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JALANSH

The Monthly Newsletter of Central Water Commission

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Message

S. Masood Husain
Chairman, CWC

*During the month of October, CWC organized an important national level seminar on "**Environmental Issues in Water Resources Projects**". It provided platform to all stakeholders including environmental experts and NGOs to air their views and have an informed discussion on the subject.*

*On 10th October, Central Govt. promulgated a notification for ensuring the **minimum environmental flows** (e-flows) for the river Ganga for its stretch upto Unnao. CWC has been entrusted with monitoring and reporting of flow data to NMCG.*

*A major **landslide** event occurred in Yarlung Tsangpo river in Chinese territory (Siang in India) during 16-17 Oct, 2018 which caused blockade of flow in river in India. This artificial blockade caused emergency like situation in down-stream States of Arunachal Pradesh and Assam. Overtopping and breach of this blockade caused water level rise of about 12m in one hour at Tuting site of Central Water Commission on 19th Oct, 2018. The situation was monitored closely by CWC based on the sharing of data from Chinese side in terms of MoU between the two countries and timely warnings were issued to concerned agencies. The landslide event was further repeated near the month end which was also monitored by CWC enabling protection of life and property in affected areas.*

*CWC partnered with International Commission on Large Dams (**ICOLD**) and other stakeholder organizations for organizing the Dams India 2018 conference on "Storage Dams for Water Security and Sustainable Development" at New Delhi during 24-25th October, 2018.*

*A major milestone has been achieved for **Punatsangchu** Hydro Electric Project-II in Bhutan with the completion of excavation of 6.3 km long HRT having one of largest diameters (11m) in Asia. This task had numerous challenges because of extremely poor geology. CWC is providing design consultancy to the project. Various CWC officers are also working in project executing agency on deputation.*

*Irrigation/Multipurpose projects estimating **Rs.3,841.29 crore** were accepted by the concerned Advisory Commitee of MoWR, RD&GR during the month.*

*CWC successfully completed and delivered the DPR of two minor irrigation schemes of **Meghalaya** after detailed survey and investigation.*

Wide spectrum of activities including flood forecasting, reservoir storage monitoring, project appraisal, design consultancy (in and outside country) etc. continued during the month. Few important projects like Ujh Multipurpose, Par-Tapi-Narmada link projects etc. are expected to achieve major milestones in approval process in coming months.

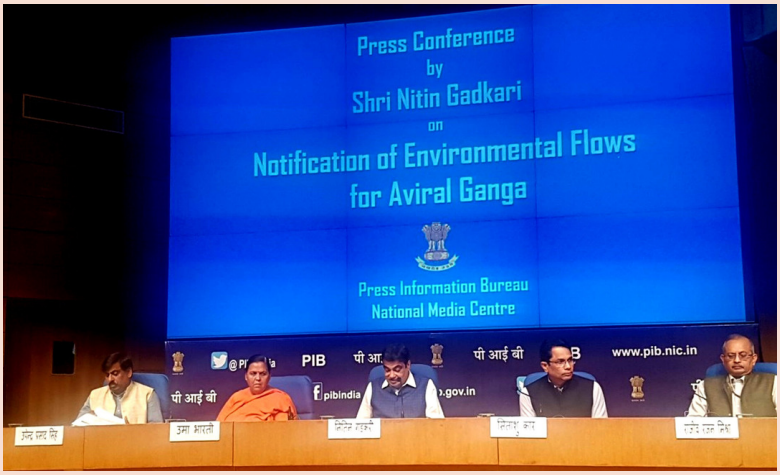
On this note, I convey warm greetings to all for upcoming festival season.

ICOLD delegates in meeting with Hon'ble Minister(WR,RD&GR) and other senior officers of ministry and CWC

Completion of excavation of 6.3 km long HRT for Punatsangchu HEP-II in Bhutan having one of largest diameters (11m) in Asia

Completion of DPR for Umri and Umsiang Projects in Meghalaya with benefits of Irrigation & other associated benefits of Pisciculture, Tourism

Notification for minimum environmental flows in Ganga



On 10th October, 2018 Central Government promulgated notification for the minimum environmental flows (e-flows) for the river Ganga that has to be maintained at downstream of structures or projects meant for diversion of river flows for purposes like irrigation, hydropower, domestic and industrial and other requirements. The order of e-flows will apply to the upper Ganga River basin initiating from the originating glaciers to Unnao district of Uttar Pradesh. Notification was brought under powers conferred under Environment (Protection) Act, 1986.

Shri Nitin Gadkari, Union Minister (WR, RD&GR) during press conference said that e-flows notification would go a long way in ensuring the Aviralta or continuous flow of River Ganga. The minister reiterated about the Government's commitment towards Aviral and Nirmal Ganga and also informed that the draft Ganga Act will soon be sent to the Cabinet for approval.

The minimum environmental flows requirement is applicable to all the existing, under-construction and future projects. For the existing projects which are unable to meet the norms at present are required to ensure the desired e-flows norms within a period of three years. For the mini and micro-projects which does not alter the flow of the river significantly are exempted from these e-flows norms.

Role of CWC

As per the notification, Central Water Commission will be the designated authority and the custodian of the data and shall be responsible for supervision, monitoring, regulation of flows and reporting of necessary information and also authorized to take emergent decisions about the water storage norms in case of any emergency. The Central Water Commission shall submit flow monitoring-cum-compliance report on a quarterly basis to National Mission for Clean Ganga (NMCG).

The project authorities are required to install automatic data acquisition and data transmission facilities at appropriate locations within six months at the project sites. The installation, calibration, maintenance of flow monitoring facility shall be the responsibility of the project developers or authorities and they shall submit the data to the Central Water Commission.

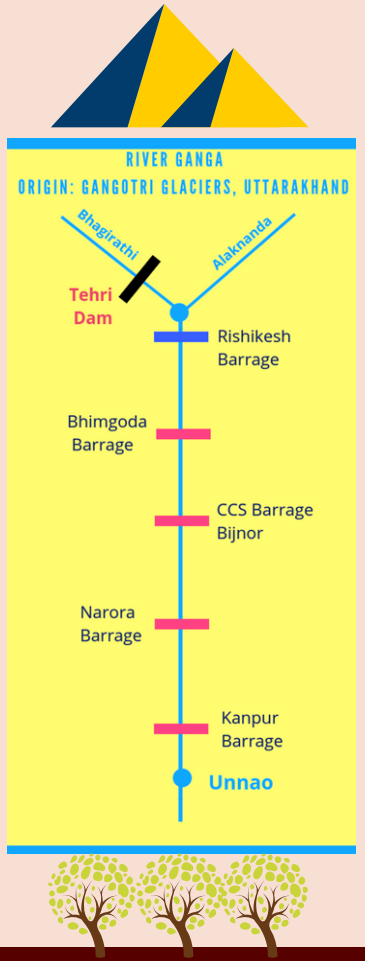
Upper Ganga River Basin Stretch originating from glaciers to Haridwar

S No.	Season	Months	(%) Percentage of Monthly Average Flow observed during each of preceding 10-daily period
1	Dry	November to March	20
2	Lean	October, April & May	25
3	High Flow	June to September	30*#

*# 30% of monthly flow of High flow season.

Stretch of main stem of River Ganga from Haridwar, Uttrakhand to Unnao, Uttar Pradesh

S No.	Location of Barrage	Minimum flow releases immediately downstream of barrages (In Cumecs) Non-Monsoon (October to May)	Minimum flow releases immediately downstream of barrages (In Cumecs) Monsoon (June toSeptember)
1	Bhimgoda (Haridwar)	36	57
2	Bijnor	24	48
3	Narora	24	48
4	Kanpur	24	48



Seminar on "Environmental Issues in Water Resources Projects"

On 9th October 2018, a one-day seminar on "Environment Issues in Water Resources Projects" was organized by Central Water Commission, MoWR, RD&GR, at its HQ in New Delhi. The seminar was organized at the moment when the concern regarding the sustainable development was raised by several quarters.

From L to R .. Sh. Y.K. Sharma, Member(RM), CWC, Sh. S. Masood Husain, Chairman, CWC, Sh. U.P.Singh, Secretary(WR,RD&GR), Sh. N.K.Mathur, Member(D&R),CWC, Sh. S.K. Haldar, Member(WP&P), CWC

Sh. U.P. Singh, Secretary, MoWR, RD&GR inaugurated the seminar and said, "We no longer talk of development now. We talk of sustainable development and I am happy that CWC has initiated such a dialogue which is very necessary". He further added, "While the pendulum should not swing completely in the direction opposite to development, we can no longer ignore the ecological management. Better management of water resources should be done keeping in mind the ecological concerns and the impacts of the development projects must be studied properly."

Sh. S. Masood Husain, Chairman, CWC in his keynote address said, "Environmental concerns are, in fact, cutting across all sectors, and not necessarily limited to water sector alone. Water security is very important and water resources projects have a big role to play in achieving food and water security. We should stress upon the need for striking proper balance between developmental needs and environmental needs." He further added "There is a need to minimize the adverse impacts, but that does not take anything away from the water resources projects, as far as positive impacts of water resources projects are concerned. Unfortunately, there has not been much scientific debate between development proponents and the environmental activists. There is, thus, a need for healthy and informed debate so that developmental and environmental needs complement each other, and may not necessarily be at loggerheads, as the case has been off late".

Different stakeholder organizations that actively engaged in the seminar were Ministry of Environment, Forest and Climate Change, CWC, National Water Development Agency, WAPCOS, Narmada Control Authority, Central Ground Water Board, Central Inland Fisheries Research Institute, National Institute of Hydrology, Tehri Hydropower Development Corporation, National Hydro Power Corporation, State Government of Gujarat, NGPs and others. Few of the presenters are depicted below. There was in general opinion that environmental management plan should be such that it maximizes the benefits while minimizing the adverse impacts and it should be followed in letter and spirit.

Presentation on Issues in mandatory clearances for Water Resources Projects - Ken-Betwa (A Case Study) by Shri M. K. Srinivas, DG, NWDA

Presentation on Challenges in Resettlement & Rehabilitation of Water Resources projects by Dr. M K Sinha, Executive Member, NCA

Presentation on Environmental aspects of Water Resources Projects - NGO's Perspective by Shri Soumya Dutta, Environmentalist

Draft "Guidelines for Sediment Management in Hydropower and WR Projects"

Reservoir sedimentation has been a pertinent issue for diversion structures for a very long time. This causes problems like loss of live storage, erosion of turbine coating, shutdown of power due to the maintenance of hydraulic machinery etc. In some past cases, turbines have been abraded too badly for further use just after a few months of operation. This has resulted in high financial loss due to reduced power revenue and repair costs.

In view of above, a draft "Guidelines for Sediment Management in Hydropower and Water Resource Projects" have been prepared in CWC and uploaded on CWC portal for inviting comments from experts in particular and public at large in general. It can be accessed from the following URL :

http://cwc.gov.in/main/downloads/guidelines_sediment_management.pdf

Projects Approval

138th meeting of the Advisory Committee of MoWR, RD&GR on Irrigation, Flood Control & Multipurpose projects was held on 31.10.18 in CWC, HQ. It was chaired by Sh. U.P. Singh, Secretary, Ministry of Water Resources, River Development and Ganga Rejuvenation.

Four irrigation projects, one each from the States of Punjab, Karnataka, Jammu & Kashmir and Maharashtra, with a cumulative cost of Rs. 3,841.29 crore were considered and accepted by the Advisory Committee in the meeting. Brief details of the projects are summarized in the table below.

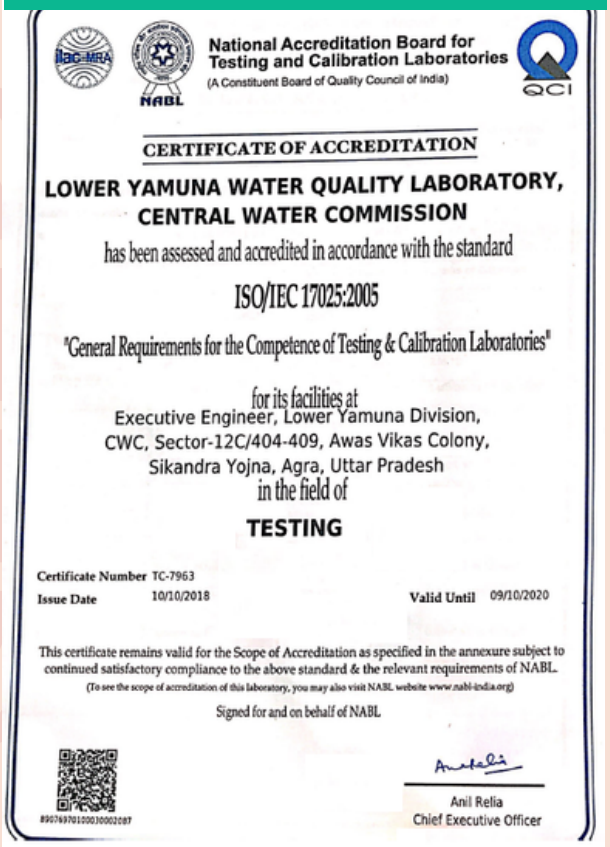
Sh. U.P.Singh, Secretary(WR,RD&GR) chairing the 138th Meeting of Advisory Committee

Project Name	State	Category	Benefitted Area/Districts	Benefits	Cost (Rs. Crores)
Revised Cost Estimate (RCE) of **Shahpur Kandi Dam** Project	Punjab	RCE, Multipurpose, National Project	-	CCA- 37173 Ha, Power - 206 MW	Rs. 2715.7 Crore @ PL Feb, 2018
Modernization of **Vijayanagara Channels** in Tungabhadra Project under Karnataka Integrated and Sustainable Water Resources Management Investment Program (KISWRMIP), Tranche-II	Karnataka	ERM , Major Irrigation, Externally Assisted	Bellary, Koppal, Raichur	CCA- 11154 Ha	Rs. 456.63 Crore @ PL 2017-18
Revised Cost Estimate (RCE) of **Tral Lift Irrigation Project**	Jammu & Kashmir	RCE, Medium Irrigation	Pulwama	CCA- 3415 Ha	Rs. 170.50 Crore @ PL 2016
Revised Cost Estimate (RCE) of **Ghungshi Barrage Irrigation Project**	Maharashtra	RCE, Medium Irrigation	Akola Taluka & Murtijapur Taluka	CCA- 6343 Ha	Rs. 498.46 Crore @ PL 2016-17

Location of NABL Accredited Water Quality Labs

During October, 2018, CWC Water Quality lab at AGRA received NABL Accreditation in accordance with Standard ISO/IEC 17025:2005. This is 6th Lab of CWC to do so after labs at New Delhi, Hyderabad, Varanasi, Coimbatore & Bengaluru

NABL Certificate for Water Quality Lab at Agra



National Accreditation Board for Testing and Calibration Laboratories
(A Constituent Board of Quality Council of India)

CERTIFICATE OF ACCREDITATION

LOWER YAMUNA WATER QUALITY LABORATORY, CENTRAL WATER COMMISSION

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at
Executive Engineer, Lower Yamuna Division,
CWC, Sector-12C/404-409, Awas Vikas Colony,
Sikandra Yojna, Agra, Uttar Pradesh
in the field of

TESTING

Certificate Number TC-7963
Issue Date 10/10/2018
Valid Until 09/10/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

Anil Relia
Chief Executive Officer

World Heritage Irrigation Structure (WHIS)

Plaque for Sadarmatt Anicut, Kamareddy District, Telangana

Chairman, CWC & INCSW handing over the Plaques to Officers from Govt. of Telengana

Plauqe for Large Tank (Pedda Cheru), Nirmal District, Telangana

This year at 69th IEC (International Executive Council) of International Commission on Irrigation and Drainage (ICID) held during 12th- 17th August in Saskatoon, Canada, Indian National Committee on Surface Water (INCSW) recommended two nominations from India for inclusion in the ICID Register of **World Heritage Irrigation Structures**(**WHIS**). Both were from the State of Telangana. The Indian nominations were accepted and the Awards/Plaques were received by representatives of INCSW. These plaques were handed over by Chairman, CWC and INCSW to officers of Govt. of Telangana at a ceremony held in CWC, HQ on 08.10.18.

WHIS are more than 100 year old structures functionally related to present or past agricultural water management activity. The objective of this recognition is to trace and understand the evolution in the irrigation in the civilization across the world and to protect and preserve such structures. It is proposed that more such nominations would be sent to ICID from India.

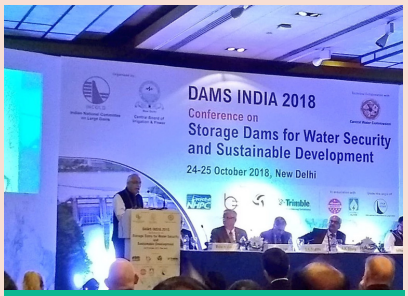
ICOLD-visit to India & Conference

Mr. M. Rogers, President and other delegates of International Commission on Large Dams (ICOLD) visited CWC, HQ on 22nd Oct, 2018 and had meeting with the Chairman and senior officers of CWC.

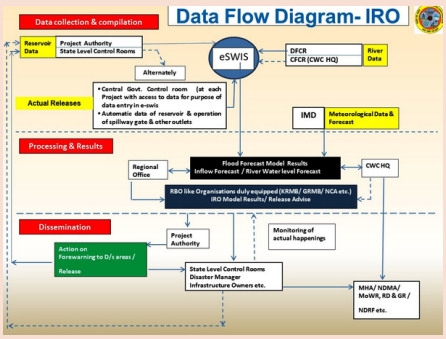
CBIP and ICOLD in technical collaboration with CWC and in association with Bhakhra Beas Management Board (BBMB), THDC India Limited (THDCIL) , National Hydro Power Corporation(NHPC), North Eastern Electric Power Corporation(NEEPCO), Sutlej Jal Vidyut Nigam Limited (SJVNL) and World Bank, organised Dams India 2018-Conference on "Storage Dams for Water Security and Sustainable Development" at New Delhi from 24th to 25th October 2018.

During the event, CWC officers made presentations on various topics including Dam Safety and Instrumentation in the Indian perspective, Importance of Flood Forecast In Reservoir Operation for Flood Management, the concept of Integrated Reservoir Operations (IRO) etc.

ICOLD delegates at CWC, HQ on 22-10-18



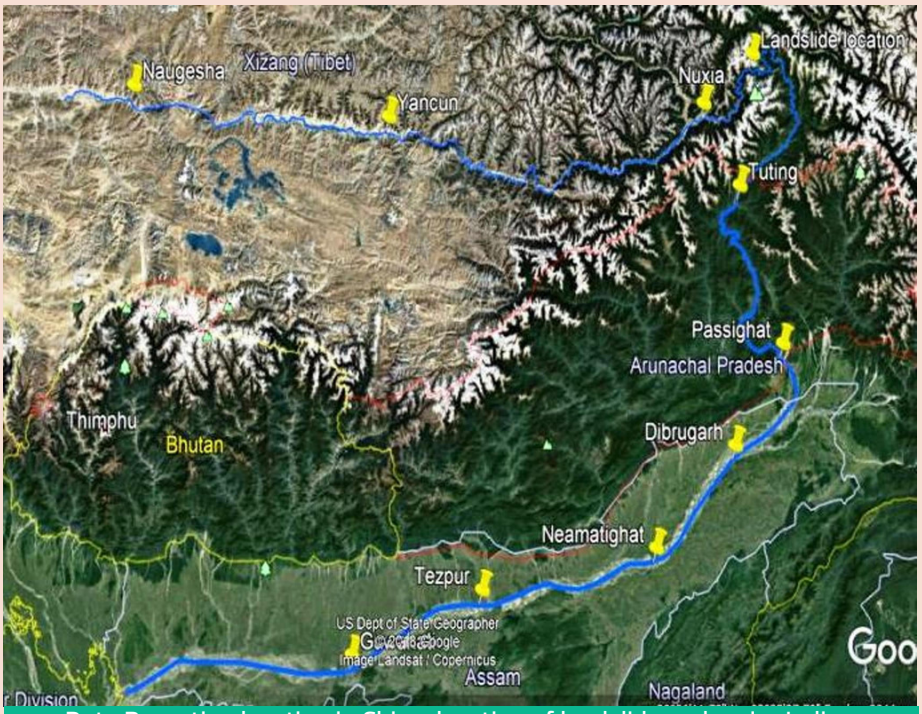
Chairman, CWC addressing Dams India 2018 Conference at New Delhi



Member (D&R) & CE(DSO), CWC giving a presentation on Mulla Periyar Dam during ICOLD Board Meeting in Delhi on 23-10-18

Flood Warning in Assam and Arunachal Pradesh due to Landslide in China

The Brahmaputra river originates from Chemayung-dung glacier in the Himalayas and flows through the Tibetan Autonomous Region of China (where it is known as Yarlung Zangbo/Tsangpo), India and Bangladesh. As per a MoU with India, China shares the Hydrological Observation Data on three sites (Nugesha, Yancun and Nuxia) on the main stream of Yarlung Zangbo/Tsangpo.

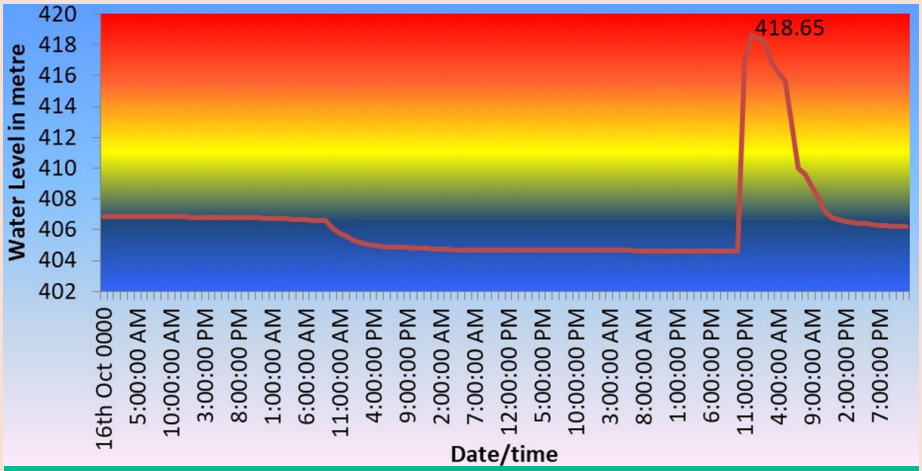


Data Reporting location in China, location of landslide and major Indian sites along Brahmaputra

1st Landslide Event

During Oct, 2018, the Chinese Ministry of Water Resources informed about **landslide blocking** Milin section of the main stream of the river about 80 km downstream from the Nuxia (Hydrological Station for flood reporting to India) from late October 16- Early morning of Oct 17, 2018, which will have an impact on the water situation of the lower reaches of the river. Initial observations record showed a fall in level at Tuting sites on the Indian side by around 2m. Central Water Commission using mathematical models and dam break modelling informed the likely impact of the flow of water to various Government functionaries including Cabinet Secretariat as well as to the Government of Arunachal Pradesh and Assam for taking immediate preventive measures.

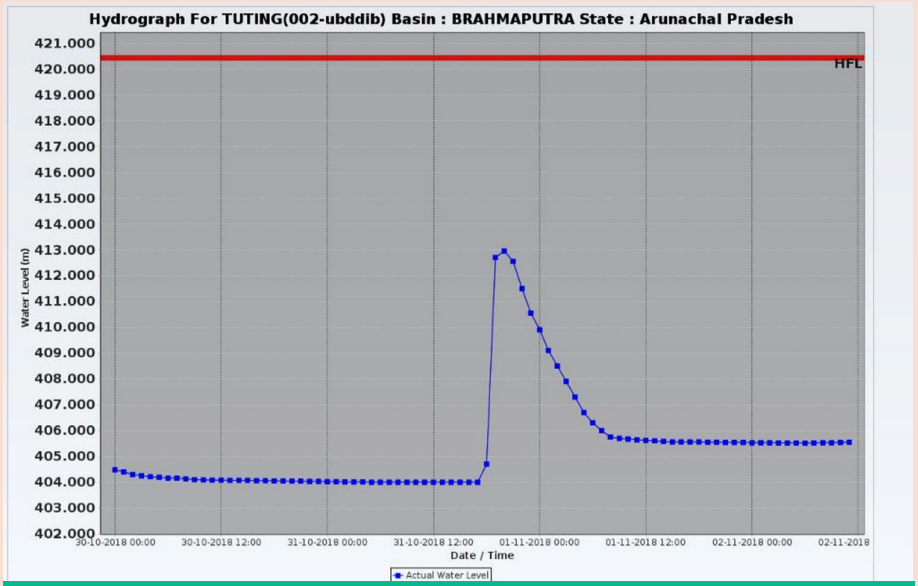
China also started monitoring the situation by opening a temporary site near the blockade and maintained hourly observations from there. They also informed that about 500 MCM water was stored due to blockage on 19-10-2018. On the same day, the blockage got breached by around 1430 hrs IST and water started flowing. The water through the breach reached Tuting at 2230 hrs IST on the same day with a rapid rise of 12 m in a single hour between 2200 hrs and 2300 hrs. The peak level was attained on the midnight of 19th and then water level started falling rapidly. However, it did not cross the previously recorded HFL. The water level at Passighat touched warning level only and at Dibrugarh in Assam, the water level did not cross warning level.



Hydrograph for Tuting Site in India during 1st Lanslide Event

2nd Landslide Event

Again on 28-10-18, another report of a blockade in river flow almost very near to the previous landslide dam was reported by the Chinese side. The volume of stored water was informed to be around 330 MCM. The dam break modelling and mathematical model of river flow indicated that the peak discharge would be of the order of 15000 to 16000 cumec and accordingly advisories were issued to all stakeholders including concerned State Governments. The landslide dam got breached on 31st October and a peak water level of 412.95 m at 2000 hrs IST was observed on Tuting Site on 31st October 2018 and then it fell rapidly.



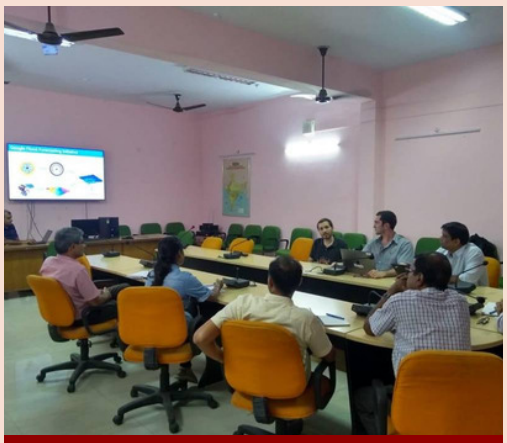
Hydrograph for Tuting Site in India during 2nd Landslide Event

Meetings and Visits

Member (WP&P),CWC chairing 13th meeting of TEC for completion of North Koel Project held on 04.10.18

Member(D&R), CWC chaired a meeting regarding technical issues of Lakhwar Multipurpose Project held on 10.10.18

CWC officers and staffs taking pledge on the eve of National Unity Day on 31.10.18



Google team at UGBO, CWC, Lucknow held meeting for discussion of Flood Forecasting and Inundation Maps on 05.10.18

Cross-section survey work being carried out in Rāmgangā Basin for for assessment of environmental flows under Indo-EU Joint Working Group

Secretary, MoWR, RD&GR, Chairman, CWC and officers from Ministry during seminar on "Eradicate Corruption: Build a New India" on 30.10.2018

Visit of newly recruited CWES officers to Saguna Baug to see Saguna Rice Technique

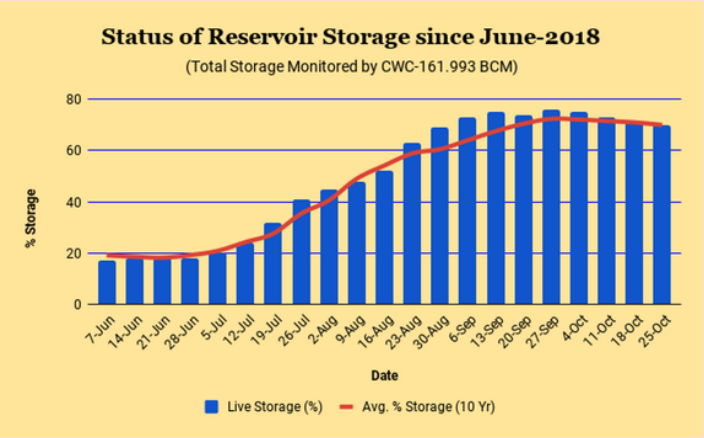
eSWIS training under the National Hydrology Project (NHP) for officers of Water Resources Department, (Maharashtra) at CWC, New Delhi

Visit of Member (RM), CWC, Director (RMCD) to the Telemetry site, Dawaleshwaram under KGBO along with CE, KGBO on 24.10.18

Reservoir Storage Monitoring

CWC is monitoring the live storage status of 91 reservoirs around the country on a weekly basis and is issuing a bulletin every Thursday. The total live storage capacity of these 91 reservoirs is 161.993 BCM, which is about 63% of the live storage capacity of 257.812 BCM which is estimated to have been created in the country.

As per the reservoir storage bulletin, dated 25.10.2018, the live storage available in these reservoirs is 112.67 BCM, which is 70% of the total live storage capacity of these reservoirs. This is 101% of the live storage of the corresponding period during last year and 100% of the average storage over the last ten years.



Flood Situation in country-Oct-2018

A BRIEF HISTORY OF CENTRAL WATER COMMISSION

Central Water Commission is an attached office of Ministry of Water Resources River Development & Ganga Rejuvenation, Government of India.

1945
Constituted by the then Government on the advice of **Dr B.R. Ambedkar (Member Irrigation)** as Central Waterways, Irrigation and Navigation Commission **(CWINC)**

1947
CWINC was declared a **Permanent** organisation

1948
Reorganized as Central Water-Power, Irrigation and Navigation Commission (**CWPINC**)

1951
Central Electricity Commission and the Central Water-Power, Irrigation and Navigation Commission were merged to create Central Water and Power Commission (**CWPC**)

1952
CWPC became **"Attached Office."** of Ministry of Irrigation and Power

1974
CWPC was **bifurcated** into two organisations
Central Electricity Authority(**CEA**)
Central Water Commission (**CWC**)

1978
CWPRS was **delinked** from CWC

1981
CSMRS was **delinked** from CWC

1994
Establishment of **Regional Offices** in Major River Basins

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