



Dr. R.K. Gupta
Chairman, CWC

Message

During the month of March 2022, the Hon'ble President of India Shri Ram Nath Kovind presented the third National Water Awards and launched the Jal Shakti Abhiyan: Catch the Rain 2022 campaign in New Delhi on 29.03.2022. He urged everyone to work on the focused interventions of this edition of the campaign and emphasized on role of district magistrates and village sarpanchas in motivating the local populace for active participation in water conservation works.

On the occasion of World Water Day celebrated on 22nd March, the Hon'ble Prime Minister Shri Narendra Modi urged people to take the pledge to save every drop of water. He also appreciated all those individuals and organizations who are working towards saving water. CWC also

celebrated World Water Day by Organising awareness campaign and activities at HQ and field units.

Under PMKSY-AIBP, 99 prioritized projects were included for financial assistance during the year 2016. Out of these several projects have been completed and remaining projects are in the advance stages of completion. Further, as per the approval of PMKSY for the period 2021-26, DoWR, RD&GR has been mandated to include additional projects under PMKSY-AIBP, beyond the ongoing projects. The revised guideline for PMKSY-AIBP was issued in Feb-2022. In line with the Guidelines, the Screening Committee of DoWR, RD&GR has recommended for funding under PMKSY-AIBP for five additional projects in its 2nd meeting held on 09.03.2022 under the chairmanship of Secretary, DoWR, RD&GR. The details of the projects were worked out by CWC with the concerned State Govt. The total CCA for these projects is around 2.42 lakh ha.

Similarly, over the past seven years, there has been regular demand from States for inclusion

of techno-economically viable flood management projects for central funding for their inclusion in Flood Management & Border Areas Programme (FMBAP). In this regard, the meeting of Inter-Ministerial Committee on FMBAP for the period 2021-2026 was held under the chairmanship of Secretary, DoWR, RD&GR on 04.03.2022 for consideration of proposals. In the meeting, five projects were recommended by the Committee for inclusion under FMBAP.

The project "Erosion Protection at Right Bank & Ghat construction work at Left Bank of Mandakini River in Chitrakoot" was accepted for consideration of its techno-economic viability in the 149th meeting of the Advisory Committee of DoWR, RD&GR on Irrigation, Multipurpose and Flood Control Projects held on 07.03.2022.

I hope that our readers shall find the content of this newsletter interesting and share with us their valuable feedback.

R.K. Gupta

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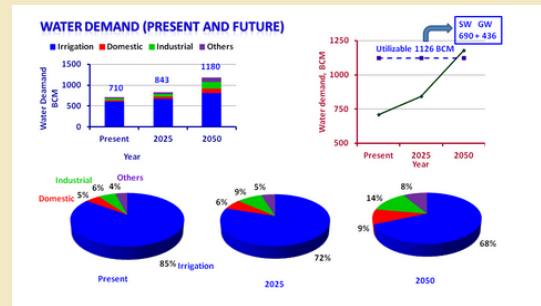
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Keynote address by Chairman, CWC in the Inaugural Session of Roorkee Water Conclave (RWC) 2022

The bi-annual Roorkee Water Conclave (RWC) was held during 02-04th March, 2022 on the theme "Water Security for Sustainable Development". It was jointly organized by IIT Roorkee and NIH Roorkee. During the event, Dr. R. K. Gupta, Chairman, CWC & ex-officio Secretary to Govt. of India delivered Keynote address through the virtual mode.



Meetings of the Screening Committee for PMKSY-AIBP Projects

The first meeting of the "Screening Committee" for the inclusion of MMI projects and ERM works of Projects under PMKSY-AIBP was held on 01.03.2022 in New Delhi under the chairmanship of Secretary, DoWR, RD&GR, MoJS. In this meeting, key features of PMKSY-AIBP for implementation during 2021-26 and the way

forward for the inclusion of various projects proposed by State Governments under PMKSY-AIBP, were discussed. Five projects as detailed below have been recommended for funding under PMKSY-AIBP by the Screening Committee of DoWR, RD&GR in its 2nd meeting held on 09.03.2022.

S.N.	Name of Project	CCA (ha)	Target Date	Benefitted Districts
1	Parwan Major Multipurpose Project, Rajasthan	CCA: 2.01 Lakh ha	December 2023	Kota, Baran, Jhalawar
2	ERM of Sukla Irrigation Project, Assam	CCA: 12150 ha UIP: 17900 ha	March 2024	Baksa
3	Formation of Flood Carrier Canal from Kannadian Channel to drought prone areas of Sathankulam, Thisayanvilai by interlinking Tamiraparani, Kurumeniyar and Nambiyar rivers	CCA: 23040 ha UIP: 23040 ha	September 2022	Tirunelveli and Thoothukudi
4	Guruvarya Late Laxamnraoji Inamadar Lift Irrigation Scheme (Jihe Kathapur Lift Irrigation Scheme)	CCA: 35540 ha UIP: 27500 ha	June 2025	Satara
5	Nadaun Medium Irrigation Project	CCA: 2980 ha UIP: 6471 ha	March 2023	Hamirpur

149th meeting of Advisory Committee of DoWR, RD&GR on Irrigation, Flood Control and Multipurpose Projects

The 149th meeting of Advisory Committee of DoWR, RD&GR for consideration of techno-economic viability of Irrigation, Multipurpose and Flood Control Projects was held on 07.03.2022 through video conferencing under the chairmanship of Secretary, DoWR, RD & GR, MoJS.

The meeting was attended by the representatives from Govt. of Madhya Pradesh besides CWC, CGWB, MoTA, MoEF&CC, CEA, Niti Aayog, MoF etc. One project, as per the details below was accepted by the Advisory Committee in the meeting.

Name of the Project	State	Project Type	Estimated Cost (in Rs. Crore)	Intended Benefits
Erosion Protection at Right Bank & Ghat construction work at Left Bank of Mandakini river in Chitrakoot District-Satna	Madhya Pradesh	Flood Control	30.09 (PL: April, 2021)	Population benefitted- 3650 Area benefitted- 181.5 ha BC ratio- 1.11

Meeting of Inter-Ministerial Committee on Flood Management and Border Areas Programme (IMC-FMP)

The meeting of Inter-Ministerial Committee on Flood Management & Border Areas Programme (IMC-FMBAP) for the period 2021-2026 was held under the chairmanship of Secretary (WR, RD & GR) on 04.03.2022

for consideration of proposals under Flood Management & Border Areas Programme (FMBAP). In the meeting, five projects were recommended by the Committee for inclusion under FMBAP. Details of these projects are as under:

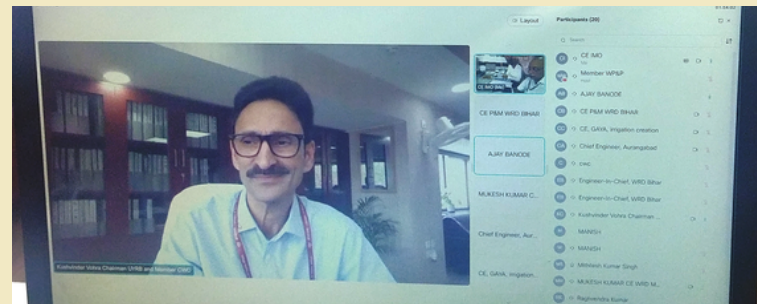
Sl. No.	Scheme Name	Estimated Cost (Rs in Crore)	FMP* cost (Rs in Crore)
1	Comprehensive Flood Management works on river Jhelum & Tributaries-Phase-II-part-A (J&K)	1623.43	1601.93
2	Protection of village Domgaon, Dababeel, Chotonilibari, Debargaon, Dangaigaon, Birengaon, Bherbheri, Rowmari, Khagrabari, Sanyashibari, Uttar Popragaon and Popragaon from the erosion of river Aie (Assam)	125.21	115.945
3	Critical flood control and anti erosion works along rivers in Manipur river basin(Manipur)	460.42	460.42
4	Extension of left Bhutahi Balan embankment from Km 25.00 to Km 31.610 (up to Ghoghardiha to Nirmali Railway line near Parsa halt) with Revetment (Bihar)	48.44	45.13
5	Providing flood protection work for Kanda Pattan (Beas River) Sakrain, Malthod, Thothu and Samour khad in Tehsil Sarkaghat, Distt Mandi (H.P.)	145.73	141.118

*Flood Management Program

Revised Cost Estimate of North Koel Reservoir Project

A meeting was held on 25.03.2022 through Video Conferencing under the chairmanship of Shri Kushvinder Vohra, Member (WP&P) and ex-officio Additional Secretary to Govt. of India, CWC with the officials of WRD, Govt. of Bihar, WRD, Govt. of Jharkhand, CWC, DoWR, RD&GR and WAPCOS to firm up the views regarding revision/update required over 7th RCE of the cost of the balance works of North Koel Reservoir Project.

WAPCOS informed that officials of WAPCOS visited the project during 28-02-2022 to 05-03-2022 along with the officials of WRD, Govt. of Bihar & Jharkhand, of their respective jurisdiction for identification & finalization of the no. of the additional structures required to be included in the updated 7th RCE. Accordingly, the 7th RCE of the project has been updated based on prevailing SoR of 2021 in Bihar & Jharkhand. The updated 7th RCE of the project is under further updating with regard to price escalation for 'steel and cement' as per current market rates. Further, the same, after finalization in consultation with the respective State Govt. officials,



will be submitted to Cost Appraisal Dte. of CWC for examination/acceptance by the Advisory Committee of DoWR, RD&GR.

After the detailed discussions in this regard, Member (WP&P), CWC directed that the 7th RCE may be updated on the basis of current Schedule of Rates and keeping the provisions in-line with the approved 7th RCE as far as possible. Inclusion of any additional provisions, if required, may be kept to bare minimum with due justification. The whole exercise may be completed in a strict time bound manner for the submission of consolidated updated 7th RCE for examination in CWC and subsequent approval of AC of DoWR, RD & GR.

Webinar on Legal and Institutional Framework for Dam Safety in India

Shri J. Chandrashekhar Iyer, Member (D&R), CWC & ex-officio Additional Secretary to Govt. of India gave the Inaugural Address on 09.03.2022 during the inauguration of 'Webinar on Legal and Institutional Framework for Dam Safety in India'. He gave brief details about the Dam Safety Act 2021, various Dam Safety

aspects & role of CWC in Dam Safety and structure of National Dam Safety Authority (NDSA) & National Committee on Dam Safety (NCDS). He also gave his concluding remarks during the wrap up session of the webinar on 11.03.2022.

Various meetings held to review works under Polavaram Irrigation Project

A meeting was taken by Shri Gajendra Singh Shekhawat, Hon'ble Minister of Jal Shakti, Government of India on 04.03.2022 at Polavaram dam site which was attended by officials of MoJS, Polavaram Project Authority, Water Resources Department, Govt. of Andhra Pradesh, CWC, CSMRS, WAPCOS, CWPRS and all agencies involved in the design and execution of the project. Hon'ble Minister visited Indukuru-1 R&R colony in East Godavari district and Taduvai R&R colony in West Godavari district and interacted with Project Displaced Families (PDF) and enquired about the R&R colony, amenities, entitlements etc. Shri J. Chandrashekhar Iyer, Member(D&R), CWC & ex-officio Additional Secretary to Govt. of India who is holding the additional charge of CEO, PPA made a presentation on the project status and issues.



reaches and the right bank slope stability and the decisions taken thereof.

The Chief Executive Officer briefed the follow up action taken on the decisions taken in the review meeting of Hon'ble Minister during his visit to Polavaram Project on 04.03.2022.

During the review meeting Hon'ble Minister directed that Advisor to MoJS shall convene a meeting of all stakeholders viz. WRD, PPA, MoJS, CWC, DDRP, CSMRS, WAPCOS, Executing Agency and others concerned to expeditiously address the pending design issues pertaining to scoured reaches in the downstream coffer dam and in the two gaps of ECRF dam. Accordingly, Advisor to MoJS convened a meeting on 10.03.2022 to resolve the design issues.

Another meeting was chaired by Shri Gajendra Singh Shekhawat, Hon'ble Minister of Jal Shakti, and Government of India on 16.03.2022 at New Delhi to review the critical issues of Polavaram Irrigation Project. Advisor to Minister of Jal Shakti explained about the deliberations of the meeting convened by him with all the stake holders to address the issues raised by WRD, AP regarding design and construction of the downstream coffer dam, ECRF Dams (in Gap-I & Gap-II) in the scoured

In pursuance of DoWR, RD & GR request to CWC for seeking its comments in the matter including balance cost and benefits likely to be observed at +41.15 m level as projected by GoAP, four internal meetings were held under the chairmanship of Shri Kushvinder Vohra, Member (WP&P), CWC & ex-officio Additional Secretary to Govt. of India, with CWC (HQ) officers on 27.01.2022, 31.01.2022, 21.02.2022 and 14.03.2022 for examination of compliance submitted by GoAP. In addition to the above, two external meetings were also held on 22.02.2022 and 05.04.2022 under the chairmanship of Member (WP&P), CWC with PPA, GoAP and CWC Officials to review the progress on the assessment of partial benefits and balance cost at +41.15 m level.

Based on the above meetings and correspondences, the balance cost and benefits likely to be observed at +41.15 m level as projected by GoAP are under the final stage of scrutiny in CWC.

Meeting for review of progress of preparation of National Register for Irrigation Projects in India

In a meeting held in the Chamber of Member (WP&P) on 08.10.2021 attended by Secretary General, ICID (Former Chairman, CWC) Shri A. B. Pandya, it was decided to prepare a National Register for Irrigation Projects in India also.

It was noted that earlier, up to X Plan, a compendium of Major & Medium Irrigation Project was prepared in the Project Monitoring Organization on the basis of data provided by the erstwhile Planning Commission. Additionally, a High Level Committee for Reassessment of UIP, IPC & IPU has also been constituted under the chairmanship of Chairman, CWC.

The format finalized by the High Level Committee was modified for collection of data for National Register for Irrigation Project and sent to the field Chief Engineers

for updating information. The modified format has also been included in the revised guidelines of the AIBP and National Projects. As per the provision made in the guidelines, all the States are required to submit the details of State's Major and Medium Irrigation Projects in the aforementioned Proforma at least once in a year. In this context, Member (WP&P) chaired a video conferencing meeting on 02.03.2022 with field Chief Engineers of Central Water Commission (CWC) to inter-alia review the progress of data collection for preparation of National Register for Irrigation Projects. During the meeting Member emphasized that these are the core activities of CWC and desired that field units of CWC to collect the data, verify it and verified data to be submitted to CWC, HQ. So far, the data from 17 States / UTs have been received which is under examination.

Meeting related to inter-State agreement for Kishau Multipurpose Project

Kishau Multi-Purpose Project envisages construction of a 236 m high concrete dam across river Tons in Dehradun Distt. of Uttarakhand with a live storage of 1324 MCM. The benefits envisaged are drinking water supply (0.5MAF), irrigation use and generation of 660 MW of power. The project is being taken up for techno-economic clearance by Uttarakhand Jal Vidyut Nigam limited (UJVNL).

The project has been included in the Government of India approved scheme of National Project in Feb 2008. The scheme was launched during XI plan with a view to expedite completion of identified National Projects for the benefit of people. National Projects are provided financial assistance for cost of irrigation and drinking component in the form of Central grant.

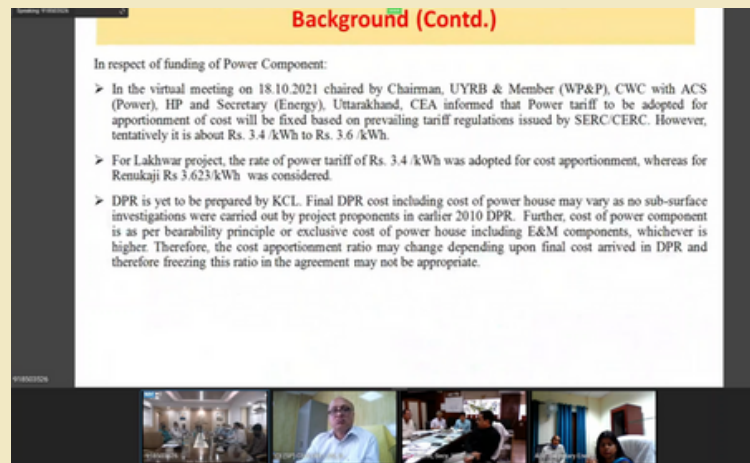
A meeting was held on 22.03.2022 to review the implementation of Kishau Multipurpose Project under the Chairmanship of Shri Pankaj Kumar, Secretary, DoWR, RD& GR, Ministry of Jal Shakti, Govt. of India. Officials from DoWR, RD&GR, CWC, Govt. of Haryana, Uttarakhand, Himachal Pradesh had attended the meeting.

During the meeting, UYRB suggested that one or more beneficiary States other than Himachal Pradesh and Uttarakhand may come forward to bear the cost of power component beyond the above referred levels considered acceptable by the two implementing States.

Meeting to review implementation of Renukaji Dam Project

Renukaji Dam Project has been contemplated as a storage scheme on river Giri, a tributary of river Yamuna, to augment the drinking water supply of National Capital Territory of Delhi. The Project envisages construction of 148-m high rockfill dam at about 5 km upstream of existing Jateon Barrage and about 375 m downstream of Confluence of Jogar-ka-khala with river Giri in District Sirmour of Himachal Pradesh. It is also proposed to utilize the available head to generate 40 MW (2x20 MW) of power in the power house proposed at the toe of dam. The project has been included in the Government of India approved scheme of National Project in Feb 2008. The scheme was launched during XI plan with a view to expedite completion of identified National Projects for the benefit of people. National Projects are provided financial assistance for cost of irrigation and drinking component in the form of Central grant.

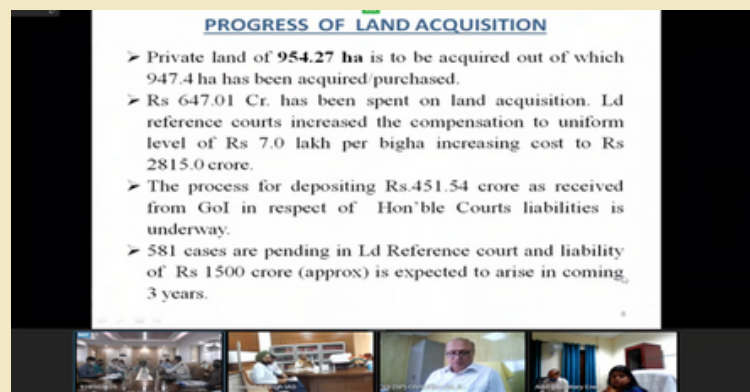
A meeting was held on 22.03.2022 to review the implementation of Renukaji dam (National) project under the Chairmanship of Shri Pankaj Kumar, Secretary, DoWR, RD & GR, Ministry of Jal Shakti, Govt. of India. Officials from DoWR, RD & GR, CWC, Govt. of Haryana, Uttarakhand, Himachal Pradesh had attended the



Alternatively, all the other beneficiary States can join hands and fund 90% of the power component of the project. Additional Chief Secretary, WRD, Government of Haryana opined that the liability on the part of each of the Co-basin State in both the cases needs to be worked out before taking up the matter further.

Further, various issues discussed such as share between Uttarakhand and Uttar Pradesh and withdrawal of Yamuna waters by Himachal Pradesh and Uttarakhand from place of their choice, it was opined that such issues can be taken up separately at UYRB level.

Since in the meeting all the party states were not present chairman of the meeting directed to hold a separate meeting in this regard shortly.



meeting.

In the meeting HPPCL was suggested to hiring of International consultant or CWC, associated with WAPCOS to expedite the issues related to management and quality control. HPPCL was suggested to expedite the resolution of pending court cases on the issue of Land Acquisition to avoid further accumulation of interest liability and also on to put up the issue at rest to enable proceeding ahead with the project implementation. During the meeting, it was suggested to the Project Authority that preconstruction activities, infrastructure development as well as preparation of tender documents etc., need to be taken up urgently.

Meeting for review of progress of preparation of Report on Irrigation Development from Major and Medium Projects

A meeting was taken by the Member (WP&P) during October 2021 to review the works of the field offices. In the meeting, Member (WP&P) emphasized that reports viz. "Irrigation Development from Major and Medium Irrigation Projects" which used prepared for each state on yearly basis, are important tool to understand the status of the development of water resources sector of the State and areas requiring critical attention and as such the preparation of these for each State on yearly basis is necessary.

Member (WP&P) desired that all concerned field offices may start preparing such reports which should be updated on annual basis. Accordingly, letters to field Chief Engineers were issued with a request that State wise reports in respect of States under jurisdiction of

Technical Session II-Theme E Policy and Governance at Roorkee Water conclave 2022

Indian Institute of Technology (IIT) Roorkee and National Institute of Hydrology (NIH) Roorkee jointly organized the second edition of Roorkee Water Conclave 2022 on "Water Security for Sustainable Development" from 02nd-04th March, 2022.

Shri Kushvinder Vohra, Member (WP&P), CWC and ex-officio Additional Secretary to Govt. of India, chaired a technical session on the theme "Policy and Governance" on 03.03.2022 via virtual mode. At the onset of the technical session, Member (WP&P), CWC mentioned the importance of Policy and Governance issues in the water sector and briefed the speakers about salient features of the existing National Water Policy (NWP) and priorities envisaged therein. He further highlighted that most of the rivers in the country are inter-State and many inter-State differences and disputes occur while States plan the regulation and development of the waters of these rivers. The governance issues likely to be faced by policymakers in the next decade due to manifold increase in usage of water in all competing sectors viz. irrigation, domestic, industrial and environmental, were

each field organization of CWC may be prepared by each field organization in consultation with concerned State Government on yearly basis.

To review the progress of data collection for the preparation of report on Irrigation Development from Major and Medium Projects, a video conferencing meeting taken by the Member (WP&P) with field Chief Engineers of Central Water Commission (CWC) on 02.03.2022. During the meeting, he has desired that said report may be prepared by March, 2022 for the period up to year 2020-21 and sent to CWC HQ. As of now the Report on Irrigation Development from Major and Medium Projects have been received from 6 States namely Chhattisgarh, Jharkhand, Madhya Pradesh, Nagaland, Sikkim and Telangana.



touched upon. Further, he emphasized the role of 3 R's i.e. Reduce, Reuse and Recycle in policy and governance for meeting the future demands of water.

After the remarks by Member (WP&P), CWC, presentations were made by speakers of the technical session covering topics such as international cooperation in the water sector, water governance, water economics, wastewater quality improvement techniques, gender mainstreaming in the water sector, hydro-chemical assessment of rivers and others.

PIB meetings on 4th Revised Cost Estimates/Completion cost of Mangdechhu HEP in Bhutan

PIB Meeting on 4th Revised Cost Estimates/Completion Cost of Mangdechhu Hydroelectric Project (720 MW), Bhutan was held on 24.03.2022 under the chairmanship of Finance Secretary and Secretary (Expenditure), Govt.

राजभाषा कार्यान्वयन समिति की बैठक

अध्यक्ष, केंद्रीय जल आयोग की अध्यक्षता में केंद्रीय जल आयोग-मुख्यालय की राजभाषा कार्यान्वयन समिति की 147वीं बैठक दिनांक 17.03.2022 को आयोजित की गई। इस बैठक में सितंबर, 2021 और दिसंबर, 2021 के तिमाही आंकड़ों का तुलनात्मक विश्लेषण किया गया।

of India. It was attended by Chief Engineer, Designs (E&NE) Unit, Director, HCD (E&NE) Dte. and Director Cost Appraisal (HWF) Dte. Inputs on the cost and technical aspects of the project were provided by CWC in the meeting.

आगे, अध्यक्ष, केंद्रीय जल आयोग ने सभी कार्यों को हिन्दी में करने तथा राजभाषा हिन्दी के प्रगामी प्रयोग को बढ़ावा देने की पूरी कोशिश करने को कहा। साथ ही केंद्रीय जल आयोग में राजभाषा नीति एवं नियमों के अनुपालन तथा सरकारी कामकाज में राजभाषा हिन्दी के प्रयोग में निरंतर हो रही वृद्धि पर संतोष व्यक्त किया।

“World Expo-2020” in Dubai

As per the direction of DoWR, RD&GR, MoJS, CWC under the chairmanship of Member (D&R), CWC suggested relevant material to be presented at the World Expo in Dubai from 20th to 26th March, 2022. The suggested topics by CWC were National Water Mission, National Mission for Clean Ganga, Jal Jeevan Mission, Jal Shakti Abhiyan, Water Resource Development in India, Ground Water Management in India, Dam Safety Management in India, A journey of Irrigation development in India, Flood Management in India, Technological Development in the water resource sector in India, National Hydrology Project, WAPCOS, MoJS and Participatory Irrigation Management. Later on, as per the direction of the Ministry, CWC provided detailed material along with existing documentary on PMKSY Scheme to IEC Section after discussion with Chairman, CWC and Member (D&R), CWC.

The Hon'ble Minister Jal Shakti visited the Expo in Dubai on 23.03.2022. A team of officials from MoJS including Shri Sanjay Awasthi, (JS-RD&PP), Shri Girraj Goyal, Director-IEC, Shri Ramjeet Verma, SE, CWC, Faridabad, Shri K.K. Rao, AD, NWDA, Dr. Bhushan Lamsoge, Scientist-E, CGWB, Shri Amit Shukla, Director-DDWS and Mr. Karanjit, DDWS also participated in the Expo. The final topics along with static posters and digital display



of documentary film, which were displayed at Word Expo Dubai are given as below.

Screen-1: Groundwater Management

Screen-2: Water Conservation

Screen-3: Story of Dams in India

Screen-5: National Mission for Clean Ganga (NMCG)

Screen-6: Swachh Bharat Mission- Grameen

Screen-7: Jal Jeevan Mission

Screen- 8: National Hydrology Project (NHP)

Screen-9: Pradhan Mantri Krishi Sinchayee Yojana

Screen-10: WAPCOS

Screen-11: Overview of Ministry of Jal Shakti

Screen-12: National Water Awards

DRIP

Construction Site visit to Kuttiyadi dam and Karapuzha Dam of Kerala WRD

Construction Supervision and Quality Assurance (CS&QA) visit was carried out during 25-26th March 2022, to inspect the rehabilitation activities carried out under DRIP Phase II at Kuttiyadi dam and Karapuzha dam. The Inspection visit was undertaken by the CWC officials led by the Chief Engineer, DSO along with officials from Kerala WRD, Independent Experts and representatives of the concerned contractor. Recommendations were given by the CWC team on quality control and various bottlenecks of the project.



Meeting to review the progress and current status on the issue of Deficit discharge in the Rajasthan portion of Narmada Main Canal

The progress of the work “Analysis and resolution of deficit discharge in the Rajasthan portion of Narmada Main Canal” which is entrusted to CWC is constantly being reviewed through a series of meetings through video conferencing mode under the chairmanship of Member (D&R), CWC. The fourth meeting in this regard was held on 23.03.2022 through video conferencing under the chairmanship of Shri J. Chandrashekhar Iyer, Member (D&R), CWC & ex-officio Additional Secretary to Govt. of India to review the progress and status. Officers from CWC, NCA, CWPRS and the State of Gujarat and Rajasthan participated in the meeting.

In this meeting, the mathematical model prepared by CWPRS was discussed and it was decided that to satisfactory calibration of model, more field observations are required to be carried out by CWPRS. A protocol for field measurement was jointly prepared by CWC and CWPRS. Subsequently, CWPRS team carried out field data observations from 28.03.2022 to 01.04.2022. The field observations were carried out by CWPRS jointly with officers from State Govt of Gujarat and Rajasthan. Officers from MTBO, Gandhinagar, CWC and NCA also participated in this exercise.

33rd meeting of the Committee on Congresses/Conferences (C-CONGR)

The International Commission on Irrigation and Drainage (ICID) is a not-for-profit international organization working in the field of irrigation, drainage, and flood management to promote and achieve sustainable agriculture water management. The International Executive Council (IEC) is highest decision-making body of ICID, responsible for management of affairs of ICID. ICID consists of various National Committees (NCs) who represent their respective countries. Indian National Committee on Irrigation and Drainage (INCID) is India's National Committee of ICID.

ICID organizes International Congress on Irrigation and Drainage on triennial basis and IEC meets every year. The 25th International Congress will be hosted by India along with 75th IEC, at the coastal city Vizag (A.P.) during 6th -13th November 2023 under the aegis of CWC, INCID and Govt of Andhra Pradesh.

C-CONGR is the ICID Committee on Congresses/Conferences to discuss the past and the upcoming ICID events. The C-CONGR has representatives from the Organizing Committees of the past events, the upcoming events, ICID, among others. A meeting of the

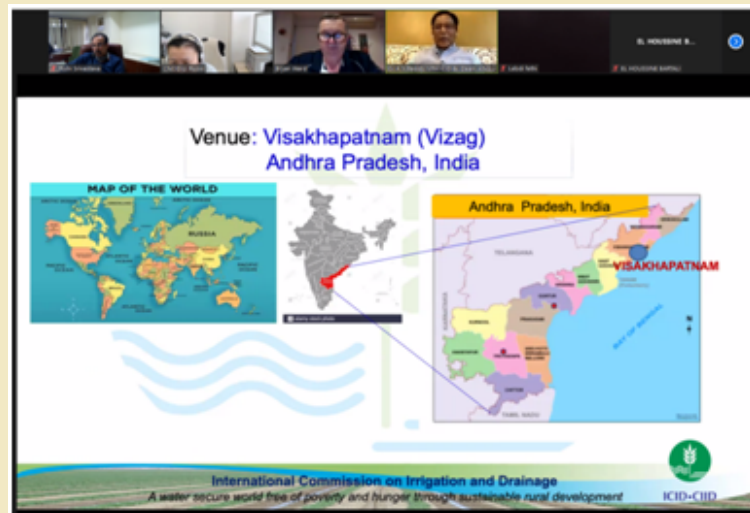
Preparatory activities for organizing 25th Congress and 75th IEC

The Congress is being held in India after more than five decades. The approval for holding the 25th Congress and 75th IEC at Vizag, Andhra Pradesh in November 2023 was accorded in the 72nd IEC Meeting and 5th African Regional Conference, Marrakech, Morocco in 2021.

The Congress and other events at Vizag are expected to have around 1200+ participants from all around the globe. The scale and stature of the event require robust planning keeping in mind the finest of the details.

In view of this, Shri Kushvinder Vohra, Member(WP&P), CWC and ex-officio Additional Secretary to Govt. of India, Shri Rishi Srivastava, Director, Remote Sensing Dte., CWC from INCID Secretariat and Dr K. Yella Reddy, Hon. Vice President ICID, along with other officers from KGBO, CWC, ANGRA University (Guntur) & the State Govt of Andhra Pradesh visited Vizag during 8-10th March, 2022 to see/assess the facilities available at various venues in Vizag to manage different events and also to discuss the other modalities involved. The team also met Prof. P.V.G.D. Prasad Reddy, Vice-Chancellor, Andhra Pradesh University to discuss the facilities available in the University campus.

The Team visited various venues/facilities which include



C-CONGR was held in virtual mode on 03.03.2022 to discuss various ICID events held in the past or proposed to be held in 2022 and 2023. The new composition of the C-CONGR, having four representatives from India, was accepted by the Committee during the meeting. The Indian representatives in the C-CONGR include Shri Kushvinder Vohra, Member (WP&P), CWC, Shri Rishi Srivastava, Director (CWC), Shri Sunil Kumar, Director (CWC) and Dr. K Yella Reddy, Vice President Hon. and Dean, ANGRA University, Guntur (AP).



Hotels, Andhra University Convention Centre, VMRDA Children's Arena, Vizag Convention Center, AP University Campus, IIM Vizag Campus etc. Based on the visit & subsequent discussion, INCID Secretariat has prepared a Visit Report highlighting the various facilities offered by the visited venues and the Visit conclusion.

Further, for making the arrangements towards logistics, local transport, venue selection and management, conducting of different sessions etc, an Organizing Committee, headed by Member (WP&P) CWC, has been constituted by the INCID secretariat, having members from CWC, ANGRA University, ICID Central Office and the State Govt. of Andhra Pradesh.

Panellist in Sansad TV- Mudda Aapka Show on World Water Day on 22-03-2022

Shri Kushvinder Vohra, Member(WP&P), CWC and ex-officio Additional Secretary to Govt. of India participated as a panellist on Sansad TV's show "Mudda Aapka" on occasion of World Water Day which is celebrated every year on 22nd March. The theme of World Water Day this year was "Groundwater: making invisible visible". The programme was joined by Prof. A.K. Gosain, IIT-Delhi and Shri Anshuman, Associate Director (TERI-Water Resources).

Member (WP&P) informed that spreading awareness among masses regarding conservation of water resources, discussing issues related to water security and their solutions, is one of the prime objective of celebrating World Water Day, as public participation plays significant role in achieving water security. Member (WP&P) also shared an interesting fact about World Water Day that although United Nation started celebrating World Water Day in 1992, Central Water Commission has been celebrating Water Resources Day long before that.

Member (WP&P) further informed that as per statistics, on an average about 60% of total annual replenishable GW available for extraction is utilized in India. The figures are of concern and if extraction goes beyond 70% the situation will be alarming. Issues of GW salinity, contamination of GW with arsenic, fluoride and heavy metals were flagged.

Member (WP&P) further highlighted that in States like Punjab, Haryana and Rajasthan the extraction of GW is more than annual replenishable GW, due to various factors. He stated that demand side management and behavioural changes of water users is the need of hour. In this direction, various efforts by Ministry of Jal Shakti, Govt. of India through schemes/ programmes like

9th Meeting of Indian National Committee on Surface Water (INCSW)

The 9th Meeting of INCSW was held on 25.03.2022 under the chairmanship of Chairman, CWC with an agenda to discuss Final Reports of 28 R&D schemes and to consider a note on the invited research theme "Towards achieving full irrigation potential in India".

The details of 28 R&D schemes were put up before the Committee. The Committee recommended acceptance of the final reports of all the 28 research schemes and recommended the release of institutional overhead and other balance payments, if any.

Further, the Committee discussed the note on "Towards achieving full irrigation potential in India".



National Aquifer Mapping and Management program (NAQUIM) of CGWB, Atal bhujal Yojna launched in 2020 by Hon'ble PM efforts, Sahi Fasal Yojna based on water budget and other were elaborated.

Targets and work done under Jal Jeevan Mission (JJM) were also briefed by Member (WP&P). It was informed that every rural household is to be provided with functional tap water by 2024 under JJM and till date more than 6 crore additional water taps connections have been provided since the JJM was launched. JJM is an extensive programme which also cover source sustainability under which inter-alia replenishing of GW sources is also taken up.

Towards increasing water usage efficiency, he informed that under PMKSY scheme wherever possible usage of underground water pipelines, micro-irrigation and deployment of modern technology like SCADA were promoted. The 46 projects completed under PMKSY scheme created additional Irrigation Potential of 22 lakh ha. In Narmada Canal Project, the envisaged 1.35 lakh ha area to be taken under irrigation was scaled up to 2.46 lakh ha using micro irrigation.

Member(D&R), CWC & ex-officio Additional Secretary to Govt. of India suggested that as the irrigation sector consumes a major share of the water, emphasis should be on the research needs for increasing water use efficiency in irrigation. It was emphasized to restart conducting annual R&D session wherein progress review of all ongoing studies can be carried out and topics for new R&D studies may be identified.

Chairman, CWC suggested that a Note on research needs may be prepared at CWC level and requested all Members of INCSW to suggest topics, which may be deliberated during the proposed R&D session for identifying new research topics related to the water sector with an emphasis on Action Research.

Presentation on Consultancy Studies on Sedimentation in Seven River Basins

CWC has engaged M/S Haskoning DHV Consulting Pvt. Ltd in JV with SECON Pvt Ltd for carrying out the work of Consultancy Studies of Physical Based Mathematical Modelling for Estimation of Sedimentation Rate and Transport in Seven River Basins, namely - i) Ramganga, ii) Barak, iii) Narmada, iv) Cauvery, v) Kuttiaidipuzha, vi) Mangalam, and vii) Peechi under National Hydrology Project. M/s Royal Haskoning gave a presentation on the above Consultancy Studies on 11.03.2022 in the

6th Meeting of the Committee for Indroka dam & Bastawa Mata Dam Project

The 6th meeting of the Committee for Bastawa Mata & Indroka Dam Projects, Jodhpur, Rajasthan was chaired by Shri J. Chandrashekar Iyer, Member (D&R), CWC on 23.03.2022 to review the progress of the works. The meeting was attended by officials from CGWB, CWC, CSMRS & WAPCOS.

It was decided during the meeting that the design of dam section based on available limited soil test results available from CSMRS and Geological Assessment by

chamber of Member (D&R), CWC.

The presentation focussed on Introducing Consultant's Consortium and the teams (Team 1 and Team 2), Overviews of the tasks, objectives, work plan and deliverables, Salient characteristics features of the seven basins, Methodology of modelling: catchment and river modelling, and morphological study and also the Model results from catchment modelling. Discussion was also done on Integrated Data Model Platform.

GSI, the drawings covering details of grouting – Curtain & Consolidation and Earth Dam Section (maximum) shall be finalised and issued to the Contractor accordingly. The finalized drawing shall be reviewed on receipt of all test results from CSMRS. Construction planning of the projects was also discussed and WAPCOS was advised to work out the timelines and single out the critical activities so that project completion can be done in scheduled time.

Status of various inter-State Water Disputes Tribunals

The Central Government has, so far, set up nine Tribunals to settle inter-State water disputes among the

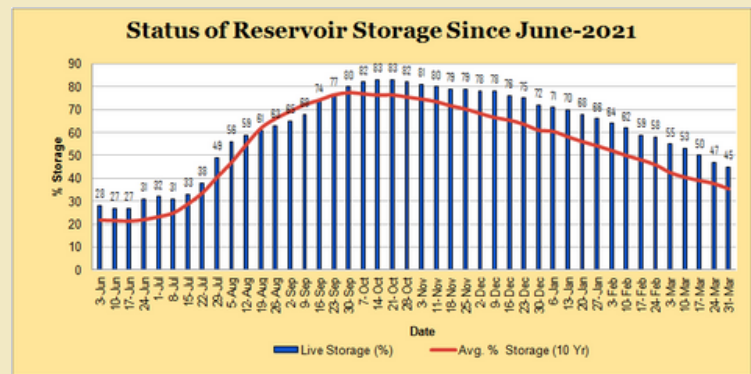
States under Inter-State River Water Disputes (ISRWD) Act, 1956.

Sl.N o.	Name of the Tribunal	States Concerned	Date of Constitution	Present Status
1.	Godavari Water Disputes Tribunal	Maharashtra, erstwhile Andhra Pradesh, Karnataka, Madhya Pradesh, Chhattisgarh, Odisha and UT of Puducherry	10 th April, 1969	Decision given in July 1980.
2.	Krishna Water Disputes Tribunal - I	Maharashtra, erstwhile Andhra Pradesh and Karnataka	10 th April, 1969	Decision given in May 1976.
3.	Narmada Water Disputes Tribunal	Rajasthan, Madhya Pradesh, Gujarat and Maharashtra	6 th October, 1969	Award given in December, 1979. Narmada Control Authority (NCA) was constituted to give effect to the decision.
4.	Ravi & Beas Water Tribunal	Punjab, Haryana and Rajasthan	2 nd April, 1986	Report & Decision under Section 5(2) of ISRWD Act, 1956 given in April, 1987. Clarification/explanation sought from the Tribunal under Section 5(3) of the said Act by the party States. The matter is sub-judice.
5.	Cauvery Water Disputes Tribunal	Kerala, Karnataka, Tamil Nadu and Union Territory of Puducherry	2 nd June, 1990	Report and decision under Section 5(2) of ISRWD Act given on 05.02.2007. In accordance to Supreme Court Order dated 04.02.2013, the final decision dated 05.02.2007 of the Tribunal was published in the official Gazette on 19.02.2013. Subsequently, Hon'ble Supreme Court vide its judgment dated 16.02.2018, slightly modified the Tribunal Award dated 05.02.2007. The Tribunal has been dissolved on 16.07.2018.
6.	Krishna Water Disputes Tribunal - II	Karnataka, Andhra Pradesh, Telangana and Maharashtra	2 nd April, 2004 (effective date of constitution 01.02.2006)	Report and decision under Section 5(2) of ISRWD Act given on 30.12.2010. Further report under Section 5(3) of the Act given by the Tribunal on 29.11.2013 which could not be published in the Official Gazette on account of stay by Hon'ble Supreme Court vide Order dated 16.09.2011. According to Section 89 of AP Reorganization Act, 2014, term of the KWDT-II has been extended with certain Terms of Reference. The Tribunal is currently hearing the matters and yet to submit its Final Award. The matter is sub-judice.
7.	Vansadhara Water Disputes Tribunal	Andhra Pradesh and Odisha	24 th February, 2010 (effective date of constitution 17.09.2012)	Report and decision under Section 5(2) of ISRWD Act, 1956 given on 13.09.2017. The Tribunal has submitted the Further Report under Section 5(3) of the Act on 21.06.2021. The Award of the Tribunal dated 21.06.2021 is yet to be Notified. Government of Odisha has filed an SLP in Hon'ble Supreme Court seeking not to publish the Award. The Tribunal has been dissolved on 09.03.2022.
8.	Mahadayi Water Disputes Tribunal	Goa, Karnataka and Maharashtra	16 th November, 2010 (effective date of constitution 21.08.2013)	Report & Decision under Section 5(2) of ISRWD Act, 1956 submitted on 14.08.2018. Basin States have filed separate SLPs in Hon'ble Supreme Court. State of Karnataka has filed an Interlocutory Application (I.A.) before Supreme Court for a direction to the Union of India to publish the Award dated 14.08.2018. Supreme Court vide its Order dated 20.02.2020, allowed the said I.A. subject to the result of the pending proceedings. Accordingly, the Tribunal Award dated 14.08.2018 has been published in Official Gazette on 27.02.2020. The Tribunal is yet to submit its Further Report under Section 5(3) of the Act. The matter is sub-judice.
9.	Mahanadi Water Disputes Tribunal	Chhattisgarh, Odisha, Jharkhand, Maharashtra and Madhya Pradesh	12 th March, 2018	Matter is sub-judice before the Tribunal under section 5(2) of ISRWD Act.

Reservoir Monitoring

CWC is monitoring live storage status of 140 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 45 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 140 reservoirs is 175.957 BCM which is about 68.25% 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 31.03.2022, the total live storage available in these reservoirs is 79.396 BCM which is about 45% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding period was 74.183 BCM and the average



of last 10 years live storage was 62.054 BCM. Thus, the live storage available in 140 reservoirs as per the bulletin dated 31.03.2022 is 107% of the live storage of corresponding period of last year and 128% of storage of average of last ten years.

Financial Progress of Schemes as on Mar-2022

(Amount rounded-off in ₹ Crore & Specific to CWC's component)

Sl. No.	Scheme/Component Name	BE 2020-21	Expenditure	Expenditure (in %)
1.	Development of Water Resources information System (DWRIS)	160.00	155.311	97.07%
2.	Investigation of Water Resources Development Schemes (IWRD)	7.30	6.858	93.94%
3.	Flood Management & Border Areas Programme (FMBAP)	9.580	8.963	93.55%
4.	Infrastructure Development (ID) Schemes	Scheme shifted to Non-Scheme Direction & Administration(D&A)		
5.	National Hydrology Project	34.178	28.895	84.54%
6.	Dam Rehabilitation and Improvement Project	25.00 (BE)	23.00	92.00%

Water Sector- News

- 10-member delegation visits Pakistan for Indus meet (The Tribune, 01.03.2022)
- India says all its project fully compliant with Indus Water Treaty (Mint, 04.03.2022)
- Polavaram phase I to be completed in a year (Telangana Today, 05.03.2022)
- Water management needs a hydro-social approach (The Hindu, 10.03.2022)
- Centre to spend 19k crore for rejuvenation of 13 rivers (The Times of India, 15.03.2022)
- GO on river waters is anti-federal (Telangana Today, 16.03.2022)
- Parl panel red flags irregularities observed in irrigation projects (Millennium Post, 17.03.2022)
- TN passes resolution against Karnataka's move to build dam (The Indian Express, 22.03.2022)
- World Water Day: Experts call for immediate solution to India's fresh water crisis (Millennium Post, 23.03.2022)
- PM Modi urges citizens to save every drop of water (The Pioneer, 23.03.2022)
- SC keen on ending Mullaperiyar row (The Hindu, 25.03.2022)
- Karnataka CM to meet Shekhawat to discuss inter-state water disputes (The Morning Standard, 28.03.2022)
- President give Water Awards, Launches Drive for Conservation (Hindustan Times, 30.03.2022)
- Centre releases Rs. 40,000 crore grants to states/UTs under Jal Jeevan Mission (The Print, 31.03.2022)



MAHESHWAR PROJECT

Gallery/Azadi Ka Amrut Mahotsav



Hon'ble Minister, MoJS along with WRD Minister, Govt. of Karnataka & Senior Officials of MoJS/CWC inspecting a SCADA centre at NARAYANPUR LEFT BANK CANAL (NLBC) modernization project in Karnataka on 06.03.2022



Shri Pradeep, MTS under P&I Division CWC Faridabad has won BRONZE MEDAL in All India Civil Services Free Style Wrestling Competition organized in Chandigarh from 05-08th March, 2022 among 19 participating Departments.



Inaugural Program for newly joined CWES Group A Officers (ESE-2020) held at NWA on 28.03.22 in hybrid mode. Shri Pankaj Kumar (IAS), Secretary (DoWR, RD&GR) as Chief Guest & Dr. R. K. Gupta, Chairman (CWC) as Guest of Honour graced the event through VC and motivated the trainees.



Visit to RRR and SMI schemes in Mayurbhanj district, Odisha by Hon'ble MoS alongwith team from MoJS, CWC and DoWR Odisha (04-07 March 2022).



Drawing & Elocution competition organised by KGBO as part of mass awareness programme under Swachhata Pakhwada programme -2022 at Govt High School, Hyderabad.



A group of the CWC officers, headed by Shri Vijai Saran, Chief Engineer, Design (E&NE), visited the Ganol Hydroelectric Project from 20.03.2022 to 23.03.2022.

History- Irrigation through the Ages in Tamilnadu

Pioneering for Irrigation

Irrigation Engineering has been as old as agriculture evidenced by the development in the rich deltaic lands of the Tanjore district. The early Chola rulers have earned a name as pioneers in the field of irrigation. King Karikala Chola is said to have tamed the Cauvery River and controlled the floods by raising dams and embankments and digging up several canals. The construction of the Grand anicut, the earliest attempt at harnessing the Cauvery water is attributed to his period (about 4th century A.D.). The Uyyakondan channel which takes off from the Cauvery is an interesting ancient work ascribed

to Rajaraja Chola I (985-1013 A.D.). It is a perfect contour channel which supplied irrigation water to about 30,000 acres. A large number of stone anicuts and channels across the Tambraparni River in the southernmost district of Tirunelveli were built in the days of the Pandya Kings.

Development during British Rule

After the advent of the British, their first attempt was to improve the existing indigenous works before taking up construction of new projects. The most important of these was the Cauvery Delta system in the Tanjore



Source: File Photo

district. Remodeling of the Grand anicut was first taken up with a view to scouring out the sand brought by the Cauvery River. This method alone being later found inadequate, the construction of the Upper anicut across the Coleroon to hold up and divert the water into the Cauvery at its very head was taken up. The successful and improved conditions of supply in the Cauvery delta led to the construction of the Lower anicut on the Coleroon with a channel to the Veeranam tank on one side and irrigation channels on the others.

Diversion Works

Every time a severe famine or food scarcity occurred, it gave an impetus to taking up more irrigation schemes. The Godavari anicut, the Krishna anicut, the Kurnool-Cuddapah canal (all of which are now in Andhra Pradesh) are examples of works taken up following severe famines. Other works which were carried out by the British in the century are Shantiatope anicut in South Arcot (1847), Poinery anicut in North Arcot (1853), Cheyyar anicut (1856), Palar anicut (1857), Thirupathur anicut (1864), Srivaikuntam anicut in Tirunelveli district (1868) and Pelandorai anicut in South Arcot (1876).

Storage Works

All the above direct irrigation canal works were wholly dependent for their supplies on the natural flows available in the Parent Rivers, the majority of which would however be dry for more than 6 months in the year. Thoughts were therefore turned on to provision of storage by constructing storage reservoirs by bunding up suitable alleys with dams, either in earth or in stone masonry. Kanigiri reservoir, Russalkonda reservoir, Sarada reservoir, Mopad reservoir (all now in Andhra Pradesh), Barur tank in Salem district, Wellington reservoir in South Arcot and Periyar reservoir (Travancore-Madurai) come under this category. The last named, i.e., the Periyar reservoir has, as its novel feature, the diversion across the Peninsula of a large river, which for centuries had flown westwards into the Arabian Sea.

After Independence

With the attainment of Independence in 1947, the tempo of activity on irrigation development schemes got accelerated and a number of projects both minor and major were launched all over the State. Some of the larger projects started during the period are the following.

Project	Cost (lakhs of Rs.)	Extent of new irrigation (in acres)
Lower Bhavani Project	996	2,07,000
Malampuzha	380	40,000
Mettur Canals	267	45,000
Manimuthar	398	20,000 And stabilizing supplies for 83,000 acres of existing irrigation

First Five-Year Plan

With the advent of the First Five-Year Plan, a phased programme of execution of large irrigation works was drawn up. In this Plan many new schemes were included in addition to the schemes that were already under execution before the drafting of the Plan.

Second Five Year Plan

The slopes of the Western Ghats fed by sumptuous South-West Monsoon feed the various small rivers flowing westward into the Arabian Sea. The proposals for diverting some of the rivers to the plains of the eastern side to benefit large tracts of barren and water-starved fields were examined. One such scheme was the Parambikulam Project capable of irrigating 3.2 lakh acres. This is included in the Second Plan. The six schemes suggested for the Second Plan are as under.

	Cost (lakhs of Rs.)	Area proposed for irrigation (in acres)
Kattalai	156.65	20,622
Pullambadi	142.43	22,114
Meenakarai	49.56	4,100
Vidur	61.37	3,200
Haladi	188.00	10,000
Parambikulam	3200.00	320,000

Present Position

The then Madras State after the separation of the Andhra has an area of 38.5 million acres and a population of 35.7 million people. During 1953-54, about 16.3 million acres were under cultivation out of which 5.2 million acres were under irrigation. Tamil Nadu State has been the State which focused on development of its irrigation facilities due to the hard work and foresight of the predecessors.

A compilation of Indian National Committee on Irrigation and Drainage (INCID) can be accessed from the following link for detailed history of irrigation development in Tamilnadu.

<http://cwc.gov.in/sites/default/files/10-history-irrigation-development-tamilnadu.pdf>

(Source: Bhagirath and INCID Publication)



Central Water Commission

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

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Designed & Published by

Water Systems Engineering Directorate
Central Water Commission

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