



S. K. Haldar  
Chairman

## Message

The core component of the water network of Krishna Basin includes the river Krishna, and its principal tributaries finally draining into the Bay of Bengal. The Krishna River and its tributaries are an inter-state river system flowing through the states of Maharashtra, Karnataka, Telangana and Andhra Pradesh. Srisaillam, Nagarjuna Sagar and Jurala are major projects in the basin for which CWC is working on development of the Operation Protocol and this was deliberated in detail. The simulated operation of these reservoirs was carried out for more than three decades. The results showed that the irrigation demands can be met from

these reservoirs at desired reliabilities if the Hydropower generation at Jurala is considered as incidental and for Srisaillam 50% of the hydropower generation is considered as incidental. The rule levels are being worked out as per KWDT-1 award for which the required data has been requested from the concerned authorities.

Integrated Reservoir operation is assuming more and more importance in the recent times. CWC is collaborating with M/s Tractebel Engineering Pvt. Ltd., Gurgaon in JV with M/s Kisters AG, Germany for Consultancy Service for "Development of Decision Support System near to real time for Integrated Reservoir Operation System of Ganga Basin". The contract for the same was signed in September.

Continuing with its role in Policy planning, CWC presented the details of Draft Sediment Management Policy and draft guidelines for the preparation of DPR for Salinity Ingress Management Projects in coastal areas to DoWR, RD&GR. Policy document would require

further changes whereas the afore-said draft guideline has been approved by Dept. for circulation to all the coastal states/UTs for their comments/views.

Senior CWC officers participated in the review activity of important construction stage projects such as Polavaram Irrigation Project, Shahpurkandi Dam Project, North Koel Project and various other projects under PMKSY-AIBP and National Infrastructure Pipeline (NIP). Series of meetings were also held for firming up the details of Ujh Multipurpose Project which is a national project.

Officers of CWC-HQ and its regional offices participated actively in the various activities under Hindi Pakhwada. Regional office at Nagpur brought out a very good magazine in Hindi namely 'Tarang' which is specially worth mentioning. More and more emphasis was given to officers/staff to carry out the official work in Hindi.

गौरीग फातम



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## Meeting held under the Chairmanship of Secretary (WR), RD&GR to discuss the water sharing disputes regarding Pennaiyar River

A meeting was held on 01.09.2021 through Video Conferencing under the Chairmanship of Secretary, DoWR, RD & GR with the Additional Chief Secretaries of Govt. of Tamil Nadu and Govt. of Karnataka, Chief Engineers of Water Resources Departments from Andhra Pradesh and

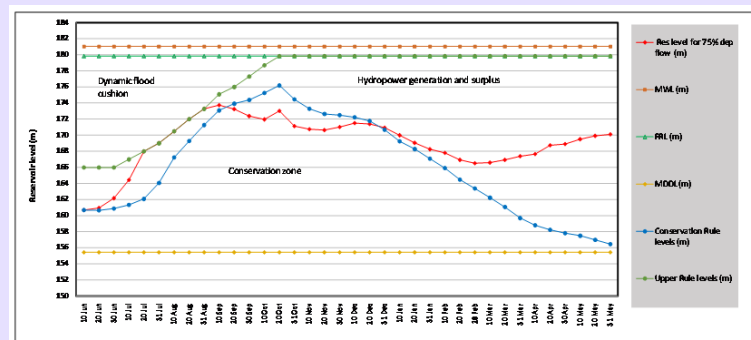
Puducherry to discuss the water sharing dispute regarding Pennaiyar River and to evolve an amicable solution. The meeting was attended by Chairman, CWC, Member (WP&P) and Chief Engineer (IMO), CWC.

## Presentation on Operation Protocol of Srisailem and Nagarjuna Sagar Projects

In pursuance of the Gazette Notification No. 2843(E) dated 15/7/2021, Chairman, CWC held a meeting with officers of GRMB, KRMB, and CWC on 10.09.2021. The meeting was also attended by Advisor to Hon'ble Minister (Jal Shakti). Director (Remote Sensing), CWC presented the Operation Protocol prepared for Srisailem and Nagarjuna Sagar reservoirs in the Krishna river basin during the meeting. The rule levels for average demands

and also for project-wise allocations were presented. The simulated operation of these reservoirs was carried out for 32 years. The results showed that the demands can be met from these reservoirs at around 87.5% reliability when operated for average 5 years demands, and reliability goes up to 90% when operated as per the Project-wise and State-wise allocations.

### Operation Protocol of Nagarjuna Sagar reservoir



### Testing of Rule Levels 75% dep year (Case-I: Avg demand)

Nagarjuna Sagar Reservoir doesn't reach FRL (in 75% dependable year and as per average demands it has to cater) but reaches upper rule level by 20th July. Comfortably meets consumptive demands by drawing water from conservation zone of the reservoir and ends up comfortably above MDDL at the end of the hydrological year with a carry-over storage of 2.6 BCM

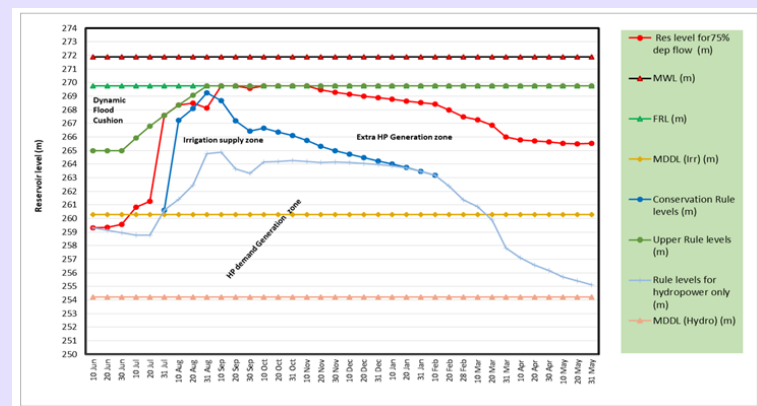
## Meeting on DPR for erosion protection works of Chitrakoot Dham in Satana, Madhya Pradesh

Earlier, the DPR for the project was submitted to GFCC, Patna for appraisal as the project is located in the Ganga basin. Later, the issue was discussed in DoWR, RD&GR and approval of Secretary, DoWR, RD&GR was conveyed for appraisal of the project to be carried in CWC. Thereafter, a meeting was held under the chairmanship of Chief Engineer (FMO), CWC through video conferencing on 10.09.2021 regarding discussion on the above Project. In the meeting, it was concluded that

## Presentation on the Draft Sediment Management Policy

A presentation on Draft Sediment Management Policy was made before Secretary, DoWR, RD&GR in the conference room of Shram Shakti Bhawan, New Delhi on 09.09.2021. During the presentation, the following modifications were suggested:

- Contents of the document may be re-arranged in order to focus the domain of the Ministry of Jal Shakti.
- Focus should be given on Sediment Management in Catchment, so as to give more emphasis on reducing



### Testing of Rule Levels 75% dep year (Case-I: Irrigation Maxmised)

Srisailem Reservoir reaches FL in September but reaches upper rule level by 31st July. Easily meets both irrigation and curtailed hydropower demands and ends up comfortably above the MDD with a carry-over of about 2.5 BCM at the end of hydrological year.

State Govt. will provide the required Data within one week of time, thereafter, various aspects of DPR viz. planning, hydrology, design, damage, cost details etc., will be examined in specialized directorates of CWC. After firming up the cost of the project and receipt of final DPR, a note for consideration of DPR in the next meeting of the Advisory Committee of DoWR, RD&GR will be sent to Chief Engineer(PAO), CWC.

silt generation rather than silt removal.

- A Chapter on the Impact of Climate Change on sedimentation may be included.
- Retrofitting of existing Dams should be flagged.
- Success story of Silt Management practices may be incorporated.
- Appraisal of Silt Management Projects in CWC may be discarded.

However, the concerned CWC Regional Chief Engineer/his representative may be included in the State Level Technical Advisory Committee.

## Third Management Committee Meeting - MoJS Research Chair (Water Conflicts and Governance) of Centre for Policy Research

The third meeting of the Management Committee, MoJS Research Chair (Water Conflicts and Governance) was held on 08.09.2021 through video conference to discuss:

- Annual Report (Consolidated) Report of the MoJS Research Chair for advice and inputs to the Research Chair.
- Proposed activities under Renewal Proposal 2021-26 prepared as per the recommendation of 2nd Management Committee meeting.
- Publication and dissemination of the research outputs.

The meeting was chaired by Chairman, CWC. The decision taken during the meeting are:

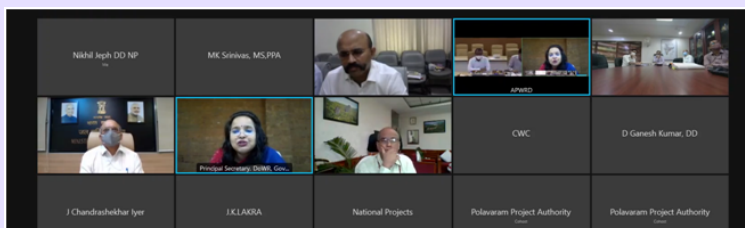
- Irrigation Management Organization (IMO), CWC

would ensure that the proposal for Renewal/Continuance would be processed and recommended and forwarded to the MoJS by the end of September 2021.

- The Research Chair and Chief Engineer(IMO) would meet to discuss the delivered outputs and act on the necessary steps towards complying with the above timeline.
- The Research Chair would pursue the next course of action on the draft monograph, The Bar and The Binding, in consultation with Shri K. Vohra, Member (WP&P), CWC.
- The Research Chair would submit the proposal for Renewal/Continuance in the required format as desired by the Indian National Committee on Surface Water (INCSW).

## Review of issues reg. Public hearing along the river Sabri & Sileru in the territories of Odisha and Chhattisgarh due to Polavaram irrigation Project

A meeting was convened under the chairmanship of Secretary, DoWR, RD&GR, Ministry of Jal Shakti on 20.09.2021 through video conferencing to discuss issues regarding Public hearing along the river Sabri & Sileru in the territories of Odisha and Chhattisgarh due to the Polavaram Irrigation Project. Officials from DoWR, RD & GR, MoJS, Polavaram Project Authority (PPA), CWC, Govt. of Odisha and Chhattisgarh attended the meeting. After detailed discussions, in the meeting, it was observed that GWDT Award mandates CWC to have the final word in respect of the design parameters of the project. Further, Secretary, DoWR, RD & GR directed PPA and CWC team to have detailed technical interaction with the officials of Odisha and Chhattisgarh



respectively, to share the various technical provisions regarding backwater studies and submergence, and to effectively address their technical issues. Also, the Government of Andhra Pradesh and the two states to jointly sort out all issues and complete the joint survey at the earliest and to take up public hearing in their respective territories, as per backwater studies with 36 lakh cusec flood.

## Meeting on draft guidelines for the preparation of DPR for Salinity Ingress Management Projects in coastal areas

A meeting was taken by Secretary, DoWR, RD&GR on 21.09.2021 in his chamber at Shram Shakti Bhawan, New Delhi. A presentation was made by CWC during the meeting on various provisions of the draft guidelines for the preparation of DPR for Salinity Ingress Management Projects in coastal areas followed by discussions on the

way forward in the matter. DoWR, RD&GR has conveyed its approval to the Draft Guidelines for the preparation of DPR for Salinity Ingress Management Projects in coastal areas prepared by CWC and has advised circulating the approved draft guidelines to all the coastal states/UTs for their comments/views within two months.

## State consultation meeting for reservoir sedimentation studies

The State Consultation Meeting for Reservoir Sedimentation Studies to be taken up under National Hydrology Project (NHP) Phase-II was held under the chairmanship of Member (WP&P), CWC on 27.09.2021 through Video Conferencing. The objectives, scope, methodology and outputs of work of Reservoir Sedimentation Studies of 86 reservoirs using Hydrographic Survey to be taken up were discussed

during the meeting. No Objection Certificates (NOCs) of these 86 reservoirs were also placed before the participants for confirmation and finalisation from respective State Government/Project Authorities. The meeting was attended by officers of CWC, DoWR, RD & GR and representatives of State Government/Project Authorities from Andhra Pradesh, Telangana, Uttarakhand, Kerala, Odisha, Uttar Pradesh, Madhya Pradesh and Maharashtra.



## 14th meeting of the Task Force for interlinking of rivers

The fourteenth meeting of Task Force for Interlinking of Rivers was held on 29.09.2021 in DoWR, RD & GR, Ministry of Jal Shakti under the Chairmanship of Shri Sriram Vedire, Chairman, Task Force for Interlinking of Rivers & Advisor, Ministry of Jal Shakti. The Chairman of the Task Force highlighted the significant achievement of the signing of the Memorandum of Agreement for implementation of Ken - Betwa Link Project (KBLP).

Director-General, National Water Development Agency apprised the members about signing of MoA for Ken-Betwa link, completion and circulation of final DPR of Godavari - Cauvery link, initiation of System studies of Manas - Sankosh - Tista - Ganga link project and efforts being taken by NWDA by interacting with States of Madhya Pradesh and Rajasthan for integration of Parbati-Kalisindh-Chambal link of National Perspective Plan (NPP) with proposed Eastern Rajasthan Canal

## केंद्रीय जल आयोग में 14 से 28 सितम्बर, 2021 तक हिंदी पखवाड़ा आयोजन

केंद्रीय जल आयोग मुख्यालय में सरकारी कामकाज में हिन्दी के प्रगामी प्रयोग को बढ़ावा देने के उद्देश्य से हिन्दी पखवाड़ा-2021 का आयोजन किया गया। केंद्रीय जल आयोग में हिन्दी पखवाड़ा-2021 का आयोजन 14 सितंबर से 28 सितंबर, 2021 तक किया गया। इस उपलक्ष्य में अध्यक्ष, के.ज.आ. द्वारा एक अपील जारी की गई जिसमें के.ज.आ. (मुख्यालय) तथा क्षेत्रीय कार्यालयों में कार्यरत अधिकारियों/कर्मचारियों को हिन्दी में अधिकाधिक कार्य करने का निदेश दिया गया। इसके अलावा माननीय मंत्री महोदय, जल शक्ति मंत्रालय, माननीय राज्यमंत्री महोदय, जल शक्ति मंत्रालय, सचिव, जल संसाधन, नदी विकास एवं गंगा संरक्षण विभाग की अपील/संदेश भी परिचालित किए गए। हिन्दी अनुभाग द्वारा सभी क्षेत्रीय कार्यालयों को हिन्दी पखवाड़ा-2021 के आयोजन हेतु दिशा निर्देश जारी किए गए। कोविड-19 महामारी के सुरक्षोपाय के दृष्टिगत हिन्दी पखवाड़ा-2021 का उद्घाटन एवं समापन समारोह का आयोजन नहीं किया गया। हिन्दी पखवाड़ा के दौरान सभी प्रतियोगिताएं गृह मंत्रालय द्वारा निर्धारित मानक प्रचालन प्रक्रिया के वर्ष के दौरान हिंदी में सर्वाधिक कार्य करने हेतु केंद्रीय जल आयोग द्वारा

## 3rd Inter Ministerial Steering Committee for monitoring of NIP Project

The third meeting of the Inter-Ministerial Steering Committee (IMSC) was held on 20.09.2021 under the Chairmanship of Secretary, DoWR, RD&GR through Video Conferencing to review the few National Infrastructure Pipeline (NIP) projects identified by CWC, which are having issues with Central Ministries.

CWC has identified three NIP Projects which are having issues with central ministries namely:

- Yettinahole integrated drinking water project (Phase-II), Karnataka
  - Rengali Irrigation Project (Left), Odisha
  - Rengali Irrigation Project (Right), Odisha
- 11 other projects have been identified for review as listed below.
- Chhindwara Irrigation Complex(new), Madhya Pradesh
  - Dwarakeswar Gandheshwari Reservoir Project, West Bengal



Project. Status of Ken - Betwa Link Project System, studies of Mahanadi - Godavari link being carried by NIH, Roorkee were discussed in detail. Chairman informed about the constitution of the National Interlinking of Rivers Authority (NIRA) which is under consideration in the ministry. NIRA would act as an Umbrella for all the links and each link will have its own SPV like Ken - Betwa Link Project Authority for KBLP.



चलाई जा रही शील्ड योजना के अंतर्गत के.ज.आ. के अनुभाग/निदेशालय एवं आयोग के 'क', 'ख' तथा 'ग' क्षेत्र में स्थित अधीनस्थ क्षेत्रीय कार्यालयों को राजभाषा शील्ड प्रदान की गई। विभिन्न राज्यों में स्थित केंद्रीय जल आयोग के अधीनस्थ कार्यालयों में भी हिंदी पखवाड़ा का सफल आयोजन किया गया तथा इस दौरान विभिन्न प्रतियोगिताएं आयोजित की गईं।

- Kaleshwaram Project, Telangana,
  - B R R Vamsadhra Project Phase II of Stage II Development Project, Andhra Pradesh
  - Sonthi Lift Irrigation Scheme Implementation Project, Karnataka
  - Pawai Medium Development Project, Madhya Pradesh
  - Lower Goi Development Project, Madhya Pradesh
  - Bilgaon Reservoir Development Project, Madhya Pradesh
  - River Sutlej Canals Upgradation Project, Punjab
  - Kotla and Ghaggar Branches Rehabilitation Project, Punjab
  - Kachunada Dam Construction Project, Uttar Pradesh
- Secretary DoWR, RD&GR discussed the issues of these projects with Officials from the Ministry of Roads, the Ministry of Railways & the Ministry of Environment, Forest & Climate Change for fast progress.



## Ujh Multipurpose project

In continuation to a series of earlier meetings on Benefit-Cost (BC) aspects of the Ujh Multipurpose Project (J&K) and progress on proposed changes in its design, 4 more meetings held in this regard under the Chairmanship of Shri Kushvinder Vohra, Member (WP&P), CWC on 3rd, 9th, 10th and 17th September 2021. The meetings were held through video conferencing and attended by Officials from SPR & Indus Wing (DoWR, RD & GR) MoJS, Central Water Commission, Central Electricity Authority, Water Resources Department (WRD), Govt of J&K and WAPCOS attended the meeting. During the meeting, detailed discussions were held on the finalisation of the cost of Dam, barrage, LA&RR, Cost & Design of Power Houses and status of environmental clearance from MoEF&CC. Further in the meeting, the preparation of the draft TAC note was also discussed.

During the meeting, detailed discussions were held on various issues including finalisation of the cost of Dam, barrage, LA&RR, Cost & Design of Power Houses and status of environmental clearance from MoEF&CC. Further in the meeting, the preparation of the draft TAC note was also discussed. The issue of finalizing of benefits of the project was resolved and power potential

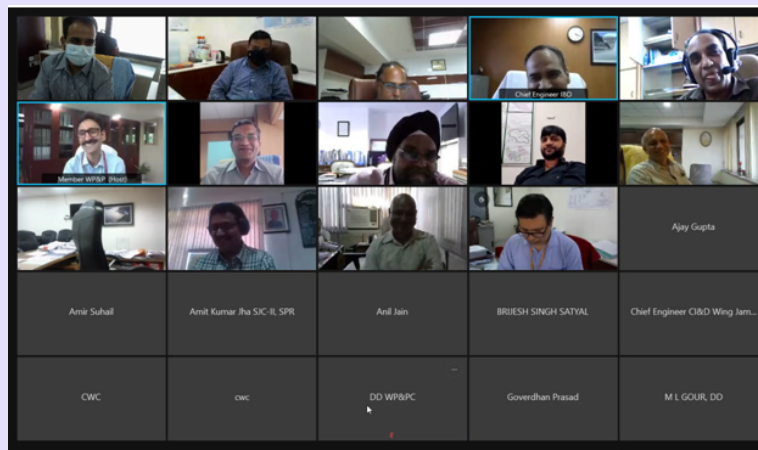
## Review of Shapurkandi Dam Project

A meeting was convened under the chairmanship of Secretary, DoWR, RD & GR, Ministry of Jal Shakti on 06.09.2021 through video conferencing to review the progress of works in Shahpur Kandi Dam Project, an inter-state multipurpose project between the States of Punjab (GoP) and J&K, being implemented by GoP.

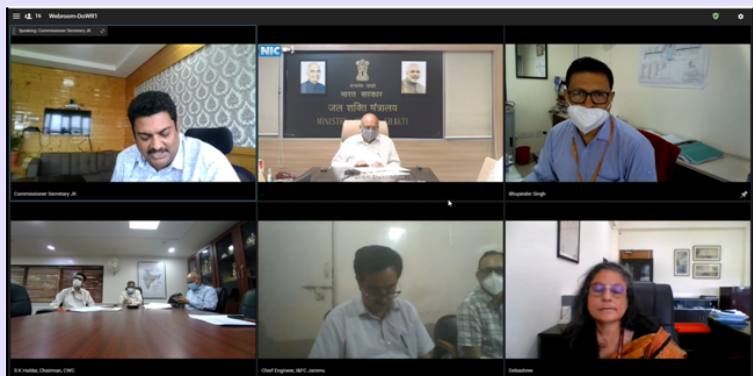
Officials from DoWR, RD & GR, MoJS, Central Water Commission (CWC), Govt of Punjab and Govt of J&K attended the meeting. After detailed discussions, Secretary, DoWR, RD&GR directed that the Government of Punjab and J&K should ensure that the works of the project are completed expeditiously, so as to meet the specified time of December, 2022. Further, it was emphasized for time-bound execution of the critical

## Review meeting North Koel Project

A meeting to review the progress and status of pending issues of North Koel Project (Bihar & Jharkhand) and Mandal Dam were taken by Additional Secretary (WR, RD & GR) along with Member (WP&P), CWC with Secretary, WRD, Govt. of Jharkhand and officials of WRD, Govt. of Jharkhand, officials of WRD, Govt. of Bihar, CWC & WAPCOS at Ranchi on 14.09.2021 and 15.09.2021 respectively. Additional Secretary, DoWR, RD&GR, MoJS stressed upon resolving the pending issues hampering the timely completion of the projects and exhorted all the concerned officials to sort out the issues so that the project is completed at the earliest so as to derive the



studies were fine-tuned for better irrigation planning and option of Dam Toe Power House was firmed up keeping in view of the techno-economic considerations. It was also noted that the specialized directorates of CWC have finalized the basic designs of the dam for the Ujh project. Further, cost apportionments were discussed in detail and were considered finalized. Member (WP&P), CWC emphasized J&K Officials to provide the inputs urgently for finalizing the BC ratio as well as preparation of Draft TAC note so as to bring the revised DPR for consideration of the Advisory Committee of DoWR, RD & GR at the earliest.



activities such as aqueduct on Ravi Canal and realignment of Basoli Kathua road, including the bridge over Noora Nala.

envisaged benefits thereon. She emphasized the importance of the Mandal dam project for the holistic development of the region leading to assured irrigation, improved employment opportunities for the local people, tourism development etc. Member (WP&P), CWC enumerated in detail, the pending issues and the status thereon and reiterated the need for necessary immediate action by all the concerned authorities for resolving the pending issues so as to ensure timely completion of the project. Additional Secretary (WR, RD & GR) alongwith Member (WP&P), CWC also visited the Mandal Dam Site on 15.09.2021.

## IEWP meeting

Member (WP&P), CWC and Ex-Officio Additional Secretary to Govt of India convened a meeting on 13.09.2021 with EU Delegation and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and IEWP nodal officers from CWC, CGWB, and NMCG to discuss the Flexible Action Plan of IEWP Action Phase 2 regarding all four work areas (River Basin Management, Irrigation and Efficient Water Use; E-Flows Assessment; Safe Reuse of Treated Water).

In the discussion on draft Action plan for River Basin Management thematic pillar, Member (WP&P), CWC suggested that all the activities proposed in the action plan should converge towards formulation of a comprehensive River Basin Management Plan taking into account some more activity areas. It was decided that Member (WP&P) shall be discuss the draft Action Plan in detail with all the Nodal officers.

Accordingly, Member (WP&P), CWC convened a meeting on 22.09.2021 with IEWP nodal officers from CWC, CGWB and NMCG to discuss draft action plan. . During the meeting discussions were held w.r.t. each Key Water Management Issue (KWMI) envisaged in the draft action Plan. Broad decisions taken in the meeting are as follows:

- RBM KWMI-3: The following additional works / studies were identified and proposed to be taken up under RBM Plan / Water Accounting studies since supply-demand management is always a major activity in most of the Indian River basins:

1. Baseline scenario: Estimation of non ET demands (Drinking water, industrial consumption)
- 2.
3. Projections for the future with different scenarios (Climate Change, increase in demands, current and

## 6th Meeting of the Committee constituted for planning BRICS Water Minister's Meet and BRICS Water Forum

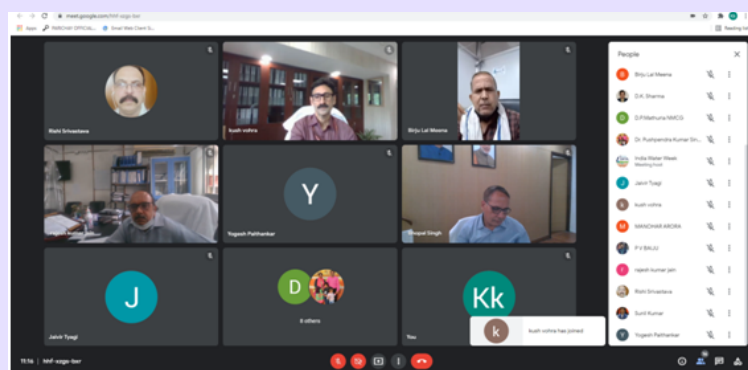
The Sixth meeting of the committee for planning the BRICS Water Ministers Meet and BRICS Water Forum in India in 2021 was held under the Chairmanship of Member (WP&P), CWC on 28.09.2021 through video conference. The Committee shortlisted potential Chairpersons for the three BRICS Water Forum Sessions and constituted a Committee for preparation of zero draft for joint declaration by BRICS Ministers and for negotiating the same with representatives of other BRICS Countries for final joint declaration. It has been decided that the zero draft of joint declaration of 1st meeting of BRICS Water Ministers shall be prepared before 15.10.2021 so that the same can be circulated to



proposed water resources projects).

3. Formulation of Strategies for various Programme of Measures(PoM) for WRM for Water Allocation modeling may be required.

- Irrigation and Efficient Water Use: Member (WP&P), CWC mentioned that all measured data (as required) in respect of the three projects namely Golavagu, Mahuar, and Lower Panjara may not be available, therefore, a broad protocol in this regard is what is being aspired for in view of the limitation of data. He also mentioned that a standard data format should be prepared for circulation to various States so that from now onwards, such data is maintained by project authorities.
- Capacity Building: Capacity Building is an important component crosscutting with all thematic areas. In phase-1 of IEWP, there was no structured training imparted to officers from various departments. Chief Engineer (NWA), CWC mentioned that it requires engagement of NWA for every activity from the very beginning, so as to understand the training needs, topics, identification of resource persons, developing training modules in consultation with GIZ and EU experts etc.



member countries through MoJS/MEA. Also, it has been decided that draft Country papers for sub-themes shall be finalised by 20.10.2021.



## 15th Authority Meeting of the Mangdechhu HPA held via Video Conference

The 15th meeting of Mangdechhu Hydro-Electric Project Authority(MHPA) was held through virtual Conferencing on 22.09.2021. Hon'ble Minister Shri Lyonpo Loknath Sharma, Ministry of Economic Affairs, Royal Government of Bhutan (RGoB) & chairman, MHPA presided over the Meeting. The meeting was attended by officers of the Royal Government of Bhutan and the Government of India. From Central Water Commission, Shri R.K. Gupta, Member (D&R) attended the meeting.

The project was successfully commissioned in mid of 2019 and it has successfully generated over 6000 MU of energy till the authority meeting date. In the meeting, it was proposed to dissolve the MHPA and handover of the project to RGoB should be commenced as per provision in the Mangdechhu Bilateral Agreement. Other technical and economic issues regarding the functioning of the MHP project were discussed in the meeting.

## Training Activity during Sep-2021

Sr. No.	Name of Training Programme	Dates	No of Trainee	Category
1	Webinar 14 : A shifted baseline : The Changing context of Cooperation in the Mekong River Basin	06.09.2021	108	Policy
2	Webinar 15 : International Water Cooperation in Water Sector- Role of Asian Development Bank, Past, Present and Future	13.09.2021	76	Policy
3	Webinar on Writing of Annual Performance Appraisal Report (APAR) for CWES Officers	17.09.2021	159	Non-Technical
4	Webinar 16 : International Cooperation in Irrigation and Drainage - Role of ICID	20.09.2021	77	Policy
5	Training Program on Smart Working MS Office Tools	23th Sep-24 <sup>th</sup> Sep 2021	49	Non-Technical
6	Webinar 17 : The World Bank Engagement in Water - Past Present and Future	27.09.2021	99	Policy

## Progress/Note for NHP during month of Sep-2021

**Using the Modern Technologies for measuring Hydro-meteorological data such as Water Level, discharge, rainfall etc:**

### A. Velocity Radar

Work for "Supply Installation, Testing and Commissioning of Velocity Radar System" under NHP has been awarded to M/s Pan India Consultant Pvt. and Contract for the same was signed on 08.09.2021.



**Consultancy services for" Development of Decision Support System near to real time for Integrated Reservoir Operation System of Ganga Basin"**

Work for Consultancy Service for "Development of Decision Support System near to real time for Integrated Reservoir Operation System of Ganga Basin" has been awarded to M/s Tractebel Engineering Pvt. Ltd., Gurgaon in JV with M/s Kisters AG, Germany. The contract for the same was signed on 02.09.2021.



## Flood Situation in the Country

Regular Flood Forecasting Activity by CWC commenced on 01.05.2021 in Brahmaputra and Barak and Jhelum basins. During the period from 1st May to 30th September 2021, 8635 flood forecasts (5789 Level and 2846 Inflow) were issued, out of which 8201 (5600 Level and 2601 Inflow) forecasts were within the limit of accuracy with a percentage accuracy of 94.97%. 117 nos. of Orange Bulletin (for Severe Flood Situation) and 52 number of Red Bulletin for Extreme Flood Situation were issued in August from Central Flood Control Room.

### Summary of Flood Situation during 01.05.2021 to 31.09.2021

#### Extreme Flood Situation

Five FF stations have observed Extreme Flood Situation.

S.No.	State	District	River	Station	Period	
					From	To
1.	Bihar	Patna	Ganga	Hatidah	13/08/2021	19/08/2021
2.		Bhagalpur	Ganga	Bhagalpur	16/08/2021	19/08/2021
3.	Uttar Pradesh	Auraiya	Yamuna	Auraiya	06/08/2021	07/08/2021
4.		Siddharthnagar	Rapti	Bansi	02/09/2021	04/09/2021
5.	Odisha	Balasore	Subarnarekha	Mathani Road Bridge	22/09/2021	22/09/2021

22 Flood Monitoring Stations observed Extreme Flood Situation.

#### Severe Flood Situation for FF Stations

83 FF Stations observed Severe Flood Situation in the States of Arunachal Pradesh, Assam, Odisha, Bihar, Uttar Pradesh, Uttarakhand, West Bengal, Maharashtra, Rajasthan, NCT Delhi, Andhra Pradesh, Telangana and Jharkhand.

#### Above Normal Flood Situation

37 FF Stations in Assam, Bihar, Jharkhand, Uttar

### Data Corner

Out of the ninety nine Major/Medium irrigation projects under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) - Accelerated Irrigation Benefit Programme (AIBP) for financial assistance, seven projects involve extension,

Pradesh, West Bengal, Andhra Pradesh, Telangana, Maharashtra and Odisha observed Above Normal Flood Situation.

#### Reservoirs having Inflow above threshold limit

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



renovation and modernization (ERM) works. State-wise details of these ERM projects included under PMKSY-AIBP are as under:

(Cost Rs. in Crore, Irrigation Potential (IP) in Th. Hectare)

S. No	Project Name	Name of the State	Latest Estimated Cost	Central Assistance Released	IP Target	IP Created	Status/Target Date
1.	Maniyari Tank	Chhattisgarh	159.95	47.20	14.52	14.52	Completed
2.	Kharung	Chhattisgarh	101.04	10.48	10.30	10.30	Completed
3.	Restoration & Mod. of Main Ravi Canal	Jammu & Kashmir	60.01	51.57	50.75	50.17	Almost Completed
4.	Anandpur Barrage Ph.I / Integrated Anandpur Barrage	Odisha	2864.36	125.93	8.88	3.31	December, 2022
5.	Rehabilitation of 1 <sup>st</sup> Patiala Feeder and Kotla Branch Project	Punjab	177.80	36.27	68.62	70.06	Completed
6.	Mod. of Gang Canal	Rajasthan	635.46	248.48	69.69	69.69	Completed
7.	NLBC System Project (New)	Karnataka	2405.84	999.40	105.00	104.60	December, 2021
	Total		6404.46	1519.33	327.76	322.65	

(Source: Answer in Lok Sabha on 29.07.2021)



## DRIP

### Inspection visit to Talanda Canal, Odisha

A technical team from Central Project Management Unit (CPMU) visited Talanda canal, Cuttack, Odisha to carry out the due diligence of the application of Cementitious Geo-synthetic Concrete Mattress (CGCM) lining on 06.09.2021. Odisha Water Resources Department (OWRD) has used this technology in a 1.5 km stretch from Jobra to Ranihat, Cuttack. The stretch was completed in a very short time of 45 days which is very less in comparison with conventional cement concrete lining.



### Training cum Workshop on 'Procurement Management under externally aided Scheme DRIP Phase II

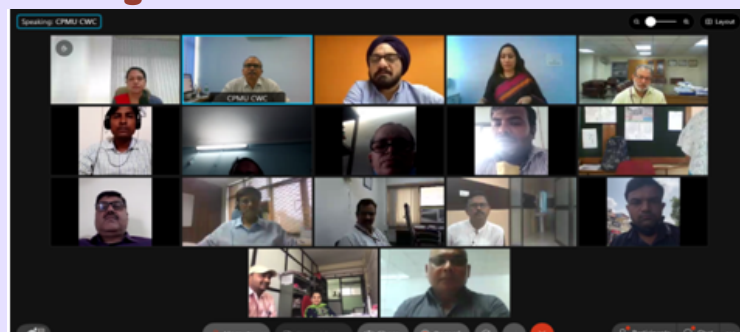
As a part of the Dam Safety Institutional Strengthening component of DRIP Phase II, Central Project Management Unit (CPMU) organised a two-day training cum workshop programme on "Procurement Management under DRIP-2". It was organized in two batches for 17 States during 20th -21st September and 27th -28th September, 2021. CPMU and World Bank experts delivered lectures on various aspects of procurement covering various topics including the Procurement Regulations of the World Bank, Project Procurement Strategy for Development (PPSD), Procurement Management Manual, Standard Bidding Document and its important provisions, Technical



Specifications, DRIP Phase I experience and challenges. The programme combined lectures, case studies and interactive sessions.

### Training Cum Workshop on Environmental and Social Safeguards under DRIP Phase-II

Training Cum Workshop on Environmental and Social Safeguards was organised by CPMU for DRIP Phase II Implementing Agencies during 24th -25th September 2021. CPMU and World Bank experts deliberated upon various topics of Environment and Social (E&S) Safeguards including Environment and Social Management Framework (ESMF), Environment and Social Commitment Plan (ESCP), Stakeholder Engagement Framework (SEF) and two dam specific documents viz. Environment and Social Due Diligence (ESDD) and Environment and Social Management Plan



(ESMP). The workshop saw active participation of almost 250 participants from various states.

## Financial Progress of Schemes

(Amount in Crore ₹)

Sl. No.	Scheme/Component Name	BE (2021-22)	Expenditure	Expenditure (in %)
1.	Development of Water Resources information System (DWRIS)	175.00	61.879	35.36%
2.	Investigation of Water Resources Development Schemes (IWRD)	12.000	3.462	28.85%
3.	Flood Management & Border Areas Programme (FMBAP)	27.320	4.205	16.04%
4.	Infrastructure Development (ID) Schemes	4.500	1.990	44.23%
5.	National Hydrology Project	23.905	3.295	13.78%

## Meeting to Review the Current Status of Bargi Diversion Project (under PMKSY) Of Madhya Pradesh

The issue of poor progress of works in Bargi Diversion Project (Madhya Pradesh) included under PMKSY primarily due to Tunnel Boring Machine having stuck up in Sleemanabad Tunnel was flagged during discussion during a briefing on a Starred Question in the monsoon session of Parliament. The Hon'ble Minister for Jal Shakti directed that the issue needs to be resolved at

### Reservoir Monitoring

CWC is monitoring live storage status of 130 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 44 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 130 reservoirs is 171.958 BCM which is about 66.70% 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 30.09.2021, the total live storage available in these reservoirs is 138.327 BCM which is 80% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding

### Meeting to discuss Afforestation along various reservoirs

A meeting under the Chairmanship of Secretary (WR) was held on 23.09.2021 through Video Conferencing to

### Water Sector News

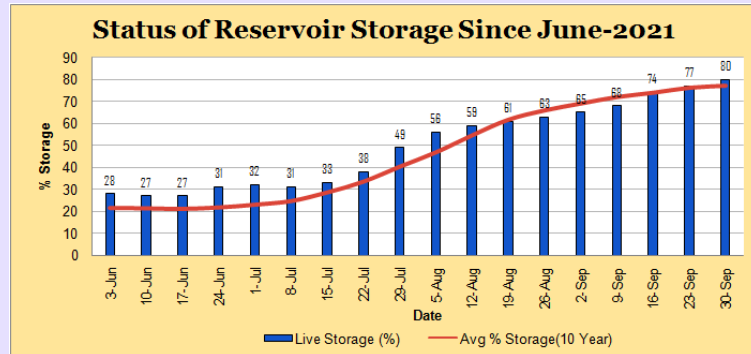
- ✈ PM calls Himanta as floods hit 5.74 lakh people in Assam (The Hindu, 01.09.2021)
- ✈ KCR seeks nod for 4 irrigation projects (Telangana Today, 07.09.2021)
- ✈ KRMB tells AP to submit DPRs of new projects (Telangana Today, 08.09.2021)
- ✈ 2-Yr Deadline to Revive Delhi's 22 Key Lakes, 200 Water bodies (Times of India, 10.09.2021)
- ✈ Centre steps up bid to take up TS, AP irrigation projects (Deccan Chronicle, 14.09.2021)
- ✈ Govt. to save Rs. 600 cr in Okhla Barrel Project : Min (The Pioneer, 17.09.2021)

### Gallery



Shri Nitya Nand Rai, Director, Hydrology (South) Directorate; as a DSRP team member visited Mirzapur, Uttar Pradesh for site inspection and making Dam safety review panel (DSRP) report of Upper Khajuri dam, Lower Khajuri dam and Sukhra dam from 13.09.2021 to 18.09.2021.

the earliest. As per the direction of Chairman, CWC, a virtual meeting was held under the chairmanship of the Chief Engineer (PMO) on 07.09.2021, to review the current status of the Bargi Diversion Project, action taken on earlier Reports, their road map for completion of the Project. The report has been submitted to the ministry on 27.09.2021.



period was 150.189 BCM and the average of last 10 years live storage was 132.962 BCM. Thus, the live storage available in 130 reservoirs as per the bulletin dated 30.09.2021 is 92% of the live storage of corresponding period of last year and 104% of storage of average of last ten years.

discuss Afforestation along various reservoirs.

- ✈ World Bank okays Rs. 1,168 cr aid for Shimla water supply project (The Tribune, 21.09.2021)
- ✈ Panel to address Polavaram flood threat fears in Odisha and Chhattisgarh (Times of India, 22.09.2021)
- ✈ NGT on Mekedatu : Top court refrains from passing order on TN plea (Deccan Herald, 25.09.2021)
- ✈ Karnataka directed to release 'some quantity' of water to T.N. (The Hindu, 28.09.2021)
- ✈ All reservoirs on Godavari brimming (Telangana Today, 29.09.2021)
- ✈ Tamil Nadu to form a regulator for water management soon (New Indian Express, 30.09.2021)



CWC team visited Tehri Dam site during 22nd -23rd September on the occasion of reaching reservoir level to FRL i.e. EL 830m. Team Visited bottom gallery, intermediate level outlet, power house, reservoir rim etc.





A VC with M/s HPPCL officials under the chairmanship of Chief Engineer, Designs (N&W) was held on 15.09.2021 to discuss the construction methodology of Barrage of Shongtong Karchham HE Project.

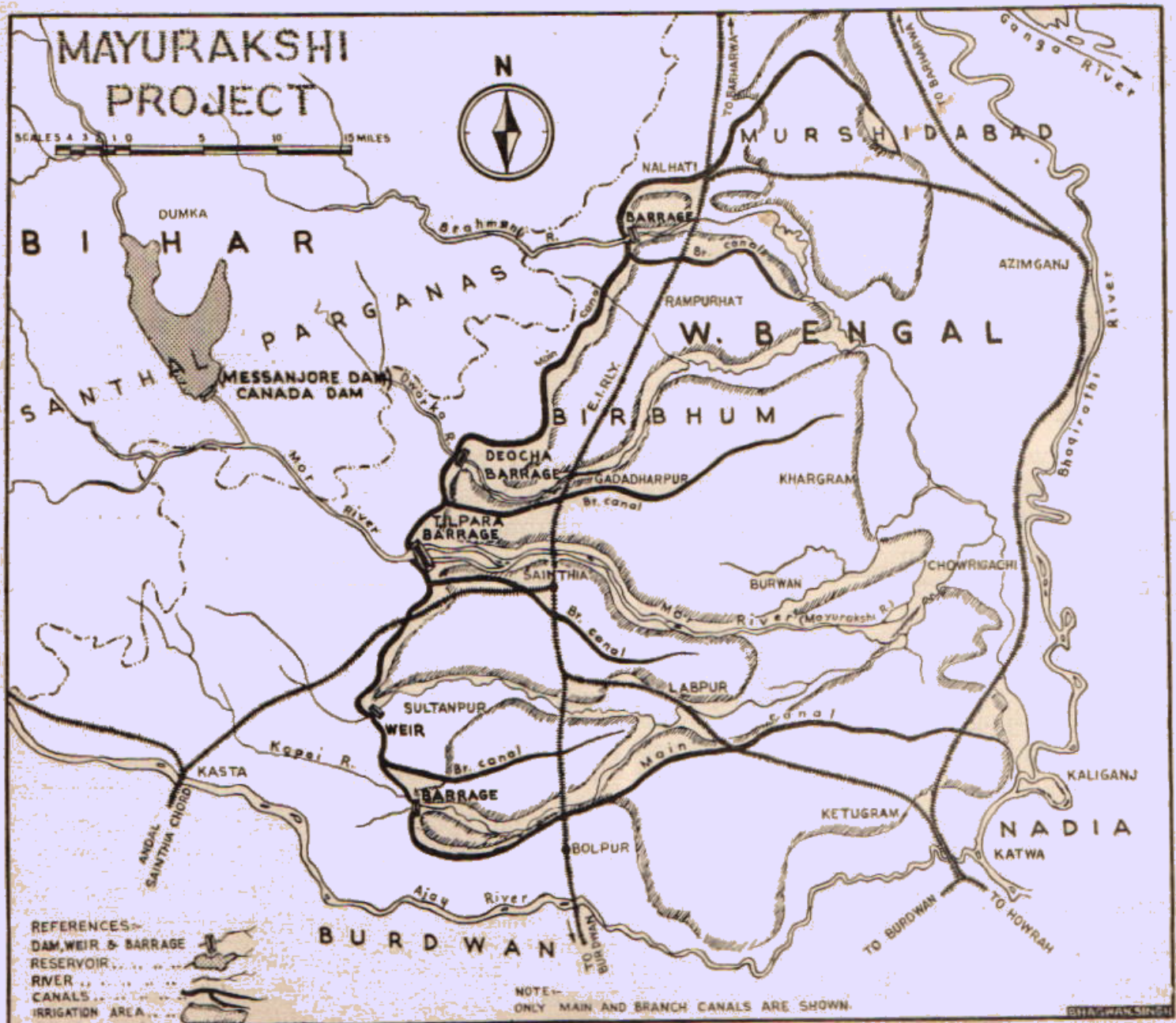


A committee comprising the experts of hydro-mechanical and dams design headed by Chief Engineer, DSO, CWC visited Sardar Sarovar Dam on 09.09.2021 and 10.09.2021 to suggest remedial measures for proper functioning of Penstock Stop logs operated by 100T spillway Gantry Crane of RBPH, Sardar Sarovar Project, Gujarat.

## History- Mayurakshi Project

After independence, all parts of the country did not have adequate means of irrigation and were completely dependent on monsoon rains. Even in West Bengal, where there was heavy flood in the monsoon, all the streams used to go into the abyss during the dry season.

Thus excess water in monsoon and water scarcity in dry season was a problem. We had proof that the dam was the only way to solve both these problems besides supplying electricity. The Mayurakshi project was an important project among other projects in West Bengal.



## The River

The Mayurakshi river is a hill-stream which takes birth in the uplands of Santhal Parganas district in Jharkhand. Flowing in a north-eastern direction it enters West Bengal territory in Birbhum district and after a total run of 150 miles joins the Bhagirathi near Duttabati.

## The Project

The history of the project dates back to 1928 when investigations started following a sad record of periodic crop failures in Birbhum. A scheme was finalised before the Second World War, but was put aside due to war conditions. As in the case of D.V.C. projects, the dam site lies in Jharkhand (then Bihar) territory, but most of the benefits would go to West Bengal. Negotiations had to be held between the two governments to come to an agreement regarding the project.

## Project Features

The Mayurakshi project comprises a dam at Messanjore in Jharkhand with a power house at its foot, a barrage at Tilpara in west Bengal and a major canal system taking off from the Tilpara barrage.

## The Messanjore Dam

The dam is situated in Jharkhand area at Messanjore, 20 miles north-west of Suri, the headquarters of the Birbhum district. At this place the river flows through a narrow valley providing a suitable dam site. The dam measures 2100 ft. from abutment to abutment out of which a length of 740 ft. is made up by the spillway. The top of the dam stands 150 ft. above the deepest foundation level.

## The Barrage

The irrigation barrage is satisfied across the river 20 miles downstream of the dam and 2 miles from the Suri, in West Bengal. It is 1013 ft. long and consists of 15 bays of 60 ft. width and can safely discharge 290,000 cusec of peak flood.

On the either side of the barrage two head regulators have been provided. Each head regulator has five vents, 20 ft. wide. These regulators divert the water headed up by the barrage into the canals on two banks. The barrage is founded on reinforced concrete raft from end to end.

## Canals

Two main canals known as the North bank and the South bank canals take off from the head regulators on

either side. Each is about 75 miles long and capable of carrying a discharge of 3500 cusec- about 13 lakh gallons per minute. The total length of the canal structures such as regulators, aqueducts, canal falls, siphons, bridges, etc., scattered over an area of 1340 square miles.

Of the canal structures the Dwarka and Brahmini barrages on the North canal and the Bakeswar and Kopai barrages on the South canal are the most important. These are constructed across homonyms rivers.

## Mayurakshi Left Bank Canal

In addition to the canal system that stem from the Tilpara barrage another springs from the dam and irrigates areas in Jharkhand. The Mayurakshi Left Bank Canal is 12.5 miles long and irrigates 23270 acres of land lying in Santhal Parganas.

## Power

A power house is also constructed at the foot of the dam with two units of 2000 kW each. This generates 2000 kW of firm power and 4000 kW of seasonal power. To meet this fluctuation, it was proposed to link up this power house with the D.V.C. grid.

## Progress

Construction of the Tilpara barrage started early in 1948 and was completed by June 1951 at a cost of Rs. 1.1 crore. Excavation of canals was also progressing along with the barrage construction. The Canal System was declared open by Dr. B.C. Roy, Chief Minister, West Bengal, in July 1951 and about a lakh acres of land was brought under irrigation in the same year. Of the canal structures the Brahmini barrage was completed in June 1954 and Dwarka barrage in June 1953. The dam was completed in 1955.

## Renamed "Canada Dam"

The new Messanjore Dam was formally opened on 1st November 1955 by Mr. Lester Pearson, Canada's Secretary of State for External Affairs. Opening the dam he observed that Mayurakshi project bore witness to the success of the Colombo plan and to the friendship between the peoples. As a token of appreciation for Canadian aid, the dam was renamed "Canada Dam".

(Source: Bhagirath, December 1955)



## 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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