



## Message

R. K. Jain

Chairman, CWC

The South West Monsoon season has ended with surplus rainfall which was 109% of Long Period Average (LPA) at the country level. This way country has received surplus rainfall during two consecutive monsoon seasons. Excessive rainfall has caused extensive flood situation in various parts of the country. CWC is continuing to play its role in minimizing the loss of life and property through non-structural measure by providing timely flood forecasting to the concerned state governments and agencies. However, more efforts are needed at Central and State levels to vigorously pursue other measures also such as construction of more storage projects, particularly in Nepal in Ganga basin and in North-eastern region in Brahmaputra basin, flood plain Zoning, etc.

Reservoirs are the important assets and their proper monitoring is required to efficiently manage them. CWC on its own and through concerned agencies is carrying out studies to assess the sedimentation rate of the selected reservoirs. Recently such assessment was completed by Maharashtra Engineering Research Institute (MERI), Nashik through satellite remote sensing technique for 23 reservoirs. Based on the study reports, CWC has recommended

hydrographic Survey of selected reservoirs. Details of these studies and recommendations of CWC are summarized in subsequent sections of this newsletter.

Improving water use efficiency in the irrigation sector has been one of the priorities of the Govt. of India and specific targets were set under National Water Mission in this regard. ADB is supporting DoWR, RD & GR, Govt. of India through Support for Irrigation Modernization Program (SIMP) for modernizing Major & Medium Irrigation (MMI) Projects in India to achieve greater crop production, increase in irrigation water use efficiency and crop water productivity. SIMP will be implemented in a phased manner. The initial phase (Phase 1) of SIMP has been commenced from August 2020 and Central Irrigation Modernization Office (CIMO) under CWC, DoWR, RD & GR, Ministry of Jal Shakti has been established.

The 6th meeting of the Expert Committee for Scientific Assessment of Flood Prone Areas in India was held under my chairmanship on 08.09.2020 at CWC, HQ, New Delhi. During the meeting, CWC presented the study on aggregated extent of flood inundated area of India delineated by

analyzing the satellite data imageries viz. delineating flood inundated maps. The Committee after thorough deliberations agreed to the study carried out by CWC and to the methodology being used subject to mention of various limitations. It was further agreed that, in respect of the states of Assam, Bihar and Odisha, the study shall be updated by including the current year's flood data/satellite imageries. It has been further decided that, for the rest of the states, the flood affected area maps may be sent for ground truth verification to the respective states through the Regional Committees.

During the month, several ongoing projects such as Polavaram Irrigation Project, Shahpurkandi dam Project, North Koel Project, Relining of Rajasthan Feeder & Sirhind Feeder were reviewed extensively in CWC. Planning for the proposed projects such as Somb-Sarasvati Barrage and Sarasvati Reservoir, 2nd Ravi Beas Link, Parbati-Kuno-Sindh(PKS) Link and Eastern Rajasthan Canal Project (ERCP) were also discussed in detail with stakeholder States/Agencies.



**Stay Protected from Corona**



**Frequently wash your hands with soap**



**Wear your mask properly**



**Maintain safe distance**



No Carelessness until there is a Cure

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## 6th meeting of the Expert Committee for Scientific Assessment of Flood Prone Area in India

For scientific assessment of flood prone areas in India, Ministry has constituted an Expert Committee under Chairman, Central Water Commission (CWC). The Expert Committee has further constituted Regional Committees for each States/UTs with Principal Secretaries of Water Resources Department as its Chairman and Regional Chief Engineer/Director of CWC as its Member-Secretary. The mandate of the Regional Committees is to identify, demarcate and classify the flood prone areas in their respective State/UT based on the methodology, classification and criteria finalized by the Expert Committee. So far six meetings of the Expert Committee have been held.

The 6th meeting of the Expert Committee for Scientific Assessment of Flood Prone Areas in India was held under the Chairmanship of Shri R. K. Jain, Chairman, CWC on 08.09.2020 at CWC, HQ, New Delhi (through video conferencing). The participants were from NITI Aayog, IMD, Sol, GFCC,

NRSC, DoS, CWC, Prof. Nayan Sharma, IIT Roorkee & Prof. Arup K Sharma, IIT Guwahati and Member Secretaries of Regional Committees.

CWC presented the study on aggregated extent of flood inundated area of India delineated by analyzing the satellite data imageries viz. delineating flood inundated maps using satellite imageries of Landsat (1984-2019), Sentinel-1 & 2 (microwave & multispectral from 2015-2019) on Google Earth Engine Application Programme Interface.

The Committee, after thorough deliberations, agreed to the study carried out by CWC and to the methodology used. It was further agreed that in respect of the states of Assam, Bihar and Odisha the study shall be carried out including the current year's flood data/satellite imageries. It is further decided that for the rest of the states the flood affected area maps may be sent for ground truth verification to the respective states through the Regional Committees.

## 7th meeting of Project Implementation Review Committee for CADWM Implementation

Seventh meeting of Project Implementation Review Committee (PIRC) for CADWM implementation of 99 Prioritised Irrigation Projects under PMKSY was held on 11.09.2020 under the chairmanship of Secretary, DoWR, RD&GR through VC. It was participated by officers from DoWR, RD&GR, CWC including its field offices and respective State Govt./Agencies.

In the meeting the progress of CADWM activity was reviewed. During the meeting Chairman, CWC stated that though creation and utilization of irrigation potential is important, equitable distribution is also crucial. He laid emphasis on Participatory Irrigation Management (PIM) and conveyed that some good work has been done in PIM by some states.



## Meeting to discuss issues related to construction of Somb-Sarasvati Barrage and Sarasvati Reservoir

Govt. of Haryana has decided to construct a dam on river Somb to divert water into river Sarasvati for its revival. A 28.5 m high concrete dam in Himachal Pradesh (HP) at a distance of 400 m from Haryana-Himachal Pradesh border, with a live storage capacity of 2.12 MCM is planned. A barrage (Somb-Sarasvati barrage), 2.45 km d/s of the dam in the State of Haryana with a small live capacity of 0.45 MCM is also envisaged in the project. The purpose of providing barrage is to divert regulated flows from the dam to the proposed Sarasvati reservoir. The Sarasvati Reservoir is 7.12 km d/s of the barrage and will function as source of water for the revived river Sarasvati. The gross capacity of Sarasvati reservoir is 14.75 MCM. The releases from the Sarasvati reservoir have been worked out by considering diversion of the entire water of river Somb in to the reservoir.

Haryana on 'Revival of Sarasvati River'.

During the meeting, it was decided that the consultancy work for designs and drawings of the project will be formally taken up by CWC as soon as actions on the points mentioned in the agenda of the meeting are completed and clearances from inter-state and international angle are obtained. Meanwhile, the Haryana Govt. can take up the work of geological investigations and laboratory testing so that the necessary data is available once the consultancy work commences.

In this regard, a meeting was held on 03.09.2020 in CWC through video conferencing under the chairmanship of Chairman, CWC with officials of concerned unit of CWC, UYRB, NIH and Irrigation & Water Resources Department/Haryana Sarasvati Heritage Development Board (HSHDB), Govt. of Haryana to discuss the issues related to the project of Govt. of



## 26th Governing Council meeting of CSMRS through VC

The Central Soil and Materials Research Station is responsible for carrying out field and laboratory investigations, research and development activities in the field of geomechanics and associated environmental issues, concrete technology and construction materials and functions as adviser and consultant in the above fields.

The CSMRS has a Governing Council which functions as the principal policy formulating and advisory body to the Government on all the matters relating to the Research Station and is assisted in the discharge of its functions by the (i) Standing Technical Advisory Committee (STAC) and (ii) Budget and Programme Committee. STAC is an advisory body constituted to assist the Governing Council of CSMRS on technical matters. It is headed by Member (D&R), Central Water Commission.

MoJS. The meeting was attended by Dr. R. K. Gupta, Member (D&R), CWC as a member of Governing Council of CSMRS. During the meeting, various technical activities undertaken by CSMRS, Research Papers published, DPRs reviewed, Progress of the activities related to DRIP component, trainings organized etc. were discussed.



Meeting of the Governing Council (GC) of Central Soil and Materials Research Station (CSMRS) was held on virtual platform on 11.09.2020 under the Chairmanship of Shri U. P. Singh, Secretary, DoWR, RD & GR,



## Working Group to suggest the water sharing and exchange of water between Madhya Pradesh & Rajasthan

The First meeting of the Working Group to suggest water sharing, exchange of water between Madhya Pradesh and Rajasthan w.r.t. Parbati-Kuno-Sindh(PKS) Link and Eastern Rajasthan Canal Project (ERCP) was held under the chairmanship of Shri S. K. Haldar, Member(WP&P), CWC on 04.09.2020 through video conference.

During the meeting, the Chairman of the Working Group gave background of the matter and mentioned that the WRD, Government of Rajasthan has proposed the Eastern Rajasthan Canal Project (ERCP) to provide the domestic water supply to the population in 13 districts of eastern Rajasthan and also provide Irrigation to more than 2.0 lakh ha of new command area and stabilizing about 0.8 lakh ha existing command. The DPR of ERCP, prepared by Govt. of Rajasthan is under examination in CWC. The WRD, Rajasthan suggested to integrate the ERCP with Parbati-Kalisindh Chambal link so that the Madhya Pradesh could also be benefited and the project can be developed as a National Project. Accordingly, NWDA prepared PFR of Parbati – Kuno – Sindh (PKS) link and its integration with ERCP. This PFR has been circulated to both the States and CWC by NWDA. The DPR of ERCP has also been shared with WRD, Madhya Pradesh. He informed that the integrated project will benefit both the States of MP and Rajasthan. The various issues involved in the integrated project were deliberated in the meeting so that a development plan, acceptable to both the States, could be taken up.

Thereafter, the Chief Engineer (North), NWDA, Lucknow made a brief presentation covering the following items:

### Shahpurkandi Project – 4th VC review

Shahpurkandi Dam Project is being constructed on river Ravi 11 Km downstream of Ranjit Sagar Dam and 6 Km upstream of Madhopur headworks to provide a balancing reservoir to ensure optimum utilization both for Irrigation in the canal system taking off from Madhopur Headworks & Ravi Canal (J&K) and Power generation at Ranjit Sagar Dam Power House. The project was declared as National Project by Govt. of India in Feb., 2008. In 2018, Ministry constituted a Monitoring Committee to oversee / monitor the implementation of the Shahpurkandi Dam (National Project) on river Ravi in Punjab and other works under the Chairmanship of Member(WP&P), CWC.

4th Meeting of Monitoring Committee for review of the implementation of Shahpurkandi Dam Project was held on 15.09.2020 under the Chairmanship of Shri S. K. Haldar, Member(WP&P), CWC through Video Conference. Members of the Committee from CWC Design wing, Field units, State of Punjab and J&K attended the meeting. The Committee reviewed the physical / financial progress of the Project. Shri Sandeep Saluja, Chief Engineer, Shahpurkandi Dam Project gave a detailed presentation of project giving the present progress of works of various

### Second Ravi Beas link project - VC with Govt. of Punjab

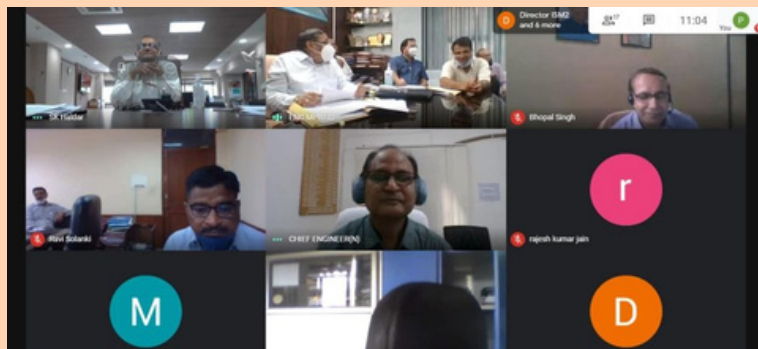
The 2nd Ravi Beas link below Ujh Project is being planned to tap excess water flowing down to Pakistan through river Ravi, even after construction of Thein Dam, by constructing a barrage across river Ravi for diverting water through a tunnel link to Beas basin. The project is expected to utilize about 0.58 MAF of surplus waters to Beas basin for the benefit of other co-basin states. Govt. of India declared this project as a National Project.

A meeting under the Chairmanship of Member(WP&P), CWC was held on 16.09.2020 through Video Conferencing with officials of Govt. of Punjab to discuss the PFR prepared by Govt. of Punjab to utilize the discharge of river Ravi and Ujh which is going to Pakistan.

In this regard, it was decided in the meeting that the officers of Govt. of

## Meeting by Additional Secretary(UT), Home Affairs reg. Flood Situation in 20 Major Flood Prone River Basins in the Country

Additional Secretary, MHA chaired a review meeting on 14.09.2020 on the Action Taken Report submitted by DoWR, RD&GR on the review meeting taken by Hon'ble Home Minister on 03.07.2020. In the review meeting, it was decided that DoWR, RD&GR will look into various issues regarding advance forecast to 10 dams for flood moderation purposes in



- Water availability in Kuno Sub-basin at proposed Shrimant Madhav Rao Scindia (SMRS) dam and sharing of water between MP and Rajasthan.
- Water Availability in Parbati Sub-basin at proposed Kumbhraj Dam
- Norms for assessment of divertible quantity of water at various locations in ERCP

Both the States of Rajasthan and Madhya Pradesh agreed with the assessment of water balance in Kuno sub-basin and the proposal of exchange of water in Kuno and Parbati sub-basins. It was decided in the meeting that revised assessment of water balance of Parbati sub-basin at Kumbhraj dam and below Kumbhraj dam as well as the assessment of water available to ERCP from Parbati sub-basin shall be placed before WG in its next meeting.



components of the project. He also briefed the committee about the components to be executed in future.

Member(WP&P), CWC directed the project authorities to expedite the work related to Power Houses on Hydel Channel (in Punjab portion), work related to Main Ravi Canal portion of J&K and balance work of Dam. He also asked the officials from J&K to expedite the issue related to Land Acquisition for Main Ravi Canal.



Punjab will determine the water requirement of Punjab in consultation with Chief Engineer(BO), CWC and suggested to provide the details for further course of action.

consultation with various stakeholders. As a consequence of the meeting, Member (RM) has directed the concerned modelling directorates (FCA-1 & FCA-2) to prepare a comprehensive report indicating the progress of issue of monthly advisories to the dam authorities. The report is in advanced stage of preparation.

## Support for Irrigation Modernization Program (SIMP)

To take the modernization framework and tools developed in the National Water Use Efficiency Improvement Support Program (NWUEISP) and More Food Less Water (MFLW) to more States in the country, ADB is now supporting DoWR, RD & GR, Govt of India through Support for Irrigation Modernization Program (SIMP). The SIMP proposes to use the framework and tools developed under the above initiative, along with application of global best practices, for modernizing Major & Medium Irrigation (MMI) Projects in India to achieve greater crop production, irrigation water use efficiency and crop water productivity. The main concept of the program is to support the States and Centre with improving modernization investments using national and international best practices to achieve meaningful improvement in irrigated agriculture production in India.

SIMP will be implemented in a phased approach. This initial phase (Phase 1) of SIMP has been commenced during August–December 2020. In the first phase, Central Irrigation Modernization Office (CIMO) under CWC, DoWR, RD & GR, Ministry of Jal Shakti has been established. Specifically, this phase will finalize the SIMP concept and framework with DoWR, RD&GR and initial participating States and convene a national workshop / webinar to discuss the program, prepare the detailed SIMP design, scope, workflow and implementation arrangements.

For the knowledge and awareness programs on irrigation modernization, this phase will develop a program of events and study tours to benefit CIMO, DoWR, RD & GR and participating States (events and study tour shall commence in a subsequent phase). This phase will also develop the

strategy for supporting the States for preparing their irrigation modernization plans and projects, promote SIMP to water-stressed States and help identify about 3–4 irrigation schemes as SIMP's first batch for which the CIMO will guide the State in preparing irrigation modernization plans. Requirements of CIMO, including staffing and consultants based on the nature of the initial investment projects, will be identified and resourced.

International meeting/video conference to discuss Phase-1 of the Support for Irrigation Modernization Program (SIMP) was held on 16.09.2020. The meeting was chaired by the Member(WP&P) CWC. The meeting was attended by Chief Engineer, POMIO, CWC and Director, EWU Dte, & Dy. Director, IPO Dte., senior officials from ADB and members of the Consultant Team (Phase 1).



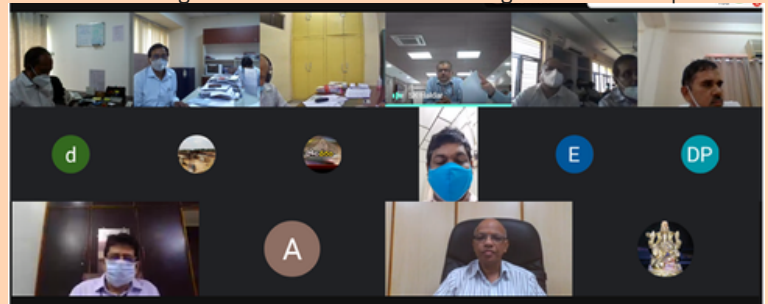
## Polavaram Project – 6th meeting of the Expert Committee

6th Meeting of the Expert Committee on Polavaram Irrigation Project (National Project), Andhra Pradesh was held under the Chairmanship of Member(WP&P), CWC through Video Conference on 18.09.2020 to review the progress of the Polavaram Irrigation Project work. The Officials of CWC, Polavaram Project Authority, Govt. of Andhra Pradesh, CSMRS and other technical experts participated in the meeting. The progress of the project was critically examined from all angles.

Committee about the various action taken by PPA for the early completion of project.

Under LA&RR activities, Member(WP&P), CWC directed the project authorities to first concentrate on critical contours. He also asked the project authorities that matters related to protective embankments on Rivers Sabari and Sileru in the State of Odisha and on River Sabari in the State of Chhattisgarh need to be looked into along with other components.

Chief Engineer, Polavaram Irrigation Project, Govt. of AP, gave a detailed presentation on physical & financial progress of each component under the project. Commissioner, Land Acquisition & RR project made a detailed presentation on R&R Colonies and PDFs (at +35.50 Mts Contour, +41.15 Mts and +45.72 Mts Contour) showing total affected numbers of Revenue Villages, Mandals, habitations to be Rehabilitated, PDFs to be shifted under the project in West Godavari and East Godavari districts and achievements till date. He also gave details of total land required under this project, land already acquired and status of balance land acquisition. The Design related issues of the project were also discussed with CWC design wing officers. CEO, Polavaram Project Authority briefed the



## Meeting regarding re-organization of CWC sub-divisions

The 3rd meeting of the Committee for reviewing the existing jurisdiction and functions of field units/organizations of CWC was held on 17.09.2020 under the Chairmanship of CE(HRM) to discuss about assessing the optimum number of sub-divisions under each field organizations.

jurisdiction at least once in a month. He is also supposed to take discharge observations during his visit.

The Committee consulted the field offices of CWC to reach at optimum level of sub-divisions in the field offices for proper discharge of works. As per norms, a Sub Divisional Engineer (SDE) needs to visit all sites under his

All field Chief Engineers were requested to submit their increased requirement of Sub-Divisional Engineers (SDEs) due to opening of new sites during the 12th Plan. The views of field Chief Engineers of CWC were taken into consideration and it was found that field officers have requested additional sub-divisions in addition to the existing 138 sub-divisions.

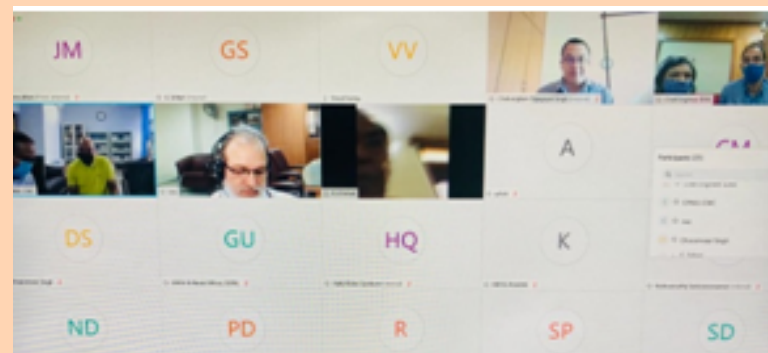
## DRIP

### Fifteenth World Bank Review Mission

15th World Bank Review Mission was held during 2nd –3rd September, 2020 to review physical and financial progress of DRIP Implementing Agencies. Also, other important issues were discussed for successful closure of the Scheme by March 2021. The meeting was attended by the officials of CPMU, Implementing Agencies and the World Bank.

### Virtual Tripartite Portfolio Review Meeting

Virtual Tripartite Portfolio Review Meeting of DEA was held on 22.09.2020, wherein, the progress of ongoing DRIP was reviewed. Issues of Loan Disbursement, Spill over activities to DRIP Phase II, Scheme closure plan were deliberated in the meeting. The meeting was attended by the officials of CPMU, World Bank and DEA.





## On Site Testing of Survey Equipment and Beach Surveys under CMIS

Field observed data on coastal processes is one of the essential requirements for evolving long term plans and coastal protection measures. The scheme of Coastal Management Information System (CMIS) was approved by the Government of India under the on-going Scheme 'Development of Water Resource Information System (DWRIS)' for collection of such data. Central Water and Power Research Station (CWPRS) was awarded the work for implementation of CMIS at one site each in the States of Maharashtra (northern region) and Gujarat (southern region). As part of the project, two sets of Coastal Bathymetric Survey System (CBSS) and GNSS-RTK and one set of Beach survey instruments have been purchased by CWPRS. These instruments were tested by the team of CWPRS officials in the presence of suppliers of the instruments at Nani Danti – Moti Danti in Gujarat and Satpati in Maharashtra during

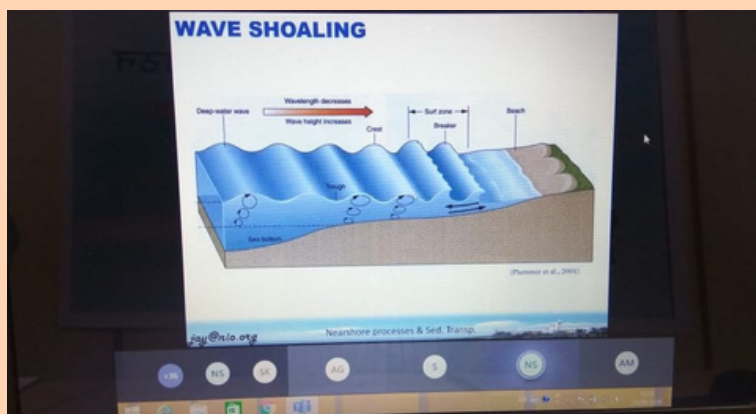


16th-21st September 2020. Two CWC officers and officials of State Government were also present during testing of these instruments. A short bathymetric test survey covering the depth of -4 m to -8 m was carried out at Nani Danti-Moti Danti and -4 m to -10 m was carried out at Satpati. Similarly, beach survey was carried out at both the sites by officers of CWPRS and sediments samples have been collected for analysis. Two Pressure Tide Gauges which continuously monitor tidal levels, have also been tested at CWPRS on 16.09.2020 and these will also be installed at both the sites shortly.

## Webinar on Development of Coastal Management Information System (CMIS)

NIO, Goa has been associated for the implementation of CMIS in the States of Goa and South Maharashtra. A tri-partite Memorandum of Understanding (MoU) has been signed between CWC, NIO, Goa and the respective State Govt., for implementation of CMIS at 3 vulnerable coastal sites (2 in the State of Goa and 1 in Maharashtra). Three workshops/trainings has to be organized during the project duration of 3 years, for dissemination of the knowledge gained during the project including the design of coastal protection works, SOP, Data collection methods etc. for the benefit of maritime states/UTs and central govt organizations concerned with coastal protection.

In this regard, NIO, Goa has organized First Training programme in the form of Webinar on 25.09.2020. Topics on Coastal Erosion and Management, Coastal Parameters and instruments to measure coastal parameters have been included in the Training program. Officers from CWC and different Maritime States participated in the Training.

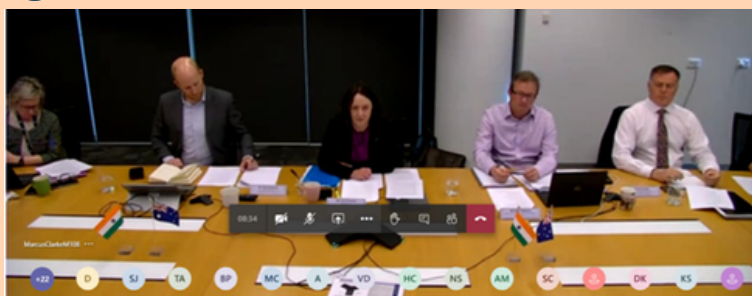


## India Australia Joint Working Group Meeting

Under India-Australia MoU Cooperation in the Field of Water Resource Management, 3rd Joint Working Group (JWG) meeting took place on 22.09.2020. From Australian side, Ms Lyn O'Connell PSM, Deputy Secretary - Water, Climate Adaption, Natural Disasters and Antarctic Group; Department of Agriculture, Water and the Environment and from Indian side, Ms. Debashree Mukherjee, Additional Secretary, DoWR, RD & GR Ministry of Jal Shakti co-chaired the JWG. Australian High Commissioner in India HE The Hon Barry O'Farrell AO briefed and addressed the Joint Working Group.

Thereafter from Australian Side, Mr. Adam Sincok, Director, International Engagement and Urban Water, Department of Agriculture, Water and the Environment briefed JWG about Water Management in Australia -Current Priorities and Issues. Dr. Nick Schofield, Chief Executive Officer, Australian Water Partnership gave update on Water Engagement Activities since last JWG in July 2018.

From the Indian Side, Shri S. K. Haldar, Member(WP&P), CWC briefed about the Status of implementation of Irrigation Efficiency Pilot Project and Brahmani Baitarni IWRM Study. Shri Sanjay Marwa, Member, CGWB briefed about MARVI Project.



Issues related to NWIC Strategic Operating Plan (SOP), Bureau of Meteorology (BoM) Capacity Development Program on Stream-flow Forecasting, Setting up of Hydromet Testing, Calibration & Certification Facility (TCCF) lab at CWPRS were discussed. Under key priorities for cooperation, Indian side looked forward for cooperation in the field of Hydrological Studies under Paragraph III Forms, Capacity building, training, study tours, education and knowledge sharing, Dam Design & Construction and Dam Safety aspects etc. Both side agreed to have a joint implementation group for frequent interaction and speedy implementation of MoU.

## Data Corner

**Basin wise details of 1548 HO sites of CWC as on September 2020**

Sl. No	Basin Name	G	GD	GD Q	GDS	GDSQ	GQ	Grand Total
1	Brahmani-Baitarni	12				11	1	24
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		37
5	Ganga/Brahmaputra/Meghna /Barak	250	206	72	24	164	91	807
6	Godavari Basin	48	43	13		32	4	140
7	Indus Basin	23	16	3	11	8		61
8	Krishna	14	14	12		29	3	72
9	Mahanadi	30	2	1		22		55
10	Mahi	10	4	2		3		19
11	Minor rivers draining into Myanmar and Bangladesh	3	7		3	4		17
12	Narmada	18	37	5		10	1	71
13	Pennar		4	4		4		12
14	Sabarmati	7	4	1		1		13
15	Subarnarekha	6	2	1		6		15
16	Tapi	17	18	1	1	3		40
17	West Flowing rivers from Tadri to Kanyakumari		16	9		26		51
18	West flowing rivers from Tapi to Tadri	7	6	4		5		22
19	West flowing rivers of Kutchh and Saurashtra including Luni	3	10	2		3		18
20	Areas of Inland Drainage in Rajasthan							
<b>Grand Total</b>		<b>461</b>	<b>423</b>	<b>157</b>	<b>39</b>	<b>368</b>	<b>100</b>	<b>1548</b>

## TEC Meeting for North Koel Project

The 28th meeting of the Technical Evaluation Committee (TEC) for completing the balance works of North Koel Project (NKP) was held on 25.09.2020 at CWC, New Delhi through Video Conferencing (VC) under the Chairmanship of Member(WP&P), CWC and Chairman (TEC), NKP. The officers from DoWR, CWC HQ & field units, CSMRS, State Governments of Bihar, Jharkhand and WAPCOS attended the meeting through VC.

During the meeting, WRD, Govt. of Jharkhand informed that security will be provided during the construction of pickets. WAPCOS also informed that tender has already been floated for construction of camp/Picket for



## Physical based Mathematical Modelling of Sedimentation Rate and Sediment Transport

CWC is in the process of engagement of consultancy services for Physical based mathematical modelling for estimation of Sediment Rate and Sediment Transport in Seven River Basins viz. Ramganga, Barak, Narmada, Cauvery including three West Flowing rivers in Western Ghats viz. Kuttidiapuzha, Peechi & Mangalam Basin under National Hydrology Project (NHP).

## Matter related to Briefing on Inter-State Water Disputes Act and Inter-linking of Rivers of India

A meeting of Committee on Subordinate Legislation was held on 24.09.2020 in Committee Room '2', Block-A, Extension of Parliament House Annexe, New Delhi to discuss following:

(i) Rules / Regulations framed under 'Inter-State River Water Disputes Act, 1956' enacted under the Article 262 of the Constitution of India and as amended from time to time; and

(ii) Rules / Regulations relating to the issue of 'Inter-Linking of Rivers in India'. Senior officers of DoWR, RD&GR attended the meeting.

The meeting was attended by Secretary, DoWR, RD&GR, Joint Secretary (RD&PP), DoWR, RD&GR, Member(WP&P), CWC and Chief Engineer(IMO), CWC. Joint Secretary(RD&PP), DoWR, RD&GR gave a power point presentation on Rules/ Regulations framed under 'Inter-State River Water Disputes Act, 1956' enacted under the Article 262 of the Constitution of India as amended from time to time. A brief Note on Rules framed under Inter-State Water Disputes Act, 1956 amended from time to time was provided by IMO, CWC to DoWR, RD&GR.

## CGWA Notification

Central Ground Water Authority (CGWA), DoWR, RD&GR, MoJS has notified new Guidelines to regulate and control ground water extraction in India for regulation of groundwater on 24.09.2020. The Authority has been regulating ground water development and management by way of issuing 'No Objection Certificates' for ground water extraction to industries, infrastructure projects, Mining Projects etc. It has framed guidelines in this connection from time to time applicable in twenty two States and two Union territories, where ground water development is not being regulated by the State Government and Union territory administration concerned. The notification exempts domestic consumers, rural drinking water schemes, armed forces, farmers and micro and small enterprises drawing water up to 10 m<sup>3</sup>/day from the requirement of a no objection certificate from the CGWA. Complete Notification can be accessed from the following link.

[www.egazette.nic.in/WriteReadData/2020/221952.pdf](http://www.egazette.nic.in/WriteReadData/2020/221952.pdf)



**Lining by Paver at RMC**

security personnel. TEC also asked representatives of Govt. of Bihar to convey their views at the earliest regarding the issue of complete lining of RMC as recommended by the Technical Team.

Apart from the above, there were discussion on other important agenda items such as status of land acquisition, progress of various components of the balance works of the project by WAPCOS, issue of thickness of LDPE sheet in canal lining in the Right Main Canal (RMC), design and drawings of Kandi Distributary System of Left Main Canal of the project etc.

In this regard, a presentation was made before Chairman, CWC on 04.09.2020 highlighting the objectives and proposed methodology for "Consultancy services of Physical based Mathematical Modelling of Sedimentation Rate and Sediment Transport". The Presentation was made by Director Hyd(C) and was also attended by Member(RM), CWC and Director RDC-I.



## Sedimentation Study of Dharoi Reservoir

Remote Sensing Directorate, CWC completed in-house sedimentation assessment study of Dharoi (Sabarmati) reservoir, Gujarat in September 2020 using microwave remote sensing data. Dharoi Dam is a gravity dam on the Sabarmati river near Dharoi, Kheralu Taluka, Mehsana district of northern Gujarat in India. Constructed in 1976, the dam is meant for irrigation, power generation and flood control. The reservoir has a catchment area of around 5475 Sq km upstream. The original Gross and Live storage capacities of Dharoi reservoir at the time of impoundment in year 1976 were 907.83 MCM and 778.31 MCM respectively.

It is now estimated that Live storage capacity of Dharoi Reservoir in year 2020 is 682.11 MCM with respect to FRL of 189.59 m, witnessing a Live storage loss of 96.20 MCM (i.e. 12.36 %) in a period of 44 years during



years 1976 to 2020. This accounts for the Live storage capacity loss of 0.281% per annum since 1976.

## Flood Situation during September-2020

Regular Flood Forecasting Activity commenced on 01.05.2020 in Brahmaputra and Barak basins. During the period from 1st May to 30th September 2020, 10209 flood forecasts (7483 Level and 2726 Inflow) were issued, out of which 9643 (7395 Level and 2248 Inflow) forecasts were within limits of accuracy with a percentage accuracy of 94.45%. 233 nos. of Orange Bulletin (for severe flood situation) and 21 number of Red Bulletin for Extreme Flood Situation were issued in the month of September from Central Flood Control Room till 30.09.2020.

### Summary of Flood Situation during 01.05.2020 to 30.09.2020

#### Extreme Flood Situation

Six 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

27 Flood Monitoring Stations observed in Extreme Flood 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.

## Study on the Issue of Flood and Siltation in River Ganga and its Tributaries due to Farakka Barrage in the State of Bihar

A Pre-bid meeting of selection of Consultants for providing Consultancy Services for "Study on the Issue of Flood and Siltation in River Ganga and its Tributaries due to Farakka Barrage in the State of Bihar" under NHP was held on 29.09.2020 by Technical Evaluation Committee with interested bidders via Video Conference for briefing and clarifying any queries regarding the work. The Committee is headed by Chief Engineer, HSO, CWC with Director, RDC-I, Director Finance, Director Hyd(C) and Deputy Director Hyd(C) as its Members. In the course of meeting, various queries put up by attended bidders were answered by the Technical Evaluation Committee.

## Meeting for discussion on feasibility report on Dam safety measures of Gandhi Sagar Dam

In sequence to the previous meetings held on 12.06.2020 and 04.08.2020, third meeting for discussion on feasibility report on dam safety measures of Gandhi Sagar Dam under the Chairmanship of Dr. R. K. Gupta, Member (D&R) was held on 30.09.2020 at CWC, HQ. During this meeting Sh. S. K. Sibbal (Chief Engineer, Design N&W), Sh. Gulshan Raj (Chief Engineer, DSO), Sh. N. N. Rai (Director, Hydrology(S) Dte.), Sh. Anil Jain (Director, Emb (N&W) Dte.) and other officials of CWC were present.

The following recommendations given by Design N&W Unit were discussed in meeting to ensure flood moderation to accommodate PMF:

- Modification required in piers to facilitate raising of gate bottoms to at

### Above Normal Flood Situation

32 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

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



## Background

A committee under Chairman, CWC comprising Commissioner (FM), DoWR, RD & GR; Chief Engineer (HSO), CWC; Director, NIH, representative of Government of Bihar and Director (Finance) as members was constituted by DoWR, RD & GR, Ministry of Jal Shakti to study on the issue of flood and siltation in river Ganga due to Farakka Barrage in the State of Bihar.

The first meeting of the committee was held on 20.02.2020 at CWC HQs in New Delhi. Detailed discussions on the Draft Terms of Reference (ToR) for an independent study proposed to be carried out through Consultancy were held. The Committee after detailed deliberations finalized the ToR for the study.

least EI 401.1m to allow higher Cd value of 1.98.

- Strengthening requirements of upstream parapet wall to withstand any likely hydrostatic pressure.
- Raising of upstream parapet wall from the present height of 1.25m to 1.50m.
- Any windows/openings provided in the longitudinal beam should be got closed.
- Pre-depletion of reservoir up to 1.0m below the FRL.
- Advanced flood warning system to have early information about the impending flood.

# The meeting of Working group for preparation of Standardization Strategic Road Map of Water Resources Division Council (WRDC)

Working Groups will undertake following works:

- Identify the broad subject areas of priority to be taken up for standardization work for Five Years and define strategies to be adopted by Sectional Committees and Division Council.
- The Working Group would take into account of projects already identified under Standards National Action Plan (SNAP), National Priorities, Standardization Gaps and Concept Note on strategic Road Map of Division Council.

The CMDD (E&NE) Directorate is involved in development of its Strategic Road Map. It is a document which would reflect its vision of national

## Design flood review of Srisailem dam

In last few years, CWC has undertaken Design flood review of various dams under Dam Rehabilitation and Improvement Project (DRIP). Recently, design flood review of Srisailem dam has been started. The total catchment area of the dam is about 2,10,000 sq.km. The project lies in Krishna basin. It has been divided into 261 sub-catchments. Major storm of Atmakaur (28th -30th September 1964), covering area of about 1,58,000 sq.km has been selected for analysis.

## Promotion to SAG Level

Shri D. M. Raipure and Shri Padma Dorje were promoted to Senior Administrative Grade (SAG) of Central Water Engineering (Group 'A') Service. Shri D. M. Raipure was posted as Member Secretary, KRMB, Hyderabad. The posting order of Shri Padma Dorje will be issued by DoWR, RD & GR at a later date.

## IMCT Visits

Various Inter-Ministerial Central Teams (IMCT) have been constituted by Ministry of Home Affairs (MHA) for an on-the-spot assessment of the situation in the wake of the flood/landslide during South West Monsoon-2020. Also, Ministry of Agriculture, Cooperation and Farmer's Welfare has constituted an IMCT for assessment of situation in the wake of pest attack during Kharif, 2020 for State of Madhya Pradesh. CWC Officers were nominated to represent DoWR, RD&GR, Ministry of Jal Shakti in these IMCTs.

In continuation to month of August, IMCTs visited the affected States in September, 2020 also. In some States, members of IMCTs met Hon'ble Chief Ministers of the concerned States. They also had meetings with District Officials and visited the affected districts for assessing the damage. Their visit details are summarized as under.

Sl. No.	State	Duration of Visit	Officer representing MoJS	Visited Districts
1	Arunachal Pradesh	1 <sup>st</sup> -2 <sup>nd</sup> September	Shri Abhishek Sinha, Superintending Engineer, CWC Shillong	Lower Dibang Valley, East Siang
2	Bihar	2 <sup>nd</sup> -4 <sup>th</sup> September	Shri Sanjeev Kumar Suman, Director, CWC, Patna	Gopalganj, Darbhanga, Supaul, Muzaffarpur, Sitamarhi, Madhepura
3	Karnataka	07-09 <sup>th</sup> September	Shri Guru Prasad J., Superintending Engineer, CWC, Bengaluru	Belagavi, Dharwad, Kodagu, Gadag, Bagalkot
4	Madhya Pradesh	10-12 <sup>th</sup> September	Shri Manoj Tiwari, Superintending Engineer, CWC, Bhopal	Schore, Hoshangabad, Raisen, Dewas, Harda
5	Maharashtra	11-13 <sup>th</sup> September	Shri M. S. Sahare, Superintending Engineer, CWC, Nagpur	Chandrapur, Gadchiroli, Nagpur, Bhandara and Gondia
6	Odisha	16-17 <sup>th</sup> September	Shri Amrith Pal Singh Superintending Engineer, CWC, Bhubaneswar	Bhadrak, Jajpur, Kendrapada, Puri
7	Uttar Pradesh	19 <sup>th</sup> -22 <sup>nd</sup> September (1 <sup>st</sup> Visit)	Shri B. C. Vishwakarma, Director, CWC, Lucknow	Azamgarh, Deoria, Gorakhpur, Sant Kabir Nagar, Barabanki, Behraich, Lakhimpur Khiri, Sitapur

standardization in its area of work and provide a broad standardization roadmap with a five-year perspective. A meeting was held on 17.09.2020 in this regard.

## The Tenth Meeting of Structural Safety Sectional Committee, CED 37

Tenth Meeting of Structural Safety Sectional Committee was organized in Manak Bhawan, New Delhi on 17.09. 2020 chaired by Dr. N. Lakshmanan, in personal capacity, Chennai. The meeting was attended by Smt. Seema Pandey, Deputy Director, CMDD Directorate by video conferencing (VC). The meeting was attended by officers from 34 different organizations to discuss the various design aspects in the published Indian standard code and to suggest & adopt changes in the same.



## Weblink to follow

The Flood Alert Dashboard created by Google in association with CWC can be accessed from following link.

<https://datastudio.google.com/s/vNyXgDiLzDk>



Bihar



Madhya Pradesh



Uttar Pradesh



Maharashtra



Odisha



Karnataka



Arunachal Pradesh



Uttar Pradesh



# Sedimentation Assessment Study of twenty three (23) Reservoirs in India through Remote Sensing Technique - work entrusted to Maharashtra Engineering Research Institute (MERI), Nashik

Remote Sensing Directorate had outsourced the work of sedimentation assessment studies of 23 reservoirs through satellite remote sensing technique to Maharashtra Engineering Research Institute (MERI), Nashik in April 2019. The studies have been completed & reports of the same have been received in September, 2020. The detailed summary of results is attached.

\*Hydrographic survey recommended, as increase in live capacity is observed.

\*\*Hydrographic survey recommended, as heavy loss in live storage capacity.

#Hydrographic survey recommended, as results of intermediate studies done are inconsistent with current study.

##Satellite imageries for bottom 10m were not available, hence hydrographic survey is also recommended.

S. No	Name of Project (Name of State)	Name of River	Year of Impoundment	Year of Present Survey (Remote Sensing)	Live Storage (Original) (MCM)	Present Live Capacity (MCM)	Loss in Live Storage Capacity (MCM)	Total% loss in Live Capacity	Avg. Annual % loss in Live capacity	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Man (Madhya Pradesh)	Man	2006	2019	129.48	110.80	18.68	14.43	1.11	--
2	PriyadarshiniJurala (Telangana)	Krishna	1996	2018	192.07	164.772	27.298	14.21	0.646	--
3	Ujjani (Maharashtra)	Bhima	1977	2018	1517.20	1347.074	170.126	11.21	0.273	--
4	Bhatghar (Maharashtra)	Yelowandi	1926	2017	665.570	603.277	62.293	9.36	0.103	--
5	Barna (Madhya Pradesh)	Barna	1975	2017	455.80	401.753	54.047	11.86	0.282	--
6	Bhandardara (Maharashtra)	Pravara	1926	2019	304.130	307.598	3.498 (increase)	--	-	Hydrographic survey recommended.*
7	Nagawa (Uttar Pradesh)	Karmnasa	1950	2017	64.408	57.322	7.086	11.00	0.16	Study covers around 62% live storage capacity only.
8	Kharung (Chattisgarh)	Kharung	1931	2018	192.32	155.53	36.79	19.13	0.222	--
9	Bennithora (Karnataka)	Bennithora	2001	2017	140.70	114.015	26.685	18.97	1.19	--
10	Meja (Uttar Pradesh)	Belan	1974	2018	300.725	258.362	42.363	14.09	0.32	--
11	Sipu (Gujarat)	Sipu	1992	2018	156	136.907	19.093	12.24	0.471	--
12	Singur (Telangana)	Manjeera	1989	2019	822.46	812.037	10.423	1.27	0.042	--
13	Moorumsilli (Chattisgarh)	SilayariNala	1923	2019	161.913	147.309	14.607	9.02	0.094	--
14	Nizamsagar (Telangana)	Manjira	1992	2017	504.12	560.602	56.482 (increase)	--	-	Hydrographic survey recommended.*
15	Maudaha (Uttar Pradesh)	Birma Tributary	1991	2019	179	177.73	1.270	0.71	0.026	--
16	Hatnur (Maharashtra)	Tapi	1982	2017	255	125.449	129.551	50.80	1.45	Hydrographic survey recommended. **
17	Nathsagar (Maharashtra)	Godavari	1976	2019	2170.935	2058.582	112.353	5.18	0.120	Hydrographic survey recommended. #
18	Yeluru (Andhra Pradesh)	Yeluru	1991	2018	508.30	508.131	0.169	0.03	0.001	Hydrographic survey recommended. #
19	Manimuthar (Tamil Nadu)	Manimuthar	1958	2018	155.821	157.701	1.880 (increase)	--	-	Hydrographic survey recommended.*#
20	Karanja (Karnataka)	Karanja	1989	2019	207.05	222.243	15.190 (increase)	--	-	Hydrographic survey recommended.*
21	Shahzad (Uttar Pradesh)	Shahzad	1992	2018	118.930	118.809	0.121	0.10	0.004	--
22	Avalanche (Tamil Nadu)	Avalanche Stream	1961	2017	60.61	57.53	3.080	5.08	0.091	--
23	Kanher (Maharashtra)	Venna	1987	2018	271.680	268.086	3.594	1.32	0.042	Hydrographic survey recommended. ##

## Financial Progress of Different Schemes/Component pertaining to CWC Dharmanagar Drainage Development Scheme, Tripura as on Sep-2020

Sl. No.	Scheme/Component Name	BE 2020-21	Expenditure	Expenditure (in %)
1	Development of Water Resources information System (DWRIS)	140.00	45.884	32.77%
2	Investigation of Water Resources Development Schemes (IWRD)	12.00	2.766	23.05%
3	Flood Management & Border Areas Programme (FMBAP)	23.910	4.402	18.41%
4	Infrastructure Development (ID) Schemes	20.200	0.039	0.19%
5	National Hydrology Project	14.6225	2.8109	19.22%
6	Dam Rehabilitation and Improvement Project	18.46	8.84	47.89%

A flood protection scheme by name Dharmanagar Drainage Development Scheme in Tripura has been prepared by Brahmaputra Board and is under process of Appraisal in CWC (HQ). Dharmanagar drainage congested area of Juri sub-basin is bounded by hills in the north, kakri-Juri river in the east, Sukhnacherra in the west and hills to its south. The bifurcated river flows through the Dharmanagar town. During monsoon, when Juri is in a high spate, the accumulation of inflow from 2 tributaries namely Haflongcherra and Sukhnacherra cannot be carried by Juri due to insufficient channel capacity. This results in drainage congestion as well as flooding in Dharmanagar town area. The drainage water from Haflongcherra and Sukhnacherra takes unduly long time because of their inadequate carrying capacity causing prolonged drainage congestion in the area. Accordingly, Brahmaputra Board has prepared a DPR amounting to Rs.27.12 Crore to address the above congestion issues of Dharmnagar Town. A virtual field visit of Dharmnagar Drainage Development Scheme (DDDS) in Tripura was held on 29.09.2020.

## Meeting of Empowered Committee for Lohari Nagpala Project of NTPC at Uttarakhand

Shri S. K. Sibal, Chief Engineer, Designs (N&W) attended the meeting of Empowered Committee for Lohari Nagpala Project of NTPC at Uttarakhand chaired by Additional Secretary, Ministry of Power on 15.09.2020 through video conferencing.

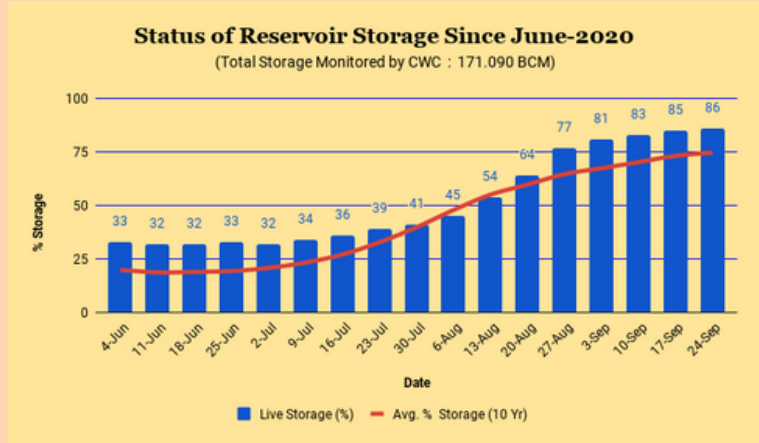
## Reservoir Monitoring

CWC is monitoring live storage status of 123 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 43 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 123 reservoirs is 171.091 BCM which is about 66.36% of the live storage capacity of 257.812 BCM which is estimated to have been created in the country.

As per reservoir storage bulletin dated 24.09.2020, live storage available in these reservoirs is 147.293 BCM, which is 86% of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 148.301 BCM and the average of last 10 years live storage was 128.21 BCM. Thus, the live storage available in 123 reservoirs as per 24.09.2020 Bulletin is 99% of the live storage of corresponding period of last year and 115% of storage of average of last ten years.

## Construction work for Icha Dam

Pending since 1990, the construction work for Icha Dam under the Subarnarekha Multi-Purpose project will finally begin. The project is being funded under PMKSY-Accelerated Irrigation Benefit Programme (AIBP). CWC is providing design consultancy for the project. Construction of Icha dam is one of the four components of Subarnarekha Multipurpose project. The other components were construction of Chandil Dam, Kharkai Barrage and Galudih Barrage. While the construction for Chandil Dam and Galudih Barrage is completed, Kharkai barrage is also on the verge of completion.



## Briefing meeting of related to progress of Relining of Rajasthan Feeder & Sirhind Feeder

### Introduction/Background

Rajasthan Feeder and Sirhind Feeder have their offtake in the upstream of Harike Head works constructed across just downstream of the confluence of the Sutlej and the Beas Rivers. Sirhind Feeder with 5439 cusecs capacity at head serves both the states of Punjab and Rajasthan. It has the design capacity of 1668 cusecs at tail reach to provide water to Rajasthan. Besides irrigation, Sirhind Feeder provides drinking water to some areas in the states of Punjab and Rajasthan. Rajasthan Feeder with 18500 cusecs capacity is exclusively meant for providing water to the Indira Gandhi Nahar Project serving the command lying in the territory of Rajasthan state. Besides irrigation, Rajasthan Feeder provides drinking water in the state of Rajasthan. Rajasthan Feeder and Sirhind Feeder run parallelly with common bank. These two canals were taken up for construction in the late 50's and were completed in mid 60's. Both the feeders were constructed as lined channels with brick tiles. Nevertheless, Seepage continued to occur which has increased in the recent past due to damages in the lining.

Member (WP&P), CWC, Chaired the meeting of the Expert Project Review Committee to review the status of works in respect of Relining of Rajasthan Feeder from RD 179000 ft to 496000 ft and Sirhind Feeder from RD 119700 ft to 447927 ft on 02.09.2020 in CWC, New Delhi through Video Conferencing. Main points discussed in the meeting are following :

### A. Status of progress and works to be taken up in Sirhind Feeder (SF) during the FY 2020-21 & 21-22

- Work for Relining of Sirhind Feeder from RD 386000 to RD 447927 was taken up during closure from 16/11/2019 to 20/12/2019. The work from RD 386000 to RD 441350 (about 18 km) was completed but the balance relining work from RD 441350 to RD 447927 ( about 2 km) could not be taken up due to shortage of time. This balance work from RD 441350 to RD 447927 (2 km) is to be taken up during Oct.-Nov, 2020 closure period. The total expenditure incurred for Relining of Sirhind Feeder up to 03/2020 is Rs. 80.70 Cr.
- As per earlier schedule, the works of Relining in stretches of 15 km was proposed to be taken up during current year of closure period from April to May 2020. But due to pandemic Covid-19, this work could not be taken up. Therefore the program is revised and as per the new program, the relining work from RD 258170 to 386000 (39 Km) & from RD 119700 to 258170 (42 km) would be taken up now in two phases during Oct.-Nov. 2020 and Oct.-Nov. 2021 (each 45 days closure period) respectively.

Tenders for all works (for both closure periods of 2020 & 2021) have been opened.

### B. Status of works to be taken up in Rajasthan Feeder (RF) during the FY 2020-21 & 2021-22

- Earlier, the relining work was proposed to be completed in 3 phases, 28 km during Mar-June 2020, 34 km during Mar-June 2021 & 34 km Mar-June 2022. The total works have been divided into 7 slices, to be executed on yearly basis. But due to pandemic Covid-19, the relining work for RF could not be taken up during the March-June 2020 closure period.
- Now, the relining works has been proposed to be taken up in 2 phases, one for relining of 54 km (approx) from RD 496000 to RD 314000 during March-June 2021 and the next phase of 42.58 km (approx) from RD 314000 to RD 179317 during Mar-June 2022.
- The works of all the slices have been tendered and allotted except for slice No 5 wherein single bid was received. Hence it had to be cancelled and rebidding is being done. Govt of Punjab has informed that the process of tendering for this slice would be completed by December 2020.

### C. Issues raised by Government of Rajasthan:

During the 70 days closure from March to June (for the two years), Govt. of Rajasthan needs 2650 cusec regular supply of water for domestic use by 10 to 12 cities including Jodhpur. Govt of Punjab agreed to provide 2000 cusec of water by encroaching the capacity in the free board of the SF. For supply of remaining 650 cusec, many options as suggested by the Expert Project Review Committee during 1st visit, needs to be looked into and implemented wherever feasible.

### Project Benefits

The irrigation aspects of Sirhind Feeder project are as under:-

- C.C.A. - 621000 ha
- After relining of SF, 256 cusecs of water would be saved
- Using the saved water 44177 ha of Punjab and 10371 ha of Rajasthan could be irrigated.
- It also provides drinking water to some areas in the states of Punjab and Rajasthan.

The irrigation aspects of Rajasthan Feeder project are as under:-

- C.C.A. - 1963000 ha
- After relining of RF, 560 cusecs of water would be saved
- Using the saved water, 51131 ha in Rabi and 47608 ha in Khariff could be irrigated in Rajasthan.



## History- Indus Water Treaty

The month of September marked 60 years of existence of the Indus Waters Treaty between India and Pakistan. Indus Waters Treaty, 1960 was signed by the Prime Minister of India and President of Pakistan in Karachi on 19.09.1960.

The Treaty fixed and delimited the rights and obligations of both the countries on use of the waters of the Indus River system. The Indus Waters Treaty is perhaps the only agreement in the world that physically divides the river system between two nations and the only one wherein a third party, the World Bank, played a crucial role in not just brokering it but also has a procedural role during its implementation.

The waters of the Western rivers i.e. Indus, Jhelum and Chenab, except for essential uses in their own basins while they flow in India, were allotted to Pakistan. The waters of Eastern rivers i.e. Ravi, Beas and Sutlej except for a Transition Period during which Pakistan would build works to replace the waters received by it from these rivers, were allotted to India. Pakistan was using water of the Eastern rivers to irrigate about 1.6 Mha area. India agreed to pay a sum of Rs 83.3 crore during Transition

Period towards the cost of replacement works in Pakistan. This division was based on proposals made by World Bank in 1954.

The signing of this Treaty was concluded by a series of protracted negotiations with an agreement which followed not only the general principles proposed by the World Bank in 1954 which the Government of India had then accepted but also the principles underlying the agreement reached in May 1948 between the Government of India and the Government of Pakistan.

After partition, major portion of irrigated area in Indus Basin remained with Pakistan. Irrigated area in Pakistan was around 8.5 Mha whereas India got only 2.0 Mha. However, population depending upon waters of the Indus basin system was roughly of the same order in both the countries. The agreement of May 1948 had laid down that India had obligations to develop the areas where water was scarce in its territory but that it should diminish supplies given to Pakistan gradually to enable Pakistan to tap alternate resources. The Government of Pakistan later denounced this Agreement and stated that India was obliged to continue the historic supplies to Pakistan. On the entry into force of the Treaty, the agreement of 04.05.1948 lapsed.

To maintain a channel for communication and to resolve various issues about implementation of the Treaty, the Treaty provided for creation of Permanent Indus Commission, with a Commissioner from each country. The Treaty provides mechanisms for resolving disputes which have helped in peacefully resolving numerous disputes. Article IX of the Treaty deals with the settlement of differences and disputes. If the Commission is



River Indus and Zaskar confluence in Leh India (Greener one is Zaskar)

unable to resolve a specific problem, provisions have been made for reference to a Neutral Expert and a Court of Arbitration. Article XII provides for the provisions of the Treaty to continue in force until terminated by a duly ratified treaty between the two Governments.

India is permitted to tap the considerable hydropower potential of Western rivers in its territory without any quantitative limits. India may construct reservoirs on the Western Rivers with aggregate storage capacity limited to 3.6 Million Acre Feet (MAF). The Treaty does not require India to deliver assured quantities of water to Pakistan and instead it requires India to let flow to Pakistan the water available in these rivers excluding the uses permitted to her by the Treaty.

The Government of India is committed to fully utilize the waters in accordance with the provisions of the Indus Waters Treaty. In this context, a number of projects have been contemplated on the Eastern and the Western rivers which are in different stages of planning, investigation, appraisal, approval and execution. The construction of Shahpurkandi Dam project on Ravi river which was suspended since 2014 has been resumed after intervention of Govt. of India. The Ujh Dam in Ravi basin is in advanced stage of planning and 2nd Ravi Beas link is also being planned. A number of hydropower projects on Western rivers are in various stages of planning and construction.

The Indus Waters Treaty is considered one of important water treaties of the world and is widely hailed as one of the best examples of international cooperation.

## Training Organized by NWA, CWC, Pune

S. No.	Topic of Programme	Date	Venue	Participants
1	6th International Distance Learning Course on Basic Hydrologic Sciences for Asian Region (WMO RA-II) being organized by the National Water Academy (NWA) in association With World Meteorological Organization (WMO)	27 July -11 Sept 2020	DL Mode	137 professionals working in Water Resources Sector & Officials of RA-II regions nominated by WMO
2	Purpose Oriented Training Program through Distance Learning on Maintenance of CWC Site Data	21-25 September 2020	DL Mode	540 Sub Divisional Engineers, Junior Engineers, and Work Charged staff of CWC
3	Training-cum-Workshop on ePAMS (Project Appraisal Management System) conducted using Distance Learning Tool	28-30 September 2020	DL Mode	120 Officers of Various State/Central Govt.

## Meeting on Telemetry Data validation and it usage in flood forecasting activities

Member(RM), CWC desired that the Telemetry Data from 941 sites needs to be utilized for real-time flood forecast formulation. An exercise for Data Validation was started at Headquarters from 2018 onwards. Regional Offices were also directed to validate the Telemetry Data both water level and rainfall for use in real-time flood forecasting. In this matter, a VC was held on 24.09.2020 under the Chairmanship of Member (RM). This was attended by all concerned officers from all the 13 Regional Offices and concerned Directorates in the CWC Headquarters. Decisions taken in the meeting were circulated to all concerned offices with a direction to provide Action Taken Note by 31.10.2020.



## Ganol HEP Meghalaya

The under-construction Ganol H.E. Project, Meghalaya (3x7.5 MW) is located about 1.5 km downstream of the confluence of Rongram and Ganol rivers in the West Garo Hills District of Meghalaya. This project has a 34m high concrete gravity dam, approx 2 km long Head Race Tunnel, 698 m long Penstocks and a Power House upstream of Phagugiri Village to utilize a gross head of about 160m and generation of 22.5 MW of power.

The construction of project started in 2015. There are 7 blocks – 3 overflow and 4 non- overflow in Dam. The concreting upto glacis level EL 330.00 m has been completed. The piers have been raised till EL 331.00 m. The construction of intake structure has been completed.

The HRT lining for invert 1043.0 m and overt lining 993.0 m has been completed. The lining of Surge Shaft has been completed. In the Power house, out of three, two draft tubes are in place. Earth mat of the switchyard has been done.

The Designs (E&NE) Unit of Central Water Commission (CWC) is providing

## Water Sector News

- ✦ Civic bodies take up cleaning of Hussain Sagar (Telangana Today, 03.09.2020)
- ✦ Water level in Godavari rises, officials on alert (Telangana Today, 03.09.2020)
- ✦ South India could have more extreme rainfall events than north as monsoon pattern shifts (Hindustan Times, 04.09.2020)
- ✦ Assam Inland Water Transport Regulatory Authority (Amendment) Bill, 2020 passed (Assam Tribune, 04.09.2020)
- ✦ Rs.600-cr project to rejuvenate watersheds in 20 taluks (Deccan Herald, 04.09.2020)
- ✦ HC stops tree-cutting for Byramangala project (Deccan Herald, 05.09.2020)
- ✦ India-Bangladesh riverine trade route opens (Indian Express, 06.09.2020)
- ✦ Study says Nainital green cover declining, experts worried (Morning Standard, 07.09.2020)
- ✦ Krishna, Godavari are lifelines, must be protected, say experts (Deccan Chronicle, 08.09.2020)
- ✦ J&K glaciers melting at 'significant' rate, study funds (Millennium Post, 09.09.2020)
- ✦ Aravallis have lost over 200 water bodies in 30 yrs to encroachment (Millennium Post, 09.09.2020)



design consultancy for civil works of the dam, water conductor system and power house complex of the project. The project is scheduled for commissioning in May 2022.

- ✦ Central Team on MP visit from Sept 10 to assess flood damage (Millennium Post, 10.09.2020)
- ✦ Committee to help those displaced by Tehri dam (New India Express, 12.09.2020)
- ✦ Central team completes flood assessment in east Vidarbha (Millennium Post, 14.09.2020)
- ✦ WB govt to provide tap water supply to 55L households by March next year : Official (The Statesman, 15.09.2020)
- ✦ Ganga cleaner in 5 yrs, but may take decades for its water to be fit for drinking (Hindustan Times, 17.09.2020)
- ✦ Odisha seeks Rs. 1,100 cr central aid for flood damage (Indian Express, 18.09.2020)
- ✦ Torrential rains wreak havoc in parts of K'taka, Udupiworst hit (Millennium Post, 21.09.2020)
- ✦ Heavy rains lash Kerala, orange alert in 10 districts (Millennium Post, 22.09.2020)
- ✦ For 70 years, govt has failed in saving people from flood, erosion (Assam Tribune, 24.09.2020)
- ✦ State demands Cauvery water due from Karnataka at CWMA meeting (New Indian Express, 26.09.2020)
- ✦ Plan to boost biz along entire Ganga stretch (The Times of India, 30.09.2020)

## Gallery- Hindi Pakhwada



Shilong



Nagpur



Patna



Hyderabad



Shimla



Gandhinagar



Lucknow



## Central Water Commission

An attached office of Dept. of Water Resources,  
River Development and Ganga Rejuvenation,  
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