taken:

- Immediate flood management measures in form of ring bunds to save settlement areas.
- Scope of agreed Tender for data collection work should also be shared with CWPRS, Pune for their views, if any,
- Officials from Govt. of Punjab and Govt. of Haryana will jointly decide the mode of payment for data collection as per accepted Tender terms & conditions and award of data collection work may be done within 10 days.
- Work for data collection should be started from 01.10.19 (after monsoon season) and be completed within stipulated period

The GSC was constituted in Feb 1990 to examine and coordinate irrigation, flood control, and drainage works in Ghaggar basin and laid down priority for their implementation and accord clearance to individual schemes in basin from the interstate angle. States of Rajasthan, Punjab and Haryana are represented in GSC.



## Inter-ministerial Central Team (IMCT) for assessment in wake of Flood/Landslide

In pursuance of a significant decision taken by the Union Minister for Home Affairs in the High-Level Committee (HLC) meeting held on 19th August 2019, the Ministry of Home Affairs has constituted 11 Inter-Ministerial Central Teams (IMCTs) to visit various States affected by recent floods.

Till now, the IMCTs used to visit the affected States only once after the receipt of the memorandum from the concerned affected State. Now they have been formed earlier to carry out first round of visit. The same IMCT will again visit the State after submission of the Memorandum for the detailed assessment of the damages and relief operations conducted for making final recommendations for allocation of additional funds. CWC's Officers have been nominated in different Inter-Ministerial Central Teams for on-the-spot assessment of the situation in the wake of floods/landslides during monsoon 2019. These officers along with the team have visited Maharashtra, Karnataka, Uttarakhand and Bihar during the August 2019.

### Karnataka

Inter-Ministerial Central Team (IMCT) constituted for Karnataka State visited flood effected Belagavi, Bagalkot, Gadag, Dharwad and Kodagu districts of Karnataka during 24.08.19 to 27.08.19. Shri Jitendra Panwar Superintending Engineer, CWC, Bengaluru represented Ministry of Jal Shakti in the IMCT.

### Uttarakhand

The Inter-ministerial Central Team for Uttarakhand in which Shri Sudhir Kumar, Superintending Engineer, CWC, Dehradun is representing MoJS visited Ghat Tehsil (Chamoli District) on 30.08.19. The Team had discussions with local officers of district administration, on-the-spot assessment of damages due to landslides, heavy rain, cloud burst, flood and flash flood during the on-going 2019 Monsoon and had interactions with the affected people.

### Bihar

Govt. of Bihar submitted a memorandum to National Disaster Management Authority seeking the assistance of Rs. 2700.30 crore in the wake of the loss of life and property due to Flood during July 2019. Thereafter, the Central Govt. constituted 7 members Inter-Ministerial Central Committee for Bihar under the leadership of Shri Ramesh Kumar Ganta, Joint Secretary, NDMA. Sh. Mukesh Kumar Singh, Director, CWC, Patna represented Ministry of Jal Shakti in the IMCT. IMCT visited the Sitamarhi, Madhubani and Darbhanga districts from 28.08.19 onwards to assess the damage due to flood.

### Maharashtra

Inter-Ministerial Central Team (IMCT) deputed for on-the-spot assessment of the situation in the wake of Flood in Maharashtra visited the affected areas during the last week of August 2019. Shri Milind Panpatil, Director, CWC, Nagpur represented Ministry of Jal Shakti in the IMCT.

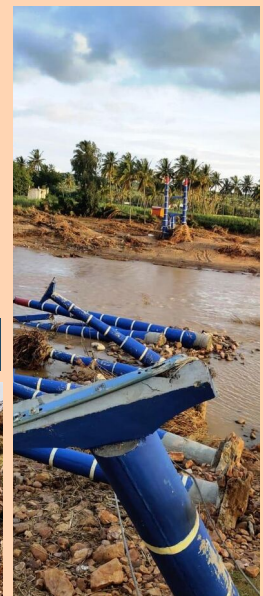
States	Name of Officer, Designation and location S/Sh	Remarks
Punjab	Vineet Gupta, Superintending Engineer (Coordination), CWC, Chandigarh	Floods
Bihar	Mukesh Kumar Singh, Director, Monitoring Directorate, CWC, Patna	Floods
Tripura and Meghalaya	Abhishek Sinha, Superintending Engineer, Meghana Circle, CWC, Silchar	Floods/land slides
Rajasthan	S. D. Sharma, Director, Monitoring & Appraisal Directorate, CWC, Jaipur	Floods
Gujarat	D.S. Chaskar, Superintending Engineer, HO Circle, CWC, Gandhinagar	Floods
Uttarakhand	Sudhir Kumar, Superintending Engineer, HO Circle, CWC, Dehradun	Floods/land slides
Himachal Pradesh	O.P. Gupta, Director, Monitoring & Appraisal Directorate, Central Water Commission, Shimla.	Floods/land slides
Assam	V. D. Roy, Superintending Engineer, HO Circle, CWC, Guwahati	Floods/land slides
Kerala	V. Mohan Murali, Superintending Engineer, C&SR Circle, CWC, Bengaluru	Floods/land slides
Karnataka	Jitendra Panwar, Superintending Engineer (HO&CC), CWC, Bengaluru	Floods/land slides
Maharashtra	Milind Panpatil, Director, Appraisal Directorate, CWC, Nagpur	Floods



De-briefing meeting on 27.8.19 with Hon'ble CM and officers of Karnataka Government at Bengaluru



Damaged sugarcane crop due to flood near Mudhol, Karnataka visited on 26.8.19



Washed away Cable Bridge on MALAPRABHA River at K Junipet, Karnataka



Uttarakhand



Bihar

## BIS- Sectional Committee Meeting (WRD-15)

Shri S.K. Sibal, Chief Engineer, Designs (N&W), CWC chaired the 17th meeting of "Hydroelectric Power House Structures Sectional Committee", WRD 15 on 29.08.2019 at Manak Bhawan, Bureau of Indian Standards, New Delhi.

In the meeting, IS 9120: "Guidelines for Planning, Layout and Design of Cavities in Underground Hydroelectric Power Stations" and IS 4720: "Code of Practice for Ventilation of Surface Hydel Power Stations" were discussed in detail for their revision along with other agenda items.





## Visit to Sardar Sarovar Dam

Shri S.K.Sibal, Chief Engineer, Designs (N&W), Shri Gulshan Raj, Chief Engineer, DSO and Shri Anil Jain, Director, CMDD (N&W) inspected Sardar Sarovar Dam from 20th to 22nd August, 2019 as a part of multi-disciplinary committee comprising of officers from CWC, CSMRS, CWPRS to assess the safety of Dam for the proposed accelerated filling of the reservoir.



## Progressive erosion of spill channel rock of Sikasar Dam, Chhattisgarh

Sikasar dam is constructed on river Pairy, a major tributary of Mahanadi river basin, near Sikasar village in Gariaband District of Chhattisgarh state. The Project consists of an earthen dam (31.7 m high and 876.31 m long), and saddle earthen dam (9.32 m high and 664.0 m long) having side channel spillway 243.23 m long, at the right bank with vertical lift gates (22 nos.) of size 9.14 m x 3.96 m. Project authorities informed that during first year of operation of the Waste weir in 1977, when the flood discharge of about 1395 cumecs passed through the Spill channel, erosion and scouring of the channel bed was observed throughout with depth of scour varying from 1.5 m to 11 m. The erosion continued progressing upstream year after year as the flood passed through the spill channel.

At the request of project authority, to assess the problem, Sikasar dam site has been visited by Sh. M Lal, Chief Engineer, Designs (NW&S), Sh. Kayum Mohammad, Director, CMDD (NW&S) and Sh. Mukesh Kumar, Dy. Director, CMDD (NW&S), CWC on 28.08.19.



## CWC-CPR Dialogue Forum

Shri Rishi Srivastava, Director, Central Water Commission delivered a Tread Talk on "Water Resources Assessment, Understanding India's Water Crisis: India's Water Resources Potential" in the talk-series from TREADs (Transboundary Rivers, Ecologies and Development studies) programme at Centre for Policy Research (CPR) on 26th August, 2019. CPR-CWC Dialogue Forum is a collaborative effort of CPR and Central Water Commission, Government of India. The talk was aimed to critically engage with the idea of water crisis and inform a robust discourse, while contributing towards a rethinking of water policy instruments and governance strategies.

Sh. Rishi Srivastava detailed about the Reassessment of Water Availability in India using Space Inputs by CWC and ISRO (2019) which is the most comprehensive and reliable estimate of water availability in India so far. There were earlier efforts by CWC in the past also. The last assessment was in 1993, when the total water resources was assessed as 1869 BCM. This assessment had certain limitations, such as, not all basins were studied during the same period, groundwater abstractions were estimated and interpolated based upon data of just two years, the utilisation from minor irrigation projects were seldom available, the utilisation from major and medium projects were not always available (mostly estimations), the return flow from irrigation was assumed as 10% of the diversion, etc. The 2019 assessment is an attempt to eliminate the above limitations relying on space inputs. Instead of assessing the utilisation and return flows, evapotranspiration has been estimated using modified



Thornthwaite Mather equation at sub-basin level. The water balance has been carried out at pixel level (56m x 56m) and then aggregated to sub-basin levels after due calibration and validation with observed discharge and rainfall. In addition to Land Use Land Cover (LULC) maps from NRSC, other data sets from CGWB, the assessment uses data sets from various agencies to arrive at the availability of 1999 BCM. The results indicate that there is a huge spatial variability across river basins. Most of the river basins are water-scarce or water-stressed by Falkenmark Water Stress/Scarcity Indices. The talk discussed this variation to deliberate on specific measures to augment this potential and meet future demands.

## Cauvery Water Regulation Committee (CWRC) Meeting

During the month, three meetings of the Cauvery Water Regulation Committee (CWRC) were held. 12th meeting was held at Bengaluru while 13th & 14th meetings were held at New Delhi under the chairmanship of Sh. Navin Kumar, Chairman, CWRC on 1st August, 8th August & 13th August 2019 respectively. During these meetings, the hydro-meteorological situations in Cauvery Basin were reviewed. The discussions were also held on the draft report of Seasonal and Annual Water Account for the Water Year 2018-19.





## Irrigation Atlas of India

Last Irrigation Atlas of India (IAI) was published in 1987. An Inter-Departmental Committee (IDC) has been constituted under the chairmanship of Member (WP&P), CWC to update the IAI. The first meeting of IDC was held on 23-08-2019 and it was decided to bring updated Atlas in Hard and Digital format both.

As per the decision taken in the meeting, a Working Group, within the members of IDC, comprising of Chief Engineer, PMO, CWC; Chief Engineer, NWA, CWC, Pune; Director, NWIC; Head, WRAD, NRSC; and Director, NATMO has been constituted. The Working Group shall finalise the detailed contents/ features to be incorporated in IAI by September 2019 and place before the IDC for consideration and decision. It was also decided to highlight area covered under Micro Irrigation separately and 20 basins as finalised by CWC shall be the basis for preparing the plates.

## Activities under DRIP

The State Consultation and Appraisal meeting for Dam Rehabilitation and Improvement Project (DRIP) Phase-II and Phase-III was held with Secretary (WRD) and other officials of Rajasthan and Uttar Pradesh WRD on 19-08-19 and 30-09-19 respectively. The meetings were also attended by officials from CWC and World Bank. Detailed presentations were made by the Central Project Management Unit (CMPU) and the World Bank team. The presentation broadly covered budget outlay, spatial coverage, timelines, participating agencies, funding pattern, implementation & monitoring mechanism and timelines for preparatory activities for project.

14th Implementation Support and Review Mission of the DRIP visited Bhubaneswar, Odisha during 21st to 22nd August 2019 to review implementation progress of the project activities and to discuss further actions to be taken to accelerate the implementation of the project. During the Mission, all Implementing Agencies (IAs) and CMPU -CWC and World Bank team participated and gave detailed presentations on the overall progress, implementation arrangements, keys challenges and future strategy for implementation and disbursement, followed by constructive discussions on the way forward.

During the mission, discussions were held on establishing State Project Management Units (SPMUs) in all participating states; preparing the ToR and RFP for the Engineering and Management Consultant (EMC) and initiating procurement; establishing Dam Safety Review Panels (DSRPs); providing a list of dams for inclusion in DRIP-II; and creating a Budget Line for DRIP-II activities.

## Water Conservation in Reservoirs

Central Water Commission is monitoring live storage status of 100 reservoirs of the country on a weekly basis and is issuing a weekly bulletin on every Thursday. During the month of August, 7 additional reservoirs have been included in this monitoring.

The total live storage capacity of these 107 reservoirs is 166.17 BCM which is about 64.45% of the live storage capacity of 257.812 BCM which is estimated to have been created in the country. As per reservoir storage bulletin dated 29.08.2019, live storage available in these reservoirs is 126.631 BCM, which is 76% of the total live storage capacity of these reservoirs. The live storage available in 107 reservoirs is 111% of the live storage of corresponding period of last year and 125% of storage of average of the last ten years.

## Glacial Lake Monitoring

Every year during June to October, CWC monitors the size of Glacial Lakes (GL) & Water Bodies (WB) that are larger than 50 ha in the Himalayan region using satellite data. These were digitised in the year 2009 and their current sizes are analyzed with respect to size in the year 2009. The number of GL & WB monitored vary due to availability of cloud-free data. Summary of their size variation in June-19 and July-19 has been highlighted in the adjacent charts.

Full report can be accessed from the following URL:

<http://cwc.gov.in/sites/default/files/admin/cwc-lakes-monitor-report-june-2019.pdf>



Rajasthan



Uttar Pradesh



Review Mission

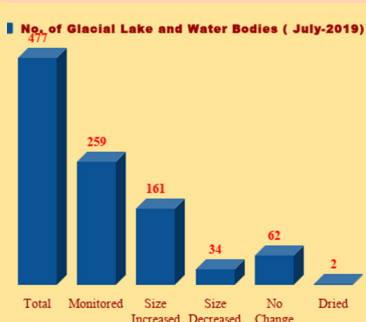
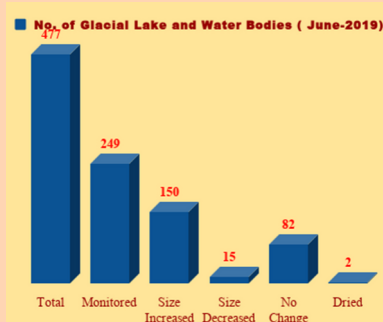
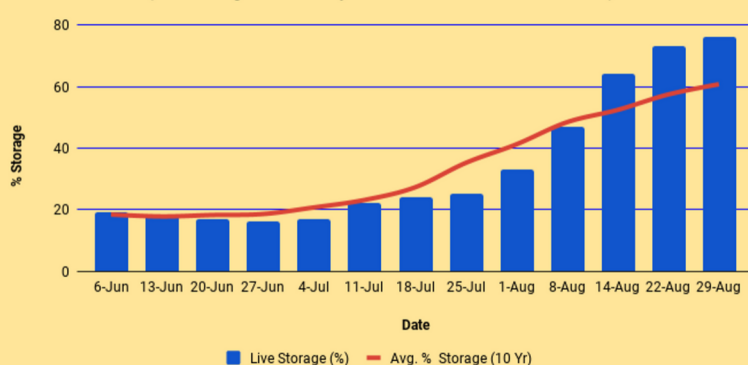


TPRM

Tripartite Pipeline Review Meeting (TPRM) was conducted by Department of Economic Affairs (DEA) and World Bank on 22nd August 2019 in Delhi to review the progress of World Bank-funded projects including Ongoing Dam Rehabilitation and Improvement Project (DRIP). Official of CPMU, CWC attended the TPRM to discuss the progress made in ongoing DRIP and preparatory activities for newly initiated DRIP Phase II & Phase III which is spread across 18 states with 20 agencies. Timelines for loan negotiation, signing and effectiveness of DRIP Phase II & Phase III were discussed during the meeting.

### Status of Reservoir Storage Since June-2019

(Total Storage Monitored by CWC as on 29.08.19 : 166.17 BCM)





## Independence Day Celebration



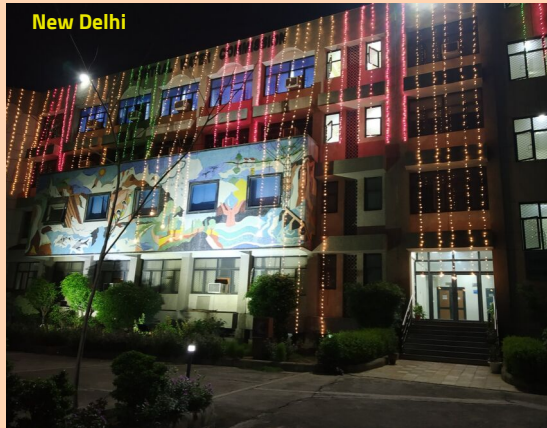
Lucknow



Coimbatore



Kolkata



New Delhi



Bhubaneswar



Bengaluru



Hyderabad



Gandhinagar



Guwahati



Pune

## Gallery



Sh. U P Singh, Secretary, Do WR, RD & GR, Min. of Jal Shakti chaired a meeting to discuss the continuation of Indo-Nepal Joint Project Office for survey works & prep. of DPR of Sapta-Kosi High Dam multipurpose project & Sun Kosi storage-cum diversion scheme (Nepal).



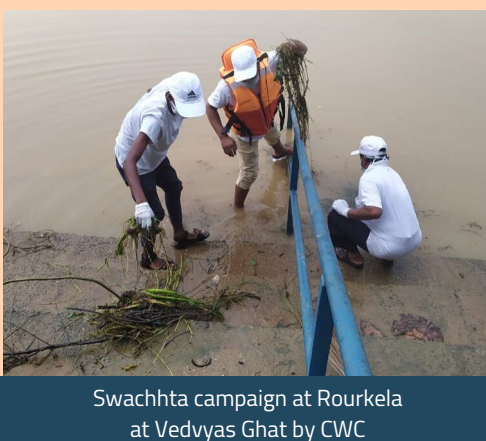
Chairman, CWC taking a meeting of Nodal officers for various Sessions, Panel Discussions etc. on 01.08.19 to be organized under India Water Week-2019 from 24-28th Sep 2019 at New Delhi



CWC on behalf of Ministry of Jal Shakti, Dept. of WR, RD&GR participated in 23rd National Exhibition organized by Central Calcutta Science & Cultural Organization for Youth in Kolkata during 28-31 Aug 2019. Students/teachers from various schools and others visited the stall.



CWC team taking discharge in Yamuna during floods at Delhi



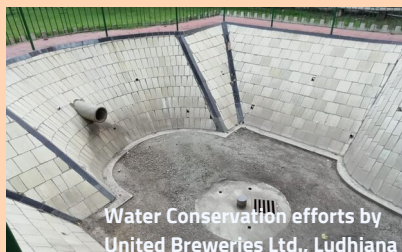
Swachhta campaign at Rourkela at Vedvyas Ghat by CWC



CWC officers sensitizing villagers about benefits of irrigation schemes in Jharkhand

## Visit to industry for Ground truth verification for NWM Awards

A visit was made by Shri Vineet Gupta, SE(C), IBO, Chandigarh on 29.08.2019 for Ground truth verification of the application of M/s United Breweries Ltd., Ludhiana for NWM awards. Similarly, Shri G. L Bansal Director & Sh. Mayank, Deputy Director M&A Directorate CWC Agra jointly visited the Lalitpur Power Generation Company Ltd (LPGL), District Lalitpur, Uttar Pradesh during 21st to 22nd August 2019, regarding verification of National Water Mission Award application submitted by LPGL.



Water Conservation efforts by United Breweries Ltd., Ludhiana



Water Conservation efforts by LPGL, Lalitpur



## Water Sector- News

- By 2024, we intend to achieve 90% accuracy in detecting heavy rain ( Business Standard, 01.08.2019)
- Contract scrapped, Polavaram irrigation project work stops ( Hindustan Times 02.08.2019)
- Kosi-Mechi River linking project gets Centre nod ( Asian Age 04.08.2019)
- Centre to Push for Maha-like Water Regulator for States( The Economic Times 05.08.2019)
- Flood situation grim in southern, western states; 97 dead ( The Statesman 13.08.2019)

- For water mission Rs. 3.3 L cr announced (Hindustan Times 16.08.2019)
- Centre and states spent Rs 6900 cr for flood relief ( The Times of India 18.08.2019)
- Bhakra Dam regulated highest flood after 40 years: BBMB (The Statesman 22.08.2019)
- Punjab, Haryana unrelenting, ministry calls off mediation (The Tribune 28.08.2019)
- Water meant for Marathwada not going to Gujarat: Fadnavis (The Hindu 30.08.2019)

## News around the States



- A Memorandum of Agreement (MoA) has been signed between Govt. of Assam & NHPC for implementation of 2000 MW Subansiri Lower H.E. on 23.08.19 at Guwahati, Assam. MoA was signed by Shri Niraj Verma, Principal Secy. (Power), Govt. of Assam & Shri Balraj Joshi, CMD, NHPC.
- Govt. of Uttar Pradesh has approved a project to set up Floating Solar Plate (150 MW) on Rihand Reservoir.

## From History- Kosi Project

Kosi is known as 'Sorrow of Bihar' which has caused destruction since time immemorial due to flood and huge shifting of its course from east to west. With no agreement on viable solutions to tame it in several deliberations, this problem was referred to Central Water Commission (erstwhile CWINC). After a detailed field survey and geological investigations, a multi-purpose project including storage dam in Barakhethra(Nepal) was prepared in 1950. However, this was not agreed upon due to economic and financial considerations at that time. Further, a project was conceived by CWC in 1953 to construct barrage and embankment on both sides of the rivers and canal system for irrigation in India and Nepal. Team of CWC officers also visited China in 1954 to study the flood control works on Yellow and other rivers. Based on this study, freeboard of proposed embankment on Kosi was raised from 4 feet to 6 feet and it was decided to construct embankment with public cooperation.

Agreement between the Government of India and the Government of Nepal on the Kosi Project was made on 25.04.54. Work on Embankment started in January 1955 and was completed by 1958. Since major portions of embankment were completed in 1957, flood control benefit started to accrue. Afterwards, the construction of Hanumansagar Barrage was taken up in 1959 and was completed in March 1963. Construction of Eastern Kosi Canal was started in 1957 and it was opened for irrigation on 09.07.64. Fall in the canal was utilized to set up 20 MW Hydro Power Plant and the first unit (5 MW) was commissioned in 1970. The construction of Chhetra Canal System in Nepal was started in 1962.

## International Distance Learning Course

The International Distance Learning Course in Hydrology: Basic Hydrological Sciences for the Asian Region (2019) was organized by National Water Academy in association with World Meteorological Organization and UCAR, the COMET Program during 17 June – 02 August 2019 for the duration of seven weeks. The DL course is designed to meet the needs of officials, who work with hydrological data, particularly in the areas of flood forecasting and design flood analysis etc. The course is intended to provide an understanding of the hydrological cycle, runoff processes, unit Hydrograph, flood forecasting, elements of hydrological modelling etc. and will prepare the participants for advance study in hydrological methods and forecasting. The faculty of this course comprises of core faculty of NWA and experts of the relevant topics from WMO, COMET UCAR. The International DL Course was attended by 56 participants.



Country	No.
India	30
UAE	02
Sri Lanka	03
Pakistan	02
Nepal	02
Mayanmar	04
Maldives	02
Malaysia	03
Iraq	01
China	01
Bhutan	06
<b>Total</b>	<b>56</b>

Kosi Barrage



In 1974, Kosi Board of Consultant constituted by Govt. of Bihar suggested for reviving the 1950 proposal of CWC to construct storage dam. Further, in 1981, CWC prepared a Feasibility Report on Kosi High Dam Project at Barahakshetra. Indo Nepal Joint Project Office (JPO) has been formed which started functioning in August 2004 with the mandate of jointly carrying out field investigations and preparation of DPR for Sapta Kosi High Dam Multipurpose Project & Sun Kosi Storage cum Diversion Scheme.

Though the progress on storage dams is yet to be achieved, engineering interventions carried out earlier could tame Kosi's course shifting as well as flood damages which according to local legends was not possible. The project provided Flood Control benefits, Irrigation and hydropower to both the countries and is a fine example of international cooperation between the two countries.



## 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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