



Dr. R.K. Gupta
Chairman, CWC

Message

The Indian National Committee on Irrigation & Drainage (INCID) is India's representative national committee under the International Commission on Irrigation & Drainage (ICID) to cater India's needs for improvements in irrigation & drainage, through closer & active interactions with ICID. In view of above developments and also INCID's splendid legacy of 73 years, INCID Secretariat revamped the INCID Website (www.incid.cwc.gov.in). The INCID Website, INCID Logo, INCID Magazine, & Pamphlets on INCID & 25th ICID Congress were inaugurated by me, in presence of Member (WP&P), Member (RM) & Member (D&R), in a ceremony held at CWC-HQ on 26.09.2022.

An Agreement has been signed between MoJS and Centre for Policy Research (CPR) on 31.08.2018, for establishment of "MoWR Research Chair-Water Conflicts and Governance" at CPR, New Delhi. One of the deliverables to be submitted by the Research Chair is "A monograph on Supreme Court's interventions in inter-state water disputes and their implications for policy formulation" (monograph of Bar and Binding). In accordance, a meeting between Dr. Srinivas Chokakula, MoJS Research Chair and Shri Khushvinder Vohra, Member(WP&P), CWC was held on 09.09.2022 to finalize 'monograph of Bar and Binding'. During the meeting, 'Bar and Binding monograph' was

discussed in detail and after deliberations, MoJS Research Chair agreed to recast the same keeping in view suggestions given during the meeting.

The 150th meeting of Advisory Committee of DoWR, RD&GR for consideration of technoeconomic viability of Irrigation, Multipurpose and Flood Control Projects was held on 19.09.2022 under the Chairmanship of Secretary, DoWR, RD&GR. A total of 13 (Thirteen) projects/schemes were accepted by the Advisory Committee in the meeting.

The 3rd meeting of Screening Committee for inclusion of projects under PMKSY-AIBP was held on 12.09.2022 under the Chairmanship of Secretary, DoWR, RD&GR. During the meeting 3 projects from Manipur, Maharashtra and Uttarakhand were discussed for inclusion under PMKSY-AIBP scheme.

To promote work in official language in government departments, Hindi Pakhwada is celebrated in the month of September all over the country. Taking this practice forward, like every year, this year too Hindi Pakhwada was celebrated with full enthusiasm and pomp in the regional offices including the headquarters of CWC. Under which many competitions like essay writing, poetry recitation were organized and prizes were distributed to the winners.

R.K. Gupta

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ACTIVITIES UNDER D&R WING

7th meeting of Committee on Farakka Impact Study

HSO has convened 7th meeting of Committee for "Study on the issue of Flood and Siltation in River Ganga and its Tributaries due to Farakka Barrage in the state of Bihar" under the chairmanship of Chairman, CWC on 26th September 2022 to discuss the progress of the project. In

the meeting, Shri J. Chandrashekhar Iyer, Member (D&R), along with CWC officers, GFCC officers, Officers from Government of Bihar, & NIH Patna participated. Draft Final report of the project and compliances of the comments on the Draft final report submitted by the consultant were discussed and approved.

Meeting held under the Chairmanship of Secretary (DoWR, RD&GR, MoJS) to discuss matter related to Polavaram Irrigation Project

A meeting was held on 29th September, 2022 at Committee Room, Shram Shakti Bhawan, New Delhi in hybrid mode, to deliberate on the way forward towards compliance of the order of Hon'ble Supreme Court dated 6th September, 2022. The meeting was chaired by Secretary, Department of Water Resources, River Development and Ganga Rejuvenation,

Ministry of Jal Shakti. It was attended by Shri J. Chandrashekhar Iyer, Member (D&R), along with CWC officials and representatives from the key party States, i.e., the States of Odisha, Chhattisgarh, Telangana and Andhra Pradesh associated with the issues before the Hon'ble Supreme Court regarding Polavaram Irrigation Project (PIP) in OS No. 4/2007 and other similar cases tagged with it.

Regional Meeting-cum-Workshop of Southern and Northern Region States/UTs:

A Regional Meeting-cum-Workshop was organized by National Dam Safety Authority (NDSA) under the chairmanship of Shri J. Chandrashekhar Iyer, Member (D&R), Central Water Commission (CWC) & Chairman, National Dam Safety Authority (NDSA) on 3rd September 2022 and 10th September 2022 at Coimbatore and Chandigarh respectively to review the various activities undertaken under the Dam Safety Act, 2021 by the State/UT Governments/dam owners for safety of dams falling under their jurisdiction as well as sensitize all the stakeholders about the provisions contained in the Dam Safety Act, 2021. Senior officers from Department of Water Resources, RD & GR, Ministry of Jal



Shakti, CWC, NDSA and the States/UTs/dam owners falling under the Southern Region and Northern Region participated.

Visit of Sites/Projects

1. Visit of experts from CWC at Dimbhe Dam, Maharashtra under DRIP II & III

A team of experts comprising of Chief Engineer, Design (N&W), Director (DSM), Director, CMDD (NW&S) and Deputy Director, CMDD (E&NE), CWC visited Dimbhe Dam, Maharashtra on 23rd Sept 2022 to examine the safety/seepage issues of the dam under Dam Rehabilitation and

Improvement Project (DRIP) II & III. The team submitted its report on 30th Sept 2022 which contains the suggested investigation/technical studies and remedial measures to be carried out for rehabilitation of Dimbhe dam.

2. Visit to Mebo Irrigation Project, Pasighat, Arunachal

A joint visit of Officers from BCD (E&NE) Directorate, Hydrology (NE) Directorate & CMDD (E&NE) CWC, New Delhi and GSI Shillong along with the officers of BBO, CWC, Guwahati and Water Resources Department, Govt. of Arunachal Pradesh was conducted at Project Site of Mebo Irrigation Project, Pasighat, Arunachal Pradesh from 17.09.2022 and 20.09.2022. The objective of joint visit was to assess the field conditions so as to finalize tentative and suitable Dam/Barrage Axis on various design aspects. Mebo Irrigation Project is a Medium Irrigation Project



A joint visit of Officelocated under Mebo Civil Sub-Division in East Siang District of Arunachal Pradesh. The project lies in

the foothills of Himalayan range on Siku River after the confluence of Right Bank tributary Sirum River.

The project envisages construction of a diversion structure

3. Visit to Buroi Irrigation Project, Assam

A joint field visit to the Buroi Irrigation Project, Assam was made by officers of BCD (E&NE) Directorate, CWC; Hydrology (NE) Directorate, CWC; BBO, CWC, Guwahati; GSI, Shillong and Irrigation Department, Govt. of Assam during 10th September 2022 to 13th September 2022.

Brahmaputra Basin Organization (BBO), CWC, Guwahati has been entrusted with the work of preparation of Detailed Project Report (DPR) of Buroi Irrigation Project, Assam. The project envisages construction of a barrage across Buroi River, in Gohpur Block of Biswanath Chariali District, Assam to irrigate a Culturable Command Area (CCA) of approximately 8830 Ha. Apart from irrigation, the project

4. Punatsangchhu-II H.E. Project

The Punatsangchhu-II H.E. Project is an under construction 86m high concrete gravity dam with an installed capacity of 1020 MW. The dam is located 29km downstream of the Wangdue Bridge in Bhutan. The length of the dam is 213.00m. CWC is currently providing consultancy for the project. A team of officials from CWC visited the project to assess the progress and discuss certain issues with the dam authority and the contractors from 21.09.2022 to 25.09.2022. The project is nearing completion.

34th Dr M. Visvesvaraya Memorial Endowment Lecture at Institute for Water Studies, Hydrology & Quality Control, Tharamani, Chennai

Shri J. Chandrashekhar Iyer, Member, D&R delivered the 34th Dr. M. Visvesvaraya Memorial Endowment Lecture on 5th of September 2022 at Institute for Water Studies Campus,

on Siku River to facilitate assured irrigation to the proposed command area. Gross Command Area of the project is 10,182 Ha and Culturable Command Area is 8500 Ha.



will also fulfill the drinking water supply need of approx 74970 households.



Tharamani, Chennai. He explained various aspects of Dam Safety management in India and elaborated the role of CWC in Dam Safety Management.

Weekly reports

On dam incidents being submitted to Office of Hon'ble MoJS

The weekly situational report on dams is being compiled and submitted to the office of Hon'ble Ministry of Jal Shakti on weekly basis. In the month of September, following dam incidents were reported by the regional offices of CWC.

I. Cauvery and Southern Rivers Organisation (CSRO), Coimbatore reported that on 1st September, 2022 fourth shutter of Pambar dam (District- Krishnagiri, Tamil Nadu) broken due to electric glitch during operation of shutter.

Krishna Godavari Basin Organization (KGB), Hyderabad reported that a breach in Nagarjuna Sagar Left Bank Canal (District- Nalgonda, Telangana) happened at 0630 p.m. on 7th Sept 2022 due to damage to the CC lining portion and formation of a hole at canal bed.

II. On 12th September, 2022 due to heavy rainfall and obstruction caused in the drainage of the reservoir, overflow/leakage of water at 3 to 4 places of Ardala Dam on



Abana river in Khandwa District of Madhya Pradesh was reported. On receipt of information about the incident in NDSA, immediately the officers from NDSA were deputed at the project site as per the directions of Shri J. Chandrashekhar Iyer, Chairman, NDSA and provided/suggested remedial measures to be adopted. Cauvery and Southern Rivers Organisation (CSRO), Coimbatore reported that one of three shutters of

Parambikulam Dam (District Palakkad, Kerala) got damaged on 21st September, 2022. On receipt of information about the incident in NDSA, immediately the officers from NDSA

On the Inspection of Dams & Status on Formation of SCDS & SDSO

The weekly report on dam inspections carried out state wise and constitution/establishment of State Committee on Dam Safety (SCDS) & State Dam Safety organization (SDSO) is being submitted to PMO through DoWR, RD & GR, MoJS on every Friday. As on 11.11.2022, it has been reported by the states that inspection of 3907 dams out of 5334 Large

were deputied at the project site as per the directions of Shri J. Chandrashekhar Iyer, Chairman, NDSA and provided/suggested remedial measures to be adopted.

Dams has been carried out in the year 2022.

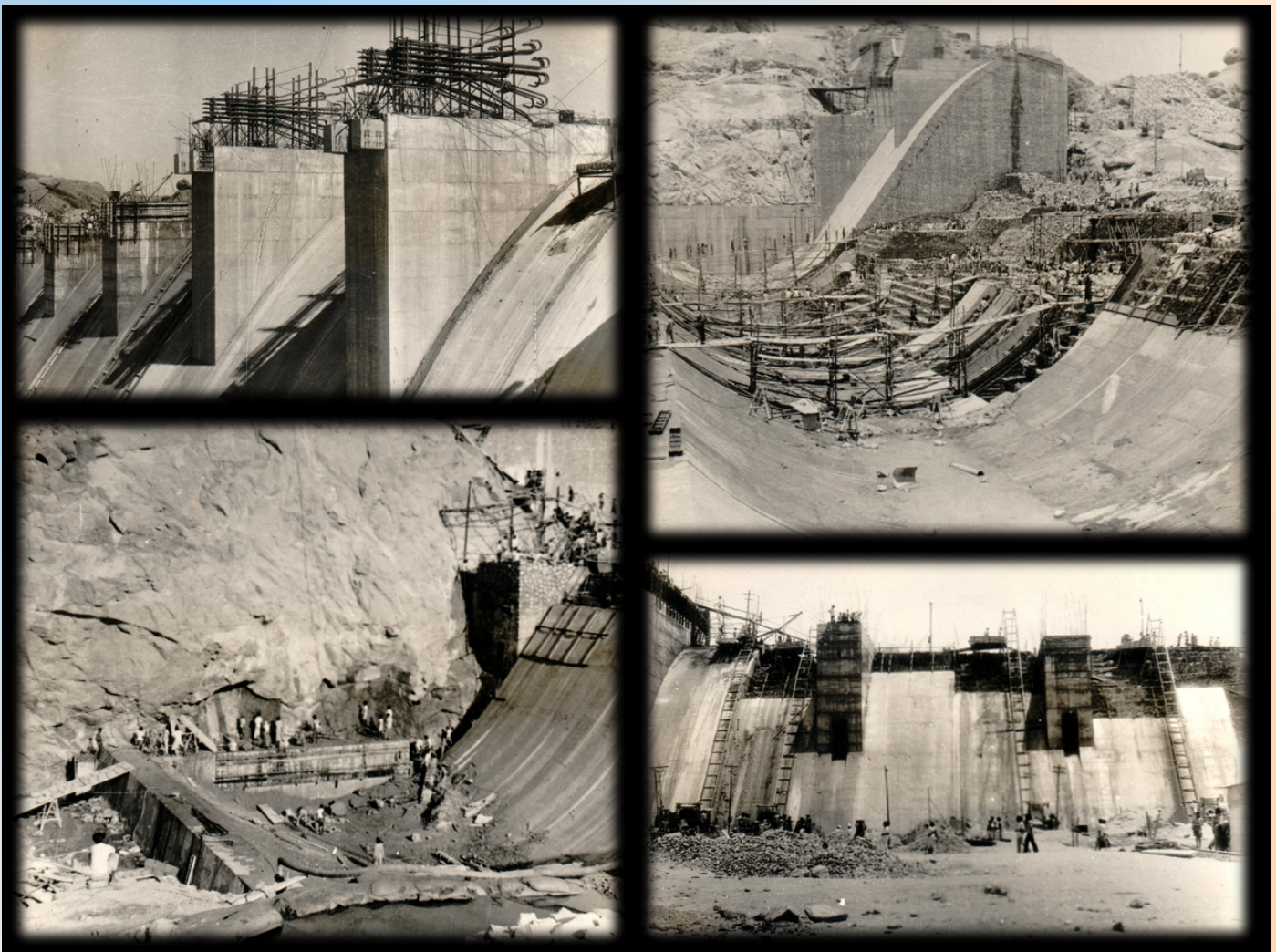
As per the provisions of the Dam Safety Act (DSA), 2021, the State Govt has to constitute State Committee on Dam Safety (SCDS) and State Dam Safety organization (SDSO). As on 11.11.2022, 30 States/UTs have constituted SCDS and 28 States/UTs have established SDSO.

13th Meeting of TARC for the work "Consultancy Services of Physical based Mathematical Modelling for Estimation of Sediment Rate and Sediment Transport in Seven (7) River Basins".

13th Meeting of TARC for the work "Consultancy Services of Physical based Mathematical Modelling for Estimation of Sediment Rate and Sediment Transport in Seven (7) River Basins" held on 30.09.2022 at CWC (HQ), New Delhi under the chairmanship of Shri Manoj Tiwari, Chief Engineer, HSO, CWC. The meeting was attended by the Consultant M/s Haskoning DHV India Consulting Pvt Ltd along with CWC officials. The Consultant presented the final report before the committee and the report was accepted by the committee after detailed deliberations.



Some Historical Glimpses of Under Constructing Dharoi Dam, Gujarat



ACTIVITIES UNDER WP&P WING

The meeting held under the Chairmanship of Hon'ble MoS (JS&TA) regarding Upper Indravati Pumped Storage Project — Inter State Clearance

Upper Indravati Pumped Storage Project scheme envisages utilizing the water of (existing) Upper Indravati Reservoir by installing a New Pumped Storage Scheme consisting of a power house of with installed capacity of 600 MW and a small reservoir downstream to store water. The water thus stored in this Lower Reservoir (proposed to be constructed for 4 MCM capacities) shall be pumped back (recycled) to main Upper Indravati Reservoir during non-peak hours.

A meeting prior to discuss inter-State issues involved in Upper Indravati Pumped Storage Project of Odisha, was taken by Shri Kushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to GoI, on 07-09-2022. The meeting was attended by officials from Department of Water Resources (Govt. of Odisha), Odisha Hydro Power Corporation Ltd. (OHPC), WAPCOS and CWC.

After detailed discussion, Engineer-in-Chief, Department of Water Resources (Govt. of Odisha) was directed to ensure utilization of water within their allocated share as per GWDT



Award.

Hon'ble Minister of State, Jal Shakti and Tribal Affairs also convened a meeting on 13.09.2022 with senior officers of DoWR, RD & GR, CWC, Department of Water Resources, Govt. of Odisha, OHPC and WAPCOS to discuss inter-State issues involved in Upper Indravati Pumped Storage Project of Odisha. The meeting was attended by Chairman, CWC, Member (WP&P) and Chief Engineer (IMO).

Inter-State issues involved in the project were resolved satisfactorily.

The Meeting Regarding Issues Pertaining to the Proposed Inter-State Agreement and Implementation of Kishau Project

Kishau Multi-Purpose Project (National Project) envisages construction of a 236 m high concrete dam across river Tons in Dehradun District of Uttarakhand with live storage of 1324 MCM. The benefits envisaged are drinking water supply up to 0.5 MAF, irrigation benefit of 0.97 Lakh ha and power benefit of 660 MW. The project is to be executed through a Joint Venture between Govt. of Uttarakhand and Govt. of Himachal Pradesh.

A Meeting by Hon'ble Minister of Jal Shakti, Shri Gajendra Singh Shekhawat, with Hon'ble Chief Ministers of Uttarakhand and Himachal Pradesh was held on 21.09.2022 to discuss various issues pertaining to proposed inter-state agreement and implementation of Kishau Multipurpose Project. The meeting was attended by officers of DoWR, RD & GR, CWC, UYRB, Govt. of Haryana, Govt. of Himachal Pradesh.

In the meeting, Hon'ble Chief Minister of Himachal Pradesh informed that the State is unable to accept the proposal of bearing the cost of power component of the project resulting

out of the power tariff of more than Rs. 2.3/unit. Hon'ble Chief Minister of Uttarakhand also endorsed the stand of the State of Himachal Pradesh. Hon'ble Chief Minister of Haryana mentioned that while the share of basin States remains unchanged, the implementation of the project will make more water available in lean season. He proposed that if the States of Himachal Pradesh and Uttarakhand (where the project is located) are not agreeable to bear the additional cost of power component over and above the power tariff of Rs. 2.3/unit, the State of Haryana is ready to purchase the power at the rate higher than Rs. 2.3/unit on the implementation of the project.

Further, Hon'ble Union Minister of Jal Shakti stated that both the States should rethink their stand on bearing the cost of the power component as any further delay in arriving at agreement of the project will escalate the overall cost of the project. Hon'ble Union Minister, Jal Shakti further appealed the States of Himachal Pradesh and Uttarakhand to approach the issue in the national interest so that the project can be fast tracked.

Polavaram irrigation project - meeting to review the status of finalization of partial benefits and possible impact of existing and proposed projects

Polavaram Irrigation Project (National Project) is being executed on River Godavari in West Godavari District of Andhra Pradesh. This multipurpose major project envisages construction of an earth cum rockfill (ECRF) dam along with saddle earth dams, a spillway, irrigation tunnels, navigation

tunnel and channel and two main canals on both flanks to create ultimate irrigation potential of 4.36 Lakh Ha. The project also envisages generation of 960 MW of hydropower, drinking water supply to 540 villages and diversion of 84.7 thousand million cubic feet (TMC) of water

(including losses) to Krishna basin.

In pursuance of action points emerged during the review of Polavaram Irrigation Project (PIP) by Secretary, DoWR, RD & GR, MoJS on 11th August, 2022, a meeting under the Chairmanship of Sh. Kushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to GoI, was held on 06.09.2022 to review the status of finalization of partial benefits and the possible impact of existing and proposed projects on PIP.

During the aforesaid meeting, the impact of unapproved projects on PIP was discussed. It was informed by Govt of

The 150 meeting of Advisory Committee of DoWR, RD & GR on Irrigation, flood control and Multipurpose Project held under the Chairmanship of Secretary (WR)

The 150th meeting of Advisory Committee of DoWR, RD&GR for consideration of techno-economic viability of Irrigation, Multipurpose and Flood Control Projects was held on 19.09.2022 under the Chairmanship of Secretary, Department of Water Resources, River Development & Ganga Rejuvenation.

The meeting was attended by the representatives from Govt. of Bihar, Jharkhand, Andhra Pradesh, Assam, Arunachal Pradesh, Uttarakhand besides CWC, CGWB, GFCC, MoEF&CC, CEA, NitiAyog, WAPCOS etc.

A total of 13 (Thirteen) projects/schemes, as per the details

AP that there are seven unapproved projects namely Chintalpudi LIS, Purushothapatnam, Venkatanagaram LIS, Uttarandra Sujalla Saravanthi, Kovvada Kalva Reservoir, Pattiseema LIS and Polavaram LIS around the PIP, details of which were presented to understand the effect on PIP.

Member (WP&P) directed WRD (GoAP), PPA and concerned officers of CWC for early resolution of the issues of the unapproved projects and assessment of PIP benefit at 4.1.15 m after considering the effects of aforesaid seven projects around PIP.



below were accepted by the Advisory Committee in the meeting.

Sl. No	Name of the Project	State	Type of the project	Estimated Cost (Rs.)	Intended Benefits
1	North Koel Reservoir Project (8th RCE)	Jharkhand & Bihar	Major Irrigation	3199.85 Cr at Dec. 2021 PL	CCA-125500 ha AI- 114021 ha BC ratio- 1.146
2	Improvement to Swarnamukhi Anicut under Andhra Pradesh Irrigation & Livelihood Improvement Project, Phase -II (APILIP-II)	Andhra Pradesh	Irrigation (Medium)	53.635 Cr at 2020-21 PL	CCA-4127.80 Ha BC Ratio-1.671
3	Rukni Irrigation Project	Assam	Irrigation (Major)	764.12 Cr at March 2020 PL	CCA-17566 Ha BC Ratio- 1.42
4	Sonai Irrigation Project	Assam	Irrigation (Major)	740.93 Cr at March, 2020 PL	CCA-10850 Ha BC Ratio-1.04
5	Phina Singh Multipurpose Project	Himachal Pradesh	Multipurpose	643.68 Cr at March 2022 PL	CCA-4025 Ha Power- 1.88 MW BC Ratio- 1.87
6	Integrated Water Resources Management of Buridehing Basin	Assam	Flood Control	733.0473 Cr at 2021-2022 PL	Population benefitted-6,00,000 Area benefitted -65,000 Ha BC ratio-1.74
7	Integrated Flood and Erosion Management of Manas and Beki River in the District of Baksa and Barpeta in Brahmaputra Valley within Assam (Review)"	Assam	Flood Control	400.22 Cr at 2021-2022 PL	Population benefitted-3,00,000 Area benefitted-80,000 Ha BC ratio-1.27
8	Flood Protection work near General Ground at upstream side of Decorai Irrigation Project at Seijosa in PakkeKessang District,	Arunachal Pradesh	Flood Control	82.16 Cr at January 2022 PL	Population benefitted- 12474 Area benefitted-550 Ha BC ratio-1.15
9	DPR on Providing Flood Protection Works and Channelization of SuketiKhad along with other Tributaries under Beas Catchment area in district Mandi	Himachal Pradesh	Flood Control	485.23 Cr at February, 2021 PL	Population benefitted- 41493 Area benefitted-881 Ha BC ratio- 1.13
10	DPR on Providing Flood Protection Measures for Swan River & its tributaries joining Beas Basin in Tehsil Amb, District Una	Himachal Pradesh	Flood Control	339.25 Cr at April, 2021 PL	Population benefitted- 14744 Area benefitted- 510.18 Ha BC ratio- 1.09
11	DPR on Providing Flood Protection / Anti Erosion measures for Different Khads under Jaswan Pragpur Constituency, Distt. Kangra	Himachal Pradesh	Flood Control	504.07 Cr at April 2021 PL	Population benefitted- 23715 Area benefitted- 811.03 Ha BC ratio- 1.04
12	Providing Flood Protection Works to Seer Khad from village Talwara to Balghat in Tehsil Ghumarwin/Jhandutta, District Bilaspur	Himachal Pradesh	Flood Control	195.49 Cr at April, 2021 PL	Population benefitted- 14647 Area benefitted- 179.35 Ha BC ratio- 1.06
13	Project for construction of flood protection work for Thathyur and Bhawan from Aglad river in Tehri Garhwal	Uttarakhand	Flood Control	30.2189 Cr.	Population benefitted- 3750 Area benefitted- 29.70 Ha BC ratio- 2.62

Inauguration of revamped website of INCID

The Indian National Committee on Irrigation & Drainage (INCID) is India's representative national committee under the International Commission on Irrigation & Drainage (ICID) to cater to India's needs for improvements in irrigation & drainage, through closer & active interactions with ICID. The primary objectives of INCID includes stimulating and promoting the development and application of irrigation, drainage, river training, and flood control techniques within India while integrating the efforts of Central Government, State Governments, academic institutions, and private sector in the field of agriculture water management. INCID is headed by Chairman CWC and Chief Engineer (EMO), CWC is the Member Secretary with the INCID Secretariat at Remote Sensing Dte., CWC.

INCID was originally founded in 1950, along with the ICID. INCID was recently reconstituted in the year 2019. INCID & ICID jointly celebrated the 73rd foundation day in June, 2022. INCID is hosting the 25th International Congress of ICID at Vishakhapatnam, Andhra Pradesh in November, 2023 with the collaborative efforts of INCID, State Govt of Andhra



Pradesh and ICID. The ICID International Congress is being held in India after a gap of about 6 decades. The Congress and other events at Vishakhapatnam are expected to have around 1200+ participants from all around the globe.

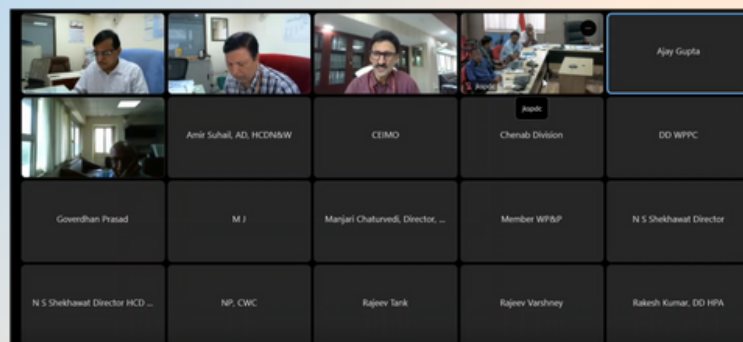
In view of above developments and also INCID's splendid legacy of 73 years, INCID Secretariat revamped the INCID Website (www.incid.cwc.gov.in). The INCID Website, INCID Logo, INCID Magazine, & Pamphlets on INCID & 25th ICID Congress were inaugurated by Chairman, CWC, in presence of Member (WP&P), Member (RM) & Member (D&R), in a ceremony held at CWC-HQ on 26/09/2022.

Meeting regarding Ujh Multipurpose project

Ujh multipurpose project (National Project) envisages construction of a 110 m high dam across river Ujh, the main tributary of Ravi River, in Kathua District of J&K. The project will provide hydro power benefit of 89.5 MW, irrigate 91073 ha and supply drinking water to Kathua District. The project is estimated to have a gross cost of Rs.11907.77 Crore (PL December, 2019).

A meeting to discuss about the progress of matters related to Ujh Multi-Purpose Project was taken by Sh. Kushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to GoI, on 06th September, 2022. The meeting was attended by officers of Govt. of J&K, CEA and CWC. In the meeting, discussions were held on the issues related to Environmental Clearance, detailed survey for canal alignment and preparation of final DPR for ensuring the smooth initiation of the project.

After discussions, Member (WP&P), CWC directed Govt. of



J&K to fast-track application for approval of Environmental Clearance in coordination with CIFRI. Govt. of J&K Officials was also directed to initiate detailed Survey for canal alignment in consultation with Chief Engineer, IBO, CWC, Chandigarh. With regard to preparation of final DPR, Member (WP&P), CWC directed CE (IBO), CWC to prepare final DPR at the earliest in coordination with all the relevant Directorates/ Divisions of CWC and CEA.

3rd Meeting of Screening Committee for PMKSY-AIBP projects

The third meeting of Screening Committee for inclusion of projects under PMKSY-AIBP was held on 12th September, 2022 under the Chairmanship of Secretary, DoWR, RD&GR.

Extension, Renovation And Modernization (Erm) Of Loktak Lift Irrigation Project (Phase-1) Manipur

After detailed discussions, the Committee recommended the project for financial assistance under PMKSY-AIBP with eligible central assistance as Rs. 51.94 crore. However, while recommending the same for inclusion under PMKSY-AIBP, it was emphasized that the State Government should

give priority to operation and maintenance of the project and adequate funds for maintenance of the project assets, including preventive maintenance, should be regularly made available by the State Government.

Bodwad Parisar Sinchan Yojana (Stage-1), Maharashtra

After detailed discussions, the Committee recommended the project for financial assistance under PMKSY-AIBP with eligible central assistance as Rs. 469.98 crore. However, while recommending the project, the Chairman emphasized that the progress of projects of Maharashtra state included in the prioritized 99 projects under PMKSY AIBP in 2016 is

Jamrani Dam Multipurpose Project, Uttarakhand

The project was deferred by the Screening Committee due to absence of senior level officer from Irrigation & Water

not satisfactory, primarily due to thin spread of resources over many projects. As a result, there are delays in implementation, which further strains the financial resources. Thus, it is imperative that Government of Maharashtra allocates adequate funds for timely completion of the project.

Resources Dept. of Uttar Pradesh.

Meeting to discuss issues of the proposed integration of Parbati-Kalisindh-Chambal (PK) links and ERCP with states

Parbati-Kalisindh-Chambal (PK) link envisages intra-basin transfer of water within the Chambal Basin by utilizing surplus monsoon water available in Kalisindh, Parvati, Mej and Chakan sub-basins and diverting it into water deficit sub-basins of Banas, Gambhiri, Banganga and Parbati. The objective of the project is to provide drinking, irrigation and industrial water to 13 districts of Eastern Rajasthan and enroute towns, villages and tanks as well as nearby command area.

and Rajasthan w.r.t. PK Link and ERCP.

Sh. Kushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to Govt. of MP, Rajasthan and NWDA on 12.09.2022. After the detailed discussions on all related issues in the light of above, further course of action decided in the meeting is as follows:

- 1.CWC will also work out the yield (at 75% dependability) through rainfall-runoff method within 15 days for comparing the same with that assessed with the observed data.
- 2.NWDA/WRD, Rajasthan within 15 days will firm up the quantity of regeneration of water and places at which it shall be available.

Revised PFR based on these figures and other suggested modifications may be submitted by NWDA in further 15 days for consideration of both the States.

Eastern Rajasthan Canal Project (ERCP) project submitted by Govt. of Rajasthan is planned at 50% dependable yield. However, in the process of examination of this proposal, CWC has suggested for either revision of project based on the 75% dependability figures, or Govt. of Rajasthan shall obtain "No Objection" from Govt. of Madhya Pradesh. Since there is no progress regarding approval of ERCP with reference to 75% vis a vis 50 % dependability criteria, a PFR for modified ERCP-PKC Project is being explored by NWDA which has submitted the Draft PFR of ERCP-PKC link with water sharing, exchange of water between Madhya Pradesh

Dr. Srinivas Chokakula, MoJS Research Chair/CE (IMO) – discussion reg. Bar and Binding

An Agreement has been signed between MoJS and Centre for Policy Research (CPR) on 31.08.2018, for establishment of "MoWR Research Chair-Water Conflicts and Governance" at CPR, New Delhi. One of the deliverables to be submitted by the Research Chair is "A monograph on Supreme Court's interventions in inter-state water disputes and their implications for policy formulation" (monograph of Bar and Binding).

During the third Management Committee meeting, it was decided that 'monograph of Bar and Binding' would be finalized after discussions between Dr. Srinivas Chokakula, MoJS Research Chair and Shri Khushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to Govt. In accordance, a meeting was held on 09.09.2022 to finalize



'monograph of Bar and Binding'.

During the meeting, 'Bar and Binding monograph' was discussed in detail and after deliberations, MoJS Research Chair agreed to recast the same keeping in view suggestions given during the meeting.

ACTIVITIES UNDER RM WING

The meeting regarding Scientific Assessment of flood prone areas in India and use of modern technology in flood forecasting by CWC and NRSC, Hyderabad.

A meeting was held under the chairmanship of the Secretary, Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR) to review the current status of "Scientific assessment of flood-prone areas in India and adoption of modern technology for flood forecasting by Central Water Commission (CWC)" on 01.09.2022 at New Delhi. The officials from CWC, NRSC, DoWR, RD & GR participated in the meeting. Decisions of the meeting are as under:

1. There is a need to expedite and complete the work of ground truth verification of flood-prone area layers by December 2022.
2. A DO. Letter is to be sent to all States/UTs where ground truth verification of flood-prone area layers is pending and to arrange the VC with all States/UTs where the work of ground truth verification is pending in October 2022.
3. CWC to develop a Standard Operating Procedure (SOP) for periodic updating of the flood-prone areas of the country,

preferably every five years.

4.CWC may submit a concept note on High-Performance Computing (HPC) ecosystem through C-DAC for CWC future requirement e. g. inundation forecasting, ensemble flood forecasting, processing of satellite datasets etc.

5. CWC and NRSC to discuss the modalities for sharing the following:

- a. Sharing of High-Resolution LiDAR Digital Elevation Model (DEM) of Brahmaputra river as available with NRSC for Inundation forecasting model development.
- b. Near Real Time Inundation Mapping maps in GIS format (raster or vector data format) for the purpose of validation of inundation forecast
- c. Sharing of technology of daily snowmelt runoff forecast for integration in CWC flood forecast model.

Handing over the inundation Forecast model of Godavari & Tapi basins to CWC as developed under NHP after the 2022 monsoon season.

Flood Situation in the country -September 2022

Regular Flood Forecasting Activity commenced on 01.05.2022 in Brahmaputra and Barak and Jhelum basins. During the period from 1st May to 30th September 2022, 9324 flood forecasts (5620 Level and 3704 Inflow) were issued, out of which 8767 (5358 Level and 3409 Inflow) forecasts were within limit of accuracy with a percentage accuracy of 94.02%. 101 nos. of Red Bulletin (for Extreme flood situation) and 120 nos. of Orange Bulletin (for severe flood situation) were issued till 30th September 2022 from Central Flood Control Room.

Summary of Flood Situation during 01.05.2022 to 30.09.2022

Extreme Flood Situation

Eight FF station observed Extreme Flood Situation.

Sl. No.	State	District	River	Station	Period	
					From	To
1.	Assam	Nagaon	Kopili	Kampur	15/05/2022 16/06/2022	21/05/2022 22/06/2022
2.	Bihar	Kishanganj	Mahananda	Taibpur	29/06/2022	29/06/2022
3.		Supaul	Kosi	Basua	02/08/2022	02/08/2022
4.	Telangana	Bhupalpally	Godavari	Kaleswaram	14/07/2022	15/07/2022
5.		Kumarambheem	Wardha	Sirpur(T)	14/07/2022	17/07/2022
6.	Andhra Pradesh	Alluri Sitharama raju	Sabri	Chinturu	15/07/2022	19/07/2022
7.	Rajasthan	Karauli	Chambal	Manderial	25/08/2022	25/08/2022
8.		Dholpur	Chambal	Dholpur	25/08/2022	26/08/2022

60 flood monitoring station observed Extreme flood situation.

Severe Flood Situation for FF Stations

94 FF Stations observed Severe Flood Situation in the States of Assam, Bihar, Jammu & Kashmir, West Bengal, Tamilnadu, Andhra Pradesh, Telangana, Chhattisgarh,

Odisha, Uttar Pradesh, Maharashtra, Jharkhand, Madhya Pradesh, Uttarakhand, Rajasthan, NCT Delhi and Gujarat.

Above Normal Flood Situation

44 FF Stations in Assam, Bihar, Uttar Pradesh, Tripura, West Bengal, Uttarakhand, Maharashtra, Andhra Pradesh, Tamilnadu, Kerala, Odisha, Telangana and Rajasthan observed Above Normal Flood Situation.

Reservoirs having Inflow above threshold limit

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



The 1st Meeting of Technical Advisory-cum-Executive Committee (South) Zone

The 1st meeting of Technical Advisory-cum-Executive Committee (South) Zone was held on 21.09.2022. The meeting was chaired by Chief Engineer, Minor Irrigation (S), Bengaluru, Govt. of Karnataka. Sri Ashok Kumar V., Director, CWC attended the meeting as a member along with other officers of CWC and State government officers. A total of 49 Detailed Project Reports proposed under Surface Minor Irrigation Schemes pertaining to Minor Irrigation South Zone were placed before the Committee for discussion.

The following points are observed after the detailed discussions in the meeting:

1. The proposed SMI Projects are to be included in District Irrigation Plan (DIP). In this regard, Executive Engineers are directed to make necessary arrangements for convening meeting under the Chairmanship of Deputy Commissioner of the respective Districts to include the proposed SMI projects in the DIP and copy of proceedings of the meeting conducted shall be enclosed in the DPR.
2. The Certificates /documents/enclosures appended in the DPRs are to be signed by the competent authorities.
3. Unique identification codes in a few DPRs are not properly

allocated and the same needs to be rectified and submitted.

4. It was decided that all the DPRs drawings shall be corrected (to M25) and submit them along with other compliances/corrections/revisions as recorded in the TAC meeting.

5. Dimension in the drawings, design, and estimates are not matching in certain DPRs. The same shall be corrected and resubmitted to CWC.

6. Index map and Command Area maps are missing in some of the DPRs. The same shall be appended.

7. Wherever gates are provided in the structures, adequate provisions shall be made for their maintenance and storage.

8. Member, TAC, from CGWB informed that list of likely beneficiaries for few projects are missing in the DPRs and corrections needs to be done at few DPRs on BC Ratio.

Ashok Kumar V, Director (Appraisal) CWC, Bangalore has suggested to consider the above observations as a model for the submission of other DPRs of SMI schemes in the future and suggested that these DPRs shall be routed through the Government of Karnataka after technical scrutiny by the Nodal officers nominated by the Minor Irrigation Department, GoK.

Financial Progress of Schemes as on 30.09.2022

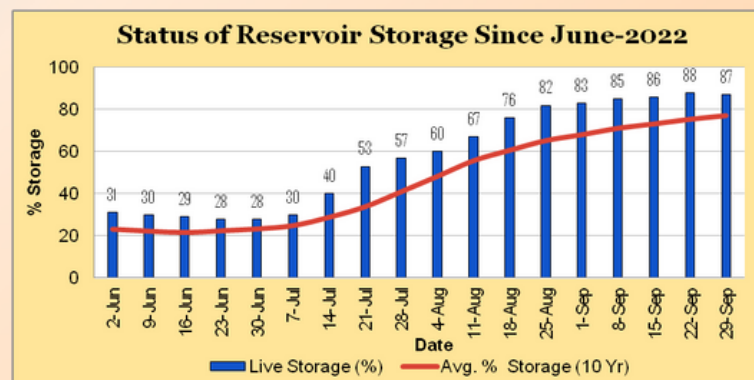
(Amount rounded-off in ₹ Crore & Specific to CWC's component)

Sl. No.	Scheme/Component Name	BE 2022-23	Expenditure	Expenditure (in %)
1.	Development of Water Resources information System (DWRIS)	185.00	75.688	40.91%
2.	Investigation of Water Resources Development Schemes (IWRD)	08.000	6.0898	76.12%
3.	Flood Management & Border Areas Programme (FMBAP)	23.203	4.2259	18.21%
4.	Direction & Administration(D&A)-Major Works and OE(SAP)	11.15	0.133	1.20%
5.	National Hydrology Project	44.37 (RE)	8.2934	18.69%
6.	Dam Rehabilitation and Improvement Project (DRIP) Phase-II	100.00	0.880	0.88%

Reservoir Monitoring

CWC is monitoring live storage status of 143 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 46 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 143 reservoirs is 177.464 BCM which is about 68.83% of the live storage capacity of 257.812 BCM which is estimated to have been created in the country.

As per reservoir storage bulletin dated 29.09.2022, the total live storage available in these reservoirs is 154.181 BCM which is 87% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding period was 142.371 BCM and the average of last 10



years live storage was 136.859 BCM. Thus, the live storage available in 143 reservoirs as per the bulletin dated 29.09.2022 is 108% of the live storage of corresponding period of last year and 113% of storage of average of last ten years.

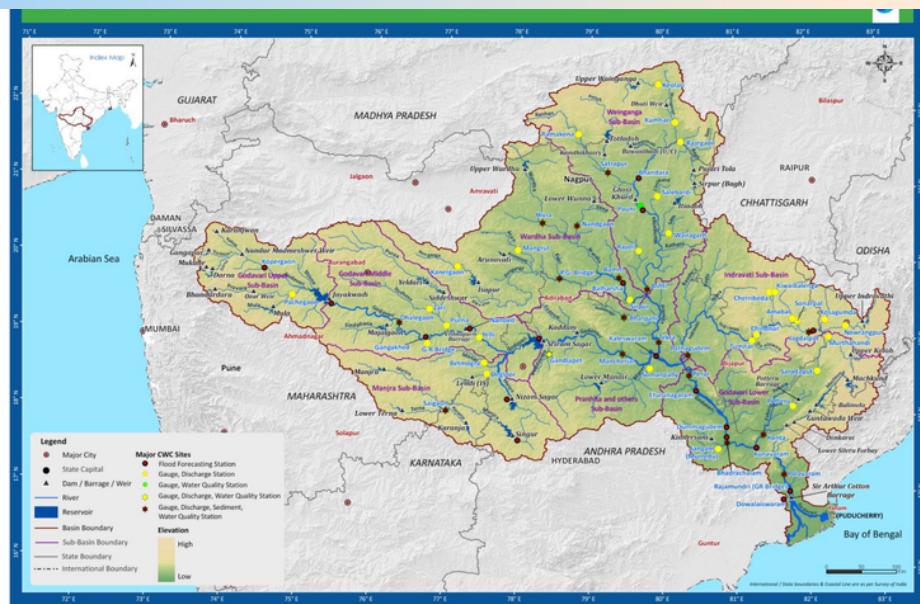
OTHER ACTIVITIES

Training Activity by NWA, Pune during September-2022

Sr. No.	Name of Training Programme	Duration	No. of Trainee per course	Category
1	Workshop on Sexual Harassment of Women in Workplace	19 Sept 2022	35	Non-Technical
2	Introduction to Python Programming and Its Applications in Water Resources Sector (under NHP)	19-23 Sept 22	604	Technical
3	Android App Development	26 Sept - 07 Oct 22	32	Technical

Data Corner- Salient features of the Godavari basin

SI. No.	Feature	Description
1	Basin Extent	73°24' to 83°4' E 16°19' to 22°34' N
2	Area (Sq. km)	312812.00 (CWC Reported)
3	States in the basin	Maharashtra - 48.7% , Andhra Pradesh - 23.7%, Madhya Pradesh - 7.8%, Odisha - 5.7%, Karnataka - 1.4%, Chhattisgarh - 12.4%, Puducherry - 0.01%
4	Districts (Census 2011)	55
5	Parliamentary Constituencies (2009)	55
6	Mean Annual Rainfall (mm)	1093.21
7	Mean Maximum Temperature (°C)	33.04
8	Mean Minimum Temperature (°C)	20.63
9	Total Population (As per Census 2001)	60489310
10	Number of villages (As per Census 2001)	43492
11	Highest Elevation (m)	1664
12	Avg. Annual Water Potential (BCM)	110.540
13	Utilizable Surface Water (BCM)	76.30
14	Number of Sub Basins	8
15	Number of Watersheds	466
16	Number of water resources structures	Dams (921), Barrages (28) , Weir (18), Anicuts (1), Lifts (62), Power House (16)
17	Highest Dam	Bandardhara Dam -82.35 m
18	Longest Dam	Sriramsagar(SRSP)/Pochampad dam-15.6 km
19	Highest Barrage	Kolar barrage-15.5 m
20	Longest Barrage	Kolar barrage-1.195 km
21	Number of Irrigation projects	Major-70, Medium-216, ERM-6
22	Number of HE projects	14
23	Number of Ground water observation wells	1875
24	Number of Hydro-Observation Sites	88
25	Number of Flood Forecasting Sites	18
26	Water tourism sites	53



(Source:
<https://indiawris.gov.in/downloads/Godavari%20Basin.pdf>)

Water Sector-News

- Why no action was taken to control water quality of Yamuna : NGT asks CS (Millennium Post, 01.09.2022)
- Solve water-sharing disputes amicably : Shah to south states (Indian Express, 04.09.2022)
- Bangladesh PM favours early solution for Teesta, other issues (The Hindu, 07.09.2022)
- Govt. plans geospatial mapping and monitoring of areas in Ganga Basin (Sunday Standard, 11.09.2022)
- PM's treasured gifts set to go under the gavel to save Ganga (Hindustan Times, 13.09.2022)
- Kaveri : TN got 3 times the yearly allocation in just 4 months (Deccan Herald, 19.09.2022)
- Gangotri glacier retreated by 1,700m since 35 : Study (Hindustan Times, 22.09.2022)
- India, Nepal to further Sapta Kosi dam project (Deccan Chronicle, 25.09.2022)
- India-Bangladesh MoU on water withdrawal gets cabinet approval (The Times of India, 29.09.2022)
- How climate change is threatening Himalayan hydropower projects (The Times of India, 30.09.2022)

Gallery

Hindi Pakhwada



2.NBO

3.YBO



1.CWC-HQ,
New Delhi

2. Narmada Basin Organisation, Bhopal

3. Yamuna Basin Organisation, New Delhi



4.BOBO



5.MSO

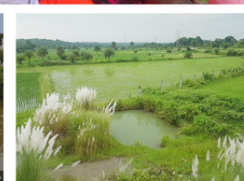


6.MCO

4. Barak & Other Basin Organization, Shilong

5. Monitoring South Organisation, Bengaluru

6. Monitoring Central Organisation, Nagpur



Sh. B.K.Karjee, Chief Engineer, Sh. Sudhir Kumar, Director and Sh Shashank, Dy Director alongwith officials from Govt of Assam visited Dhansiri Irrigation Project, Assam under PMKSY on 22.09.2022.



"Jaipur Expo-2022" exhibition in Jaipur, Rajasthan. CGWB also joined CWC in this Exhibition. CWC won the Best stall award in this event.



Sh. B.K. Karjee, Chief Engineer, Sh. Sudhir Kumar, Director and Sh. Shashank, Dy Director alongwith officials from Govt of Assam visited Dhansiri Irrigation Project, Assam under PMKSY on 22.09.2022.

History- Thannirmukkom Barrage

KUTTANAD, the rice bowl of Kerala, is a unique agricultural tract, covering an area of 880 sq km (340 sq mile) including the Vembanad Lake, and having 0.97 lakh ha under cultivation. The tract lies between Shertalai in the north and Thottappally in the south and extend eastwards to within 24 km of the Arabian Sea. The rivers, Meenachil, Manimala, Pamba and Achencoil meander through this area and empty into the Vembanad Lake, which discharges into the Arabian Sea through the Cochin gut.

Cultivation

The cultivable area consists of 303 sq km (117 sq mile) of garden lands and about 570 sq km (220 sq mile) of fertile paddy fields. The garden lands, where sugarcane and coconut are cultivated, have a very high density of population. Paddy cultivation in this region, which is 0.6 m (2 ft) lower than the sea level in the south-east, and 2.1 m in the north-west, was a risky agricultural operation. The cultivators grow paddy in fields surrounded by heavy sand embankments, beyond which 1.5 to 2.1 m of water stands above the field level.

The tidal waves which travel from Thannirmukkom to as far south as Pulikeezh constantly lash these bunds. Before construction of Barrage only one crop was cultivated in Kuttanad area. The water, which rises 2.1 to 2.4 m in the enclosed fields, was pumped out before the new crop is sown.

Ingress of Salt

After the flush of monsoon, the salt sea water enters the lake, slowly travels south-wards and covers the whole area. If the north-east monsoon fails, entry of sea water begins even earlier. The construction of the Cochin Harbour is said to have accelerated the salt ingress to some extent. The cultivation season in the Kuttanad basin extends from August to March. The

largest area is under cultivation during November-December.

Necessity of Regulator

The cultivation in the lower area where saline ingress is felt earlier is started in August while in the upper area, near Thiruvella, cultivation is started in November. However, due to breaching of bunds and saline ingress, the crops in the area are adversely affected. The water in the whole area becomes saline and unfit for human consumption. To mitigate these evils and increase food production, a regulator was proposed at Thannirmukkom. By such a regulator, the entry of sea water into the Kuttanad area can be prevented by closing the gates after the monsoons. During floods and rainy seasons, the water will flow down to the sea through the open regulator.

Investigation Committee

The Union Ministry of Transport, on the advice of the Cochin Harbour authorities, felt that it was important to investigate the effect of a partially solid barrier, originally proposed, on the Cochin Harbour before agreeing to its construction. Accordingly, a committee consisting of the representatives of the Kerala Government, the Cochin Harbour Administration, the Cochin Naval Base and the Central Water and Power Commission was constituted to examine the proposal. At the instance of the Committee, hydraulic model studies were conducted at the Central Water and Power Research Station, Pune.

Model experiments conducted for the period middle of December to the middle of March—when the barrage would remain closed showed that the closed regulator does not affect navigation. The model did not show any silting of the harbour either during the three dry months—April-June.

Similar model studies were conducted with a barrier at

a different site, namely Puthenangadi, 11 km (7 mile) south of Thannirmukkom. But, as the advantage of Thannirmukkom site was overwhelming it was preferred to Puthenangadi site.

Longest Barrage

The present proposal is to construct a regulator, 1,211 m (3,973 ft) long between the abutments with 93 spans each of 12 m (40 ft). The barrage, when completed, will be the longest in India. The sill will be 4-3 m (14-0 ft) above sea level which is the average bed level at the site. The reinforced cement concrete piers will be 0-85 m (2.75 ft) thick. The foundation is proposed to be laid on piles. No rock is available for hundreds of feet below the bed. The barrage will carry a 6-7 m (22 ft) wide

bridge on top for a road between Alleppey and Kottayam sides of the lake. Steel shutters of 5:5 m (18 ft) height are proposed for all the spans. Aprons upstream and downstream of the sill are of rubble concrete in cement mortar. These are reinforced with cement concrete cut off pile and damp proof paving beyond and are proposed to avoid seepage through the bed when there is appreciable change in the levels of water in the lake and outside. For navigation, the Thannirmukkom BARRAGE site is dewatered by pumps and dredgers. a twin-lock is proposed on the left side of the regulator and another twin lock on the right side.

Construction Progress

The work on the project was inaugurated by Shri V. K. Krishna Menon, Union Defence Minister, in February

1958. Pile driving of the locks and abutments of the regulator is in full swing. The project is scheduled to be completed during the Third Five Year Plan. The progress of work is bound to be slow for the reason that only one-third of the waterway can be blocked at any time.

Benefits

The Thannirmukkom, Barrage will enable cultivation of two crops in the whole of Kuttanad area where at present only one precarious crop is attempted. The scheme, estimated to cost Rs 1-5 crore, will benefit an area of 56,656 ha (140,000 acre) and will provide potable drinking water for the people.

(Source: Bhagirath March 1962)

THANNIRMUUKKOM BARRAGE PROJECT-KERALA



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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