



Dr. R.K. Gupta
Chairman, CWC

Message

The final report of Integrated Landscape Management Plan for Greater Panna Landscape was released on 02.06.2022. This plan has been prepared in respect of Ken-Betwa Link Project by Wildlife Institute of India (WII). The Plan provides for better habitat protection, and management of key species such as Tigers, Vultures, and Gharial. It will help in the holistic integration of the landscape for biodiversity conservation and human welfare, especially forest-dependent communities. The Ken-Betwa Link Project will be of immense benefit to the water starved Bundelkhand region, spread across the states of MP and UP.

Shri Gajendra Singh Shekhawat, Hon'ble Union Minister of Jal Shakti inaugurated a one day National Workshop Dam Safety Act, 2021 for Dam Safety Governance in India on 16.06.2022. The aim of workshop was to sensitizing all stakeholders about the provisions of the Dam Safety Act, 2021 and to brainstorm on dam safety governance in India. The Workshop was attended by the Hon'ble Ministers/Policymakers and Senior

functionaries, Technocrats of MoJS, Central/State/UT Governments, Academicians, PSUs etc.

The 17th meeting of Investment Clearance Committee for Major & Medium Irrigation, Flood Control and Multipurpose Projects was held on 10.06.2022 under the Chairmanship of Secretary, DoWR, RD & GR, MoJS. Total four projects were recommended by this committee.

The 53rd Classified Data Release Committee meeting was held on 28.06.2022 to decide release of data for classified basins of India for specific reason. In this meeting total 5 cases were considered and all the cases were approved for non commercial uses.

Three additional reservoirs were included under CWC's Reservoir Storage Monitoring System (RSMS) in this month. An increased number of reservoirs under monitoring would give a better representation of the water storage position in the country at the macro level. Now, the total live storage capacity of 143 reservoirs being monitored by CWC is 177.464 BCM which is about 68.83% of the live storage capacity of 257.812 BCM estimated to have been created in the country.

R.K. Gupta

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17th meeting of Investment Clearance Committee

The 17th meeting of Investment Clearance Committee of DoWR, RD&GR, Ministry of Jal Shakti was held on 10.06.2022 through video conferencing under the Chairmanship of Shri Pankaj Kumar, Secretary, DoWR, RD&GR, MoJS. The meeting was attended by the

representatives from Govt. of Uttarakhand, Manipur, West Bengal and Maharashtra besides CWC & GFCC. Total 4 projects were considered by the Investment Clearance Committee and recommended for Investment Clearance. The details of the projects are given in the table.

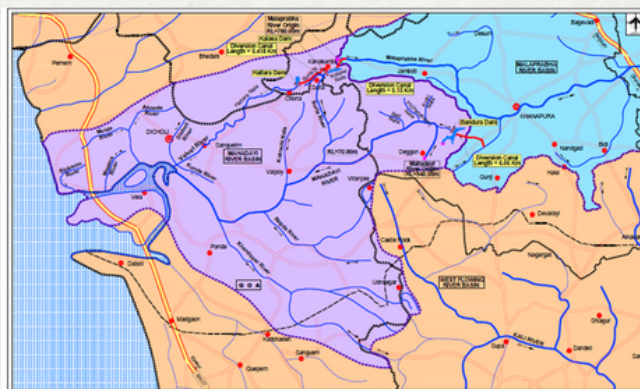
S. No	Name of the Project	State	Category	Cost (Rs) in crores & Price Level	Benefits	Status	Remarks
1	Revised cost estimate (RCE) of extension, renovation and modernization (ERM) of Loktak Lift Irrigation Project, Phase-I, Manipur	Manipur	Irrigation, Major	Rs. 81.59 crore at Dec 2020 PL	CCA-12600 ha	Recommended	Accepted in 148 th meeting of TAC
2	Phase-I works of Ghatal Master Plan in Paschim Medinipur and Purba Medinipur districts of West Bengal	West Bengal	Flood Control	Rs. 1,238.95 crore at 2017 PL	Protected area 65700 ha and population benefitted 8.74 lakh	Recommended	Accepted in 136 th meeting of TAC
3	Revised cost estimate of Bodwad Parisar Sinchan Yojana (major irrigation), Maharashtra	Maharashtra	Irrigation, Major	Rs. 3,763.60 crore at 2018-19 PL	CCA - 53025 ha	Recommended	Accepted in 143 rd meeting of TAC
4	Revised cost estimate (RCE) of the Jamrani Dam multipurpose project, Uttarakhand	Uttarakhand	Multipurpose/ RCE	Rs. 2,584.10 crore at May 2018 PL	CCA- 150027 ha; Power- 14 MW	Recommended	Accepted in 141 st meeting of TAC

Meeting with Karnataka official reg. Kalsa Bhanduri Nala issues

Kalsa Bhanduri Nala project is a Drinking Water cum inter-Basin Transfer Schemes from Mahadayi river to Krishna river. The project will benefit a number of districts viz. Hubli Dharwad, Kundgol towns including and en-route villages in Belgaum, Dharwad & Gadag Districts. The project proposes to augment the flows into the Malaprabha Reservoir (Krishna Basin) by diverting 2.18 TMC of water from Bhandura Nala.

The project consists of construction of two Dams namely i) Construction of Concrete Dam & Appurtenant & ii) Construction of Earthen Flank and Works and two interconnecting canals from Bhandura reservoir to Halatri Nala, tributary of Malaprabha River. The estimated cost of the project is Rs. 791.30 Crore at Price Level of 2018-19.

Initially, it was proposed to divert about 4.0 TMC of water to augment flows into the Malaprabha reservoir. However, Mahadayi Water Dispute Tribunal has restricted the diversion to 2.18 TMC. Accordingly, a modified Pre-Feasibility Reports was prepared by Govt. of Karnataka.



Index Map of Kalsa Bhanduri Nala Project

In this regard, a meeting was held under the chairmanship of Chief Engineer, PAO on 23.06.2022 wherein Project Authorities from Government of Karnataka made presentations on modified proposals (Pre-Feasibility Reports) of Kalasa and Bhandura nala diversion Schemes. In the modified schemes, Project authorities submitted that the heights of dams as well as land acquisition has been significantly reduced, which in turn, has brought down the estimated costs in case of both the projects.

Sankosh Reservoir Hydroelectric Project

A meeting was held on 06.06.2022 under the Chairmanship of the Secretary, DoWR, RD&GR, Ministry of Jal Shakti. Chief Engineer Design (E&NE) attended the meeting in which various issues were discussed.

Upper Siang Project

A meeting was held at National Security Council Secretariat (NSCS) which was attended by Member (D&R) and Chief Engineer, Designs (E&NE) on 13.06.2022.

The 53rd CDRC meeting

Date of Meeting	28.06.2022
Total cases considered	05
Commercial Cases	00
Non Commercial	05
No. of cases approved by the committee	05

Workshop on the 73rd Foundation Day of ICID/INCID

The International Commission on Irrigation and Drainage (ICID) is the leading scientific, technical, not-for-profit organization working internationally in the field of irrigation, drainage, drought and flood management to promote sustainable management of water for agriculture worldwide. ICID was established on 24.06.1950 with its headquarters at New Delhi. The Indian National Committee on Irrigation and Drainage (INCID) - the national committee from India for International Commission on Irrigation and Drainage (ICID) is a dedicated national committee for India for bringing improvements in irrigation and drainage through closer and active interactions with ICID. INCID inter-alia has representatives from Irrigation Dept/WRD of States, WALMIs, IMTIs, professional society/NGOs, academic institutes, private sector. INCID was also established on 24.06.1950.

INCID and ICID jointly celebrated their 73rd Foundation Day on 24.06.2022 at the Auditorium of Library Building of CWC, R. K. Puram, New Delhi. As part of the celebration, INCID and ICID organized a seminar on the topic "Role of Modern Irrigation in Global Food Security". The invitations for the Foundation Day celebrations were extended to the State/UT Govts., Central Agencies/Departments including CGWB, UYRB, ICAR, NMCG, CWPRS Pune, NIH Roorkee, CSMRS, NWIC etc., ICID-member country Embassies and other international organizations working in the field of irrigation and drainage.

The day-long Foundation Day programme was celebrated into 3 sessions. The Inaugural Session was marked by speeches by dignitaries including Secretary General ICID, President ICID and Chairman INCID/CWC, which highlighted the background as well as the crucial role played by ICID and INCID in promoting sustainable management of water for agriculture during their 7

Committee for assessing the technical viability of enhancing the capacity of the Rajasthan Feeder Canal

Ministry of Jal Shakti, DoWR, RD & GR constituted an Expert Committee dated 24.05.2022 headed by Member (D&R), CWC and comprising of Chief Engineer, Design (N&W), CWC, New Delhi and Chief Engineer, IBO, CWC, Chandigarh as Members and Director, BCD(N&W) as Member Secretary.

The committee was constituted to assess the technical viability of enhancing the capacity of the Head Regulator of Indira Gandhi Feeder canal at Harike from 15000 cusecs to 18500 cusecs.

Based on the data inputs from the Indus Basin Organisation, CWC, Chandigarh the Expert Committee



decades of existence.

The Curtain Raiser Programme in the second session marked the official launch of the run-up to the 25th Congress and 75th IEC (proposed to be held in Visakhapatnam, Andhra Pradesh during 6-13th Nov 2023). Shri Kushvinder Vohra, Member(WP&P), CWC and Chairman of the Organizing Committee for the 25th ICID Congress appraised the audience about the background, initiatives and the recent developments pertaining to INCID. Shri K. Y. Reddy, Hon'ble Vice President (ICID) and Dean, ANGRA University, Guntur, AP presented the status of the preparation for the upcoming ICID event in India. The official Website of the 25th Congress along with Event Logo and the First Announcement were also released during the session. The Messages (on 25th Congress) from Hon'ble Minister of Jal Shakti, Hon'ble Chief Minister of Andhra Pradesh, Secretary, DoWR, RD & GR were also displayed.

The final session saw engaging presentations and fruitful discussion on the seminar theme "Role of Modern Irrigation in Global Food Security" by organizing including World Bank, International Water Management Institute (IWMI), International Solar Alliance (ISA), Electro Steel Castings Limited etc.



held its meeting in New Delhi on 28th June 2022, wherein deliberations on the study was carried out. Based on the information made available, further studies were carried out in CWC and the final report was issued vide letter date 02.08.2022.

National Workshop on Dam Safety Act, 2021 for Dam Safety Governance in India

Central Water Commission under the aegis of the Department of Water Resources, RD&GR, Ministry of Jal Shakti, Government of India organized a one-day National Workshop on Dam Safety Act, 2021 for Dam Safety Governance in India on 16.06.2022 at Dr. Ambedkar International Centre (DAIC), 15 Janpath, New Delhi. The workshop was aimed at sensitizing all stakeholders about the provisions of the Dam Safety Act, 2021 and to brainstorm on dam safety governance in India.

The Workshop was inaugurated by the Hon'ble Union Minister of Jal Shakti. The workshop was attended by the Hon'ble Ministers/Polymakers and Senior functionaries, Technocrats of MoJS, Central / State / UT Governments, Academicians, PSUs etc.

In India, there are 5334 existing large dams while the other 411 large dams are under various stages of construction. Maharashtra leads with 2394 dams while Madhya Pradesh and Gujarat are at the second and third spots in terms of the number of dams. India's dams annually store about 300 billion cubic meters of water. These dams are ageing over the years with about 80% of dams exceeding 25 years of age, and over 227 dams exceeding 100 years. The ageing of dams and deferred maintenance of the dam have made dam safety a matter of concern.

The Dam Safety Act, 2021 was enacted by the Parliament and came into force with effect from 30.12.2021. The Act is aimed at ensuring surveillance, inspection, operation and maintenance of the specified dam for prevention of dam failure-related disasters and to provide for an institutional mechanism to ensure their safe functioning.

As per the provisions of the Act, the Central Government has already notified the constitution of the National Committee on Dam Safety (NCDS) under

A Delegation from Asian Development Bank (ADB) led by Ms. Mio Oka, Director (SAER), ADB visited CWC

A Delegation from Asian Development Bank (ADB) led by Ms. Mio Oka, Director (SAER), ADB visited the office of Chief Engineer (POMIO), CWC on 01.06.2022 to hold discussion regarding Support for Irrigation Modernization Programme (SIMP). SIMP is a new initiative taken up by CWC, DOWR, RD&GR with support from ADB to modernize MMI projects in the Country so as to increase their water use efficiency, crop

Mr. Kazuhiro Kiyose, Counsellor (Economic), Embassy of Japan in India visited CWC

Mr. Kazuhiro Kiyose, Counsellor (Economic), Embassy of Japan in India visited the office of Chief Engineer (POMIO), CWC on 07.06.2022 to discuss further steps of action as per the Memorandum of Cooperation (MoC)



the Chairmanship of the Chairman, Central Water Commission (CWC) to help evolve uniform dam safety policies, protocols and procedures. Further, the National Dam Safety Authority (NDSA) has also been established to function as a regulating body for ensuring the nationwide implementation of dam safety policies and standards. The NDSA is functional on additional charge basis with the Member (D&R), CWC as Chairman NDSA, Chief Engineers, CWC as For Members and JS&FA, DoWR, RD&GR as Member (Admin & Fin) of NDSA.

The Act comprehensively addresses the critical dam safety concerns under prevailing as well as new issues such as climate change, etc. Its key provisions include regular inspection of dams; hazard classification of dams; emergency action plan; comprehensive dam safety review by an independent panel; funds for timely repair and maintenance; operations and maintenance manual; record of incidents and failure; risk assessment study; dam instrumentation including hydro-meteorological and seismological network; accreditation of agencies; emergency flood warning system; and offences and penalty.

The National Workshop was a grand success as about 650 officials from various State Water Resources Departments, Energy & Power Departments, CPSUs, Organizations under DoWR, RD&GR, Ministries, Academic Institutes, World Bank, etc. participated.



productivity and ultimately increase farmer's income.

Embassy of Japan in India visited CWC

signed between India and Japan in the field of Water Resources. Sh. Padma Dorje Gyamba, Chief Engineer (POMIO) is the Member Secretary/ Nodal Officer from Indian side for the India-Japan Joint Working Group (JWG) constituted as per the MoC.

Monitoring Committee Visit to Shahpurkandi Dam Project

Government of India approved a scheme of National Projects for implementation during XI Plan with a view to expedite completion of identified National Projects for the benefit of the people. National projects are provided financial assistance for cost of irrigation & drinking water component in the form of central grant. The Shahpurkandi Dam Project (National Project) is on river Ravi, 11 Km downstream of Ranjit Sagar Dam and 8 Km upstream of Madhopur Headworks. It envisages construction of 55.5 m high concrete dam, 7.70 km long Hydel Channel along the left bank of river, 2 nos. head regulators, one to feed Shahpurkandi Hydel Channel (Left side) in Punjab and the other to feed Ravi Canal (right side) in J&K. The Project has Irrigation benefit of 37173 ha (32173 ha in J&K + 5000 ha in Punjab) and power potential of 206 MW (2x99 MW + 8 MW).

A Monitoring Committee under the Chairmanship of Member(WP&P), CWC has been constituted in December 2018 to oversee/monitor the implementation of the Shahpurkandi Dam Project. The committee headed by Shri Kushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to Govt visited the project during 07-08th June 2022. The Committee visited the Shahpurkandi dam along with other construction sites of the project viz. works of Power House I & II, location of proposed siphon for the Kashmir Canal, on-going earthwork for foundation of piers of the bridge on Noora Nala on Lakhanpur -



Basohli and proposed aqueduct over Sukhral Khad & adjoining Nallah including construction of Barrel.

A meeting of Monitoring Committee under Chairmanship of Member (WP&P), CWC was also convened on 09.06.2022, wherein representatives of Project Authority (SKDP), Jal Shakti Department (Govt of J&K), Water Resources Department (Govt of Punjab), Punjab State Power Development Corporation Limited (PSPDCL) & Contract Agencies participated. During the meeting, Member (WP&P), CWC directed that all works of project required for impounding of reservoir 1st time during monsoon season of 2023 should be completed. Further, he underscored the need of micro planning of individual activities of the balance works, which may be followed by developing MIS system for strict implementation of the aforesaid planning. The timely flow of funds for individual items shall be critical for timely completion of planned activities.

Physical progress of Main Dam

Component	Description	Total Quantity	Executed up to 31.10.2018	After Resumption 01.11.2018 to 31.05.2022	Total Progress	%
Main Dam- Civil Works	Excavation	1840000 CUM	1199232	482676	1720148	93.48%
	Concrete	1105000 CUM	74363	704536	778899	70.48%
Hydro Mechanical work of Main Dam	Fabrication	3155 Mt.	0	3130	3130	98%
	Erection	3155 Mt.	0	1623	1623	51.44%

Financial Progress

Description	Irrigation Component (28.61%)			State Power Component by PSPCL (71.39%)	Total state share	Total
	Central Share (GoI) (86%)	State Share (Pb. State) (14%)	Total			
Balance Cost in Cr.	485.35	79.28	564.63	1408.90	1488.18	1973.53
Funds Released so far(Upto 31.05.2022)	256.59	66.53	323.12	570.66	647.19	903.78

Tour to Rajahmundry to review works of Polavaram Irrigation Project

Polavaram Irrigation Project (National Project) is being executed on River Godavari near Ramayyapeta village of Polavaram Mandal, West Godavari District, 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. An Expert Committee has been constituted in June 2017 under Chairmanship of Member (WP&P), CWC to overview the implementation of Polavaram Irrigation Project till completion and to critically examine the progress of the project work from all angles, i.e. overall planning of the construction, quality, safety, cost aspect.

The 7th visit of the Expert Committee to Polavaram Irrigation Project was held from 18.06.2022 to 19.06.2022 under the Chairmanship of Shri Kushvinder Vohra, Member (WP&P), CWC & Ex-officio Additional Secretary to GoI. Various components of the project viz. spillway portion, approach channel of spillway, upstream & downstream coffer dam, Left Main Canal and Right Main Canal along with its connectivity were visited by the Expert Committee.

Further, a wrap up meeting was also held on 19.06.2022, which was attended by Principal Secretary (WRD, GoAP); officials from PIP and WAPCOS. During the meeting detailed discussions were held on progress of works, land acquisition issues, court cases, inter-State issues related to the Polavaram Project. After

Reservoir Monitoring

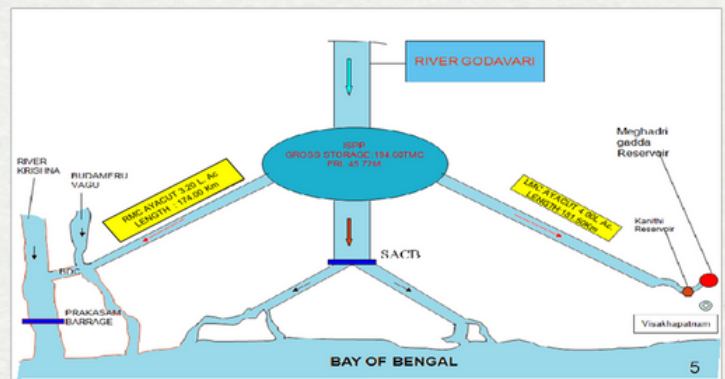
Three more reservoirs, named below have been added in the month of June 2022 in CWC's Reservoir Storage Monitoring System (RSMS).

Name of Reservoir	State	Live Storage Capacity
Jaisamand	Rajasthan	0.296 BCM
Atal Sagar (Madikheda)	Madhya Pradesh	0.835 BCM
Donkarayi	Andhra Pradesh	0.376 BCM
Total=		1.507 BCM

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 30.06.2022, the

LINE DIAGRAM OF INDIRA SAGAR POLAVARAM PROJECT



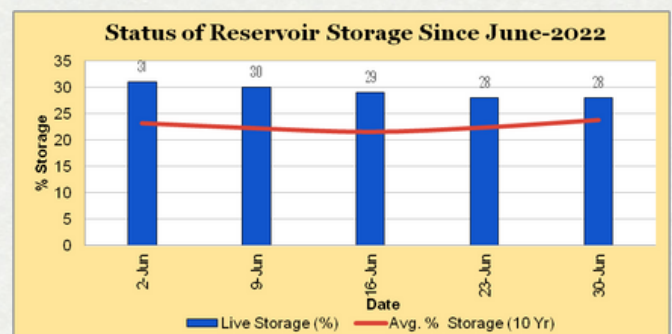
deliberations, Chairman of the Committee emphasized that timeline for completion of works, may be strictly adhered to and all efforts be made to complete the works of D/s coffer dam upto safe level throughout in view of ensuing monsoon.

Physical Progress of the project as provided by WRD, Govt. of AP during the meeting of Expert

S. No.	Description	% Physical Progress upto 31.05.2022
1	Head works	76.66%
2	Left Main Canal	71.69%
3	Right Main Canal	92.64%
4	Total Project	78.52%
5	L A and R&R	22.09%
	Overall Project (including R&R works upto EL +45.72 m)	46.25%

Financial Progress

Total Expenditure incurred since inception	Rs 20078.3 Cr Rs 15347.59 Cr under NP
Total amount reimbursed by GoI	Rs. 13152.76 Cr. upto July 2022



total live storage available in these reservoirs is 48.951 BCM which is 28% of total live storage capacity of these reservoirs. However, last year the total live storage available in these reservoirs for the corresponding period was 57.139 BCM and the average of last 10 years live storage was 41.427 BCM. Thus, the live storage available in 143 reservoirs as per the bulletin dated 30.06.2022 is 86% of the live storage of corresponding period of last year and 118% of storage of average of last ten years.

Post Project Environment Impact Assessment (EIA) of Water Resource Projects

The Environment Management Organisation (EMO) has taken up Post Project Environment Impact Assessment (EIA) studies of various water resource project spread



all over India. The studies have been taken up for those projects for which Pre- project EIA studies were not carried out as the EIA has become mandatory in the year 1994. The studies have assessed the impact of water resource project on the Environmental and Social aspects and 10 studies have been completed so far. The brief of the projects for which studies have been completed are as given below:

#	Name of Project	State	Gross Command Area (Ha.)	Year of Study
1	Jayakwadi Stage-I	Maharashtra	2,03,958	2005
2	Barna Project	Madhya Pradesh	72,000	2005
3	Salandi Water Resources Development Project	Odisha	57,160	2010
4	Ramganga Major Irrigation Project	Uttar Pradesh	13,72,000	2012
5	Singur Major Irrigation Project	Andhra Pradesh	16,000	2012
6	Mahi Bajaj Sagar Project	Rajasthan	1,35,000	2013
7	Mahanadi Delta Water Resources Development Project	Odisha	8,49,000	2013
8	Ukai Project	Gujarat	3,79,595	2022
9	Eastern Kosi Canal Project	Bihar	9,28,876	2022
10	Tawa Project	Madhya Pradesh	3,39,526	2022

Meeting of Tender Committee of Farakka Barrage Project (TC-FBP) held for evaluation of technical bids

117th meeting of the TAC-FBP was held on 21st – 23rd December 2021 in which issue of erosion on upstream left bank of Farakka Barrage was taken up. As per directions of TAC-FBP, drawing of anti erosion/bank protection works at Birnagar area upstream of Barrage (Ch. 1500- Ch. 3500) issued by BCD (E&NE) on 10.02.2022 upon receipt of survey data provided by FBP on 26.01.2022. The work was divided in six reaches of approx 500 m each. Administrative approval from DOWR RD & GR for works to be carried out for reach 1 (Amount > 10cr) was received on 30.03.2022.

The 1st and 2nd meeting of Tender Committee of FBP (TC-FBP) were held on 09.05.2022 and 13.05.2022 respectively, under the Chairmanship of Member (D&R), CWC to evaluate the technical bids for the work of



“Bank protection work at the upstream left bank of river Ganga near Birnagar area from Ch. 1530.00 m to Ch. 2000.00 m (Total working length-558.0 m)-Reach-1”. Subsequently, to evaluate the Financial Bid, a meeting was held on 07.06.2022 at Central Water Commission (CWC), under the Chairmanship of Member (D&R), CWC.

Safety Inspection of Kol Dam Himachal Pradesh

An inspection team consisting of Shri Anil Jain and Shri Rahul Kumar Singh, Directors along with Shri Rakesh Gautam and Ms. Shachi Jain, Deputy Directors of D&R wing visited the Kol dam project during 27-28th June, 2022 in response to the request made by NTPC to Central Water Commission.



Visit to proposed Turga Pumped storage project (1000 MW) site

CWC officers from CMDD (E&NE) and Embankment (E&NE) visited the proposed Turga Pumped storage project (1000 MW) site from 31st May to 2nd June 2022.

The Turga Pumped Storage Project on Turganala is located in Purulia district of West Bengal. The Project is a Close Loop type Pumped Storage Scheme. The project is currently in Tendering stage. The Detailed Project Report (DPR) preparation activities are taken up by engaging the Local Consultant, WAPCOS in association with CEA, CWC and the Foreign Consultant, EPDC (J-Power) – Japan.

Multiple issues regarding finalization of Upper dam and



Lower dam were discussed during the visit. CWC officers also visited the already constructed Purulia pumped storage scheme (900 MW) during the same visit.

Meeting on Modified Pre-Feasibility Report for Kalasa and Bhandura Nala Diversion Schemes by the project authorities

Director, Hydrology(S) directorate attended the meeting held on 23.06.2022 in CWC, New Delhi to discuss the Modified Pre-Feasibility Report of Kalasa and Bhandura Nala Diversion Schemes of Karnataka under the Chairmanship of CE(PAO), CWC.

Kalasa Nala diversion scheme envisages construction of a diversion dam of 10.5 m height at Kalasa Nala, 9.30 m height at Haltara Nala and 6 check dams on Surla Nala to divert 1.72 TMC of water to Malaprabha river through a series of lift schemes.

Bhandura Nala diversion scheme envisages construction of a dam of 10.6 m height to divert 2.18 TMC of water to Malaprabha River through a series of lift. A jack well cum pump house is proposed at the fore shore of diversion dam to lift the water and divert to Malaprabha River.

During the discussion, project authorities confirmed that the process of obtaining statutory clearances like environmental, forest, tribal affairs will be initiated shortly from local authorities.

Second Meeting of Sub Committee constituted for framing of Draft Regulations under section 54 of the Dam Safety Act 2021

The second meeting of the Sub Committee constituted for framing of Draft Regulations under section 54 of the Dam Safety Act 2021 was held on 28.06.2022 under the chairmanship of Shri Gulshan Raj, Chief Engineer

(DSO), CWC and Member, Policy & Research, NDSA in his office. Various provisions in Section 54 of Dam Safety Act were discussed by the Committee for framing Draft regulations.

10th Meeting of TARC for the work "Consultancy Services of Physical based mathematical Modeling for Estimation of Sediment Rate and Sediment Transport in Seven River Basin"

10th Meeting of TARC for the work "Consultancy Services of Physical based mathematical Modeling for Estimation of Sediment Rate and Sediment Transport in Seven River Basin" was held on 22-06-2022 at CWC (HQ), New Delhi under the Chairmanship of Chief Engineer (HSO), CWC. The objectives of the study are to

establish a methodology for modeling of sediment generation from basin catchments, its transportation mechanism through channels/rivers and its retention/deposition by flood water retention structures like reservoirs, as well as morphological behavior of river reaches. In the meeting, draft final reports submitted by the consultant were discussed.

Water Sector-News

- Indian projects fully compliant with Indus Water Treaty (Millennium Post, 02.06.2022)
- Clean Yamuna possible in 2025? Still a long way to go (The Times of India, 05.06.2022)
- Punjab govt. releases Rs. 10 cr. For expansion of canal in Fazilka (The Hindu, 10.06.2022)
- Under 'Nal Se Jal', PM inaugurates Guj projects worth Rs. 163 cr (The Times of India, 11.06.2022)
- Denmark, govt to explore avenues of collaboration on groundwater recharge (Millennium Post, 14.06.2022)
- Israel, Hry sign declaration for water resources management and capacity building (The Pioneer, 15.06.2022)
- Over 100 year old 227 dams pose safety risk (The Pioneer, 16.06.2022)
- Time to treat water as an economic good (Business Line, 18.06.2022)
- 'India, Bangladesh should work on river management' (The Hindu, 20.06.2022)
- Krishna Tribunal team extended for a year (The Morning Standard, 29.06.2022)

Flood Situation in the Country

Regular Flood Forecasting Activity commenced on 01.05.2022 in Brahmaputra and Barak and Jhelum basins. During the period from 1st May to 30 June 2022, 1410 flood forecasts (1341 Level and 69 Inflow) were issued, out of which 1356 (1294 Level and 64 Inflow) forecasts were within limit of accuracy with a percentage accuracy of 96.17%. 49 nos. of Red Bulletin (for Extreme flood situation) and 84 nos. of Orange Bulletin (for severe flood situation) were issued in the month of June from Central Flood Control Room.

Summary of Flood Situation during 01.05.2022 to 30.06.2022

Extreme Flood Situation

Two FF station observed Extreme Flood Situation during.

Sl. No.	State	District	River	Station	Period	
					From	To
1.	Assam	Nagaon	Kopili	Kampur	15/05/2022	21/05/2022
					1600 hrs	2000hrs
					16/06/2022	22/06/2022
2.	Bihar	Kishanganj	Mahananda	Tailpur	1600 hrs	1600hrs
					29/06/2022	29/06/2022
					0400 hrs	0800hrs

Four flood monitoring station observed Extreme flood situation during.

Severe Flood Situation for FF Stations

36 FF Stations observed Severe Flood Situation in the States of Assam, Bihar, Jammu & Kashmir and West Bengal.

Above Normal Flood Situation

12 FF Stations in Assam, Bihar, Uttar Pradesh, Tripura and West Bengal observed Above Normal Flood Situation.

Reservoirs having Inflow above threshold limit

4 reservoir received inflows above their threshold limit in Karnataka and Tamilnadu.



Visit to Jawahar Sagar Dam, Rana Pratap Sagar Dam & Kota Barrage (Rajasthan)

A team of CWC officers led by Shri Gulshan Raj, Chief Engineer (Dam Safety Organization) inspected Jawahar Sagar Dam, Rana Pratap Sagar Dam and Kota Barrage from 21.06.2022 to 22.06.2022 to assess the feasibility of replacing existing rope drum hoists with hydraulic hoists as well other items requiring rehabilitation under DRIP Phase-II. The visit was followed by a meeting and discussion with State Government officials on 22.06.22 at IMTI, Kota premises.



Financial Progress of Schemes as on 30.06.2022

(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	24.642	13.32%
2.	Investigation of Water Resources Development Schemes (IWRD)	08.000	1.289	16.11%
3.	Flood Management & Border Areas Programme (FMBAP)	23.203	1.873	8.07%
4.	Direction & Administration(D&A)-Major Works and OE(SAP)	11.15	0.132	1.18%
5.	National Hydrology Project	33.700	0.603	1.79%
6.	Dam Rehabilitation and Improvement Project (DRIP) Phase-II	100.00	0.550	0.55%

Data Corner- TOXIC SUBSTANCES IN GROUND WATER

S. No.	State/ UT	Salinity (EC above 3000 micro mhos/cm) (EC : Electrical Conductivity)	Fluoride (above 1.5 mg)	Nitrate (above 4 mg/l)	Arsenic (above 0.01 mg/l)	Iron (above 1mg)	Lead (above 0.01 mg/l)	Cadmium (above 0.003 mg/l)	Chromium (above 0.05 mg/l)
1	Andhra Pradesh	12	12	13	3	7			
2	Telangana	8	10	10	1	8	2	1	1
3	Assam		9		19	18			
4	Arunachal Pradesh					4			
5	Bihar		13	10	22	19			
6	Chhattisgarh	1	19	12	1	17	1	1	1
7	Delhi	7	7	8	2		3	1	4
8	Goa					2			
9	Gujarat	21	22	24	12	10			
10	Haryana	18	21	21	15	17	17	7	1
11	Himachal Pradesh			6	1				
12	Jammu & Kashmir		2	6	3	9	3	1	
13	Jharkhand		12	11	2	6	1		
14	Karnataka	29	30	29	2	22			
15	Kerala	4	5	11		14	2		1
16	Madhya Pradesh	18	43	51	8	41	16		
17	Maharashtra	25	17	30		20	19		
18	Manipur		1		2	4			
19	Meghalaya		1			6			
20	Nagaland		1			1			
21	Odisha	17	26	28	1	30			1
22	Punjab	10	19	21	10	9	6	8	10
23	Rajasthan	30	33	33	1	33	3		
24	Tamil Nadu	27	25	29	9	2	3	1	5
25	Tripura					4			
26	Uttar Pradesh	13	34	59	28	15	10	2	3
27	Uttarakhand			4		5			
28	West Bengal	6	8	5	9	16	6	2	2
29	Andaman & Nicobar	1				2			
30	Daman & Diu	1		1	1				
31	Puducherry			1					
	Total	Parts of 248 districts in 18 states & UTs	Parts of 370 districts in 23 states & UTs	Parts of 423 districts in 23 states & UTs	Parts of 152 districts in 21 states & UTs	Parts of 341 districts in 27 states & UTs	Pb in parts of 92 districts in 14 states	Cd in parts of 24 districts in 9 states	Cr in parts of 29 districts in 10 states

Progress/Note for NHP during month of June-2022

Sl. No.	Item	Current Status
1.	Procurement of New Acoustic Doppler Current Profiler (ADCP)	<ul style="list-style-type: none"> Supply Installation, Testing and Commissioning of 28 Nos. out of 29 have been completed. Contract for procurement of "Supply Installation, Testing and Commissioning of 50 nos. ADCP is awarded to M/s A&S Creations on 23-05-2022.
2.	Velocity Radar	Procurement of 19 no. of Velocity Radar System has been awarded to M/s PAN India Consultant Pvt. Ltd.
3.	Out Board (OB) Engine	Re-Tender for "Supply Installation, Testing and Commissioning of 45 No. of (OB) Engine is under process .
4.	Total Station	Tender for "Supply Installation, Testing and Maintenance of 33 nos. Total Station is under process .
5.	Reservoir Sedimentation Studies Using Hydro Graphic Survey	Work for Phase-I (32 no of reservoirs) has been awarded in Jan, 2021. Procurement for Non-consultancy work of Reservoir Sedimentation Studies using Hydro graphic survey of additional 87 Nos reservoirs in India is under process .
6.	Early Flood Warning System Including Inundation Forecast in Ganga Basin	Contract awarded- 11.40 Cr (Work started from 11th, Aug, 2021). Inception report submitted and accepted. Task I-(a) Verification of the Currently Used and Alternative Hydro-Met Data (b) Licenses of models, dashboard and other software components submitted and are in under review. Task II-Cross-section, Satellite Imageries and Digital Elevation Model Data Task III – Hydrologic Analyses of Historic Flows is in under progress. Payment of Rs 0.91 Cr has been made.
7.	Consultancy work of Extended Hydrologic Prediction (EHP)	Contract Awarded- Rs 25.17 Crore (work started from July 2020). 1 st Deliverable (inception report) completed. Phase I (Inception Report) and Phase-II: (Submission and approval of Input Data Development Report) has been completed. Phase III & IV (Model development for Low flow season, High flow season and Testing) is in under review. Phase VI (Dashboard Development) is also going on. Payment of Rs. 3.64 Cr has been made.
8.	Study on the issue of Flood and Siltation in River Ganga and its Tributaries due to Farakka Barrage in the state of Bihar	Contract Awarded- Rs 70 Lakh (work started from 1st April, 2021). Deliverable 1: Inception report, D2: Data Compilation Report submitted and accepted, D3: Carrying out river cross section survey work has also been completed. D4 & D5: Draft and Final report is in under progress. Payment of Rs 0.21 Cr has been made.
9.	Supply of Water Quality Equipment's (GCMS and ICP-MS)	Delivery has been made and installation, testing and commissioning of all equipments has been completed. Another tender for the same for new lab is under process.
10.	Real time Data Acquisition System in Narmada Basin	Contract Awarded-Rs 7.07 Cr. (Work started from Sep, 2020). All 48 Sites have been completed (installed) and calibration and GTS connection is under process. Payment of Rs 1.43 Cr has been made.
11.	Real time Data Acquisition System in Arunachal Pradesh	Contract awarded-Rs 8.12 Cr (Work started from 06 th Nov, 2020). Delivery of Goods has been completed. Civil work for installation of telemetry equipment has been completed at 32 nos. sites. Installation work of Telemetry Equipment has been completed at 27 nos. sites. Payment of Rs 1.30 Cr has been made.
12.	Integrated Reservoir Operations in Ganga Basin	Contract awarded-Rs 6.42 (Work started from 1 st Oct, 2021). Deliverable 1: Inception report has been submitted by the consultants and accepted by the Committee. D2: Data Collection and Compilation Report has been submitted by consultant and are in under review. Payment of Rs 0.54 Cr has been made.
13.	Physical Based Mathematical Modelling for Estimation of Sediment Rate and Sediment Transport in Seven River Basin	Contract Awarded- Rs 11.11 Crore (work started from 16 th Nov 2020). 1 st Deliverable (Inception Report) and 2 nd Deliverable (Data Collection & Compilation Report) submitted and accepted. D3: Draft report of i) Sedimentation modelling and study ii) Morphological study of two river basin i.e. Barak and Ramganga basin has been submitted and under review. Payment of Rs 3.91 Cr has been made.

Gallery/Azadi Ka Amrut Mahotsav



Shri Varid Gupta, AD, CWC (Technical Officer) along with Shri Sanjay Kumar Jain, JS, D/o Public Enterprises (Central Nodal Officer) visited East Champaran and West Champaran districts in Bihar for Jal Shakti Abhiyan 2022.

Visit of 4 Hydrological Observation sites and 3 stand alone telemetry stations maintained by Upper Cauvery Sub-Division in Cauvery Basin on 21st and 22nd July, 2022



Shri Ravi Ranjan, Director, CWC, Jammu alongwith Shri T.I Chisty, DD, CWC, Sringar and Shri Deepak Kumar, AD-2, CWC, Jammu monitored the Centrally Funded Scheme under PMKSY-HKKP in the Kashmir of J&K during 27-28 June 2022.

Visit of Ambassador of Denmark to India, H.E. Mr. Freddy Svane to CWC, Varanasi. He held discussions regarding Smart Lab for Clean River Water.



7th Visit of Expert Committee to overview the implementation of Polavaram Irrigation Project (National Project) during 17th - 20th June, 2022 under the Chairmanship of Shri Kushvinder Vohra, Member (WP&P), CWC.



Central Water Commission
7th Expert Committee Visit to PIP
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प्रबोधन मध्य संगठन, केंद्रीय जल आयोग, नागपूर द्वारा "आजादी का अमृत महोत्सव" के उपलक्ष में "आधुनिक सिंचाई पद्धतियों" विषय पर जन जागरूकता अभियान दिनांक 22.06.2022 आयोजित किया गया।



History- Gurgaon Canal Project

Gurgaon (now Gurugram) district of Haryana falls in the arid zone where artificial irrigation is necessary for successful agriculture. It has a gross area of 6.09 lakh ha (15.04 lakh acre), of which the net area sown is 4.65 lakh ha (11.49 lakh acre). Before construction of canal, according to available statistics, the area irrigated from all sources is only 26.9 percent of the sown area. The average annual rainfall is below 63.5 cm (25 in.).

The Project

It is necessary to mention that the Gurgaon Canal Project represents a bold experiment in inter-basin transfer of water. In this case Ravi-Beas waters transferred across the basins of the Sutlej and Ghaggar rivers to the Yamuna basin.

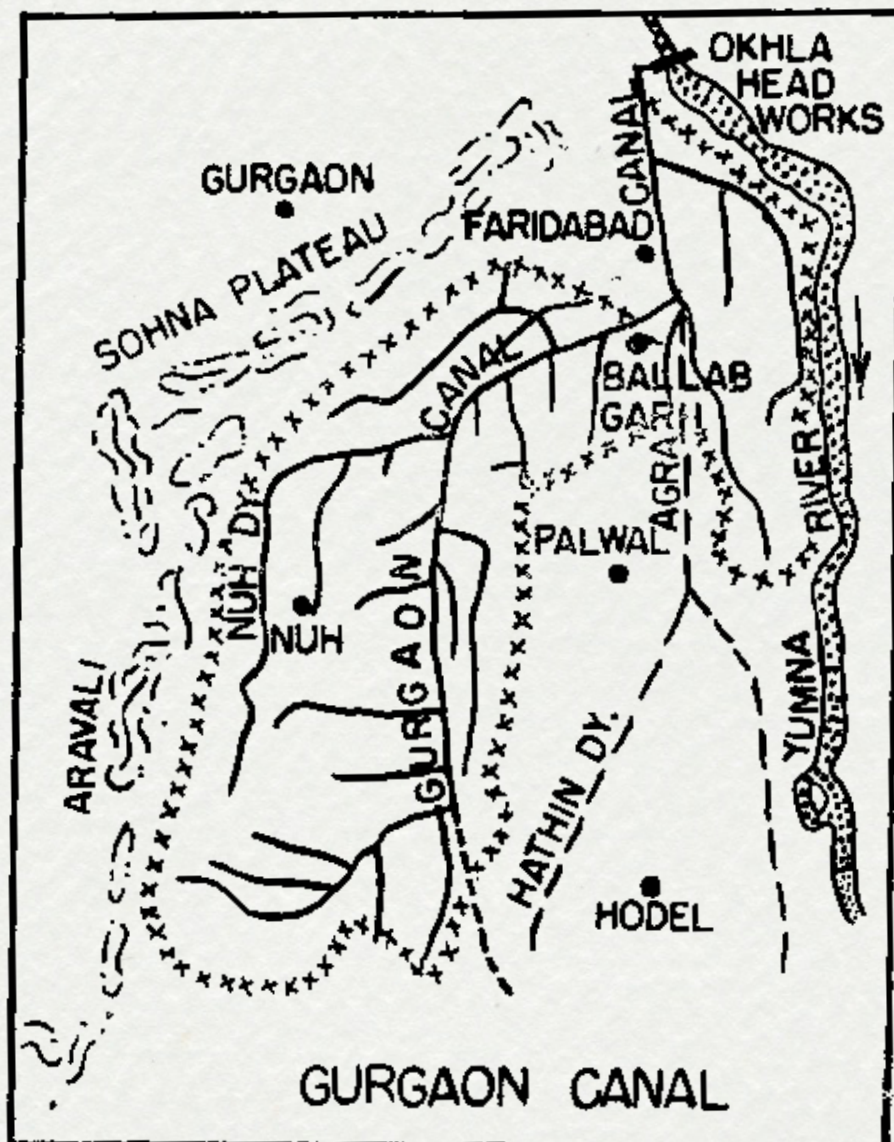
The Gurgaon Canal Project in its final shape benefits a gross area of 144867 ha and a culturable command area of 130589 ha in Gurgaon district in Haryana State. It comprises a culturable area of 33215 ha between the Agra Canal and the Yamuna close to the Delhi-Haryana boundary, and the remaining area between the western command of the Agra Canal and the main range of the Aravali Hills. A culturable area of 57754 ha is being

provided irrigation through low lifts, ranging from 0.61 m to 4.36 m (2 ft to 14.30 ft). The Gurgaon Canal Project envisaged an intensity of 77 percent irrigation which means an annual irrigation of 100552 ha.

In the Bharatpur tract of Rajasthan, it covered an area of 66773 ha.

The Project provides a capacity factor of 0.8 in the kharif and 0.5 for rabi. It was computed that the full supply discharge of 35.96 cum per sec was required for the Haryana area at the distributary head, and the water requirements worked out to 542.73 million cum per 265 days from the Ravi-Beas complex with a conveyance loss of 10 percent, and 344.14 million cum for 100 days from the river Yamuna. A full supply discharge of 45.31 cum per sec at Canal head had been fixed for the Haryana area and a 14.61 cum per sec kharif supply for Rajasthan. The total discharge at the head was 59.47 cum per sec.

The Project cost had been estimated at Rs 7.89 crore, of which Rs 5.27 crore was about to be contributed by Rajasthan and Rs 50 lakh by Haryana, Rs 2.12 crore the Badarpur Thermal Plant which was coming up near



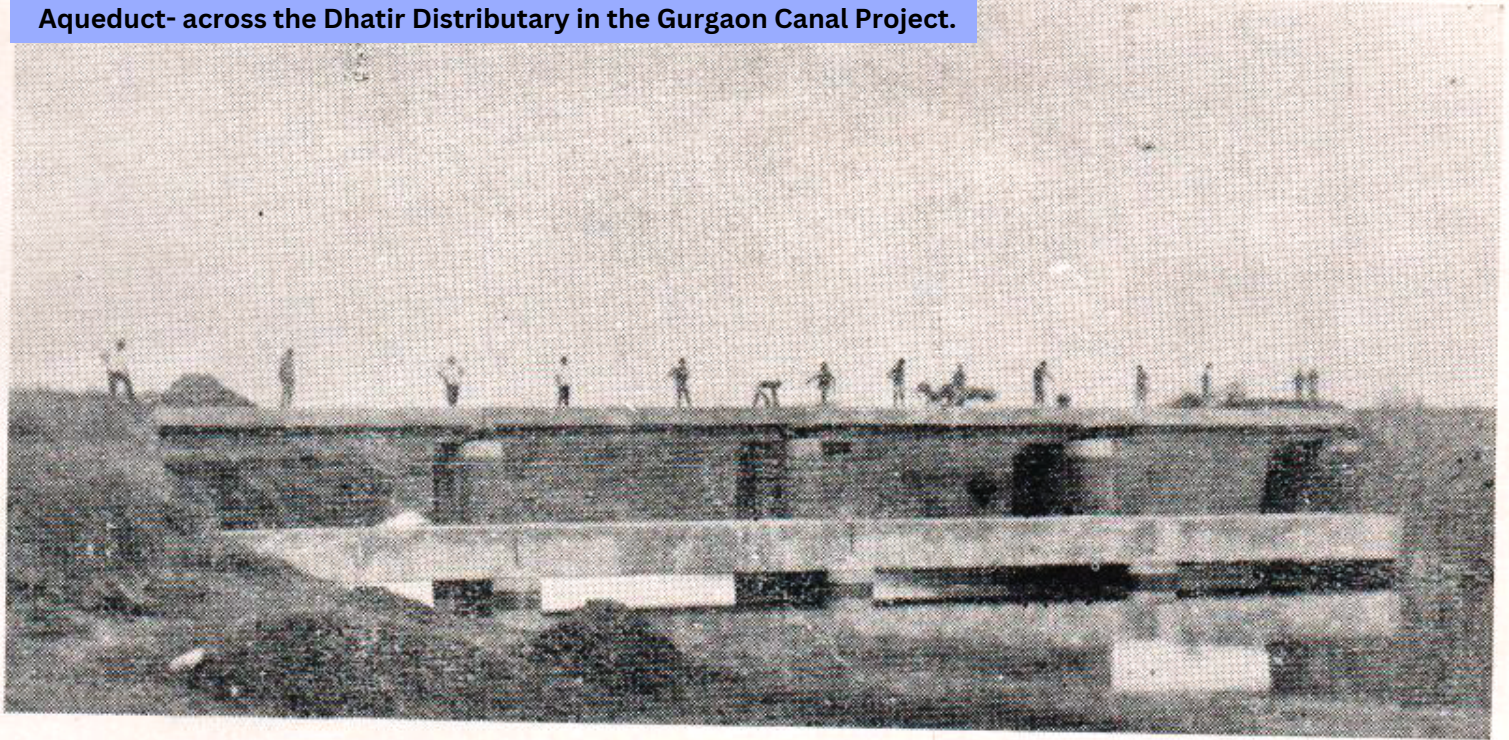
Badarpur in Delhi territory. The anticipated revenue from the Project areas in Haryana was not enough to make the Project financially productive even though the benefit-cost ratio was three. This was so because of the high expenses involved in working pumps for irrigating uplands. To improve the financial picture, it had been proposed to levy a betterment charge of Rs 494.21 per ha to be realized in ten years in equal instalments.

The technical aspects of the Project provided for certain modifications to the Okhla weir, remodelling of the head regulator of the Agra Canal and remodelling of the Canal itself, with a lined section for a discharge of 151.50 cum per sec, 92.3 cum per sec in the Agra Canal, and 59.47 cum per sec in the Gurgaon Canal.

The Badarpur Thermal Plant was coming up on the ninth km of the Agra Canal, for which cooling water was needed to be drawn from the supply meant for the Gurgaon Canal and released back into it. Agra Canal was about to be remodelled up to this point. A lined Gurgaon Parallel Feeder was about to be built from 8.05 km to 24.14 km of the Agra Canal along its right bank to feed the Gurgaon Canal.

The Project envisaged 11.11 million cum of earthwork, 25.52 lakh sqm of canal lining and

Aqueduct- across the Dhatir Distributary in the Gurgaon Canal Project.



construction of 259 masonry works, big and small, excluding the remodelling of the Okhla Weir and the head regulator of the Agra Canal.

Irrigation

In terms of the inter-State decision, U.P. agreed to carry 16.98 cum per sec in the Agra Canal up to 24.14 km for the Gurgaon Canal till 1969. A temporary regulator for the Gurgaon Canal had been built. At a subsequent meeting held in January 1966, it was further agreed to make temporary feeding arrangements for the two distributaries on the left side of the Agra Canal. At a number of meetings conducted by the Central Water and Power Commission, an ad hoc decision has been taken to fix the share of Haryana at Okhla against Beas water releases into the Yamuna for the Gurgaon Canal. After certain initial difficulties, this was implemented. The problem was further studied by the Central Water and Power Commission to evolve a rational formula to determine Haryana's share for the Gurgaon Canal.

Gurgaon Canal was opened on 17 June 1967 for a trial run. Only 148.51 ha were irrigated. It was opened for regular service in April 1968. It carried a maximum discharge of 9.34 cum per sec, including the two distributaries on the left of the Agra Canal and closed early in July, when the Agra Canal was closed due to

floods in the river Yamuna. An area of 252.19 ha was irrigated.

The programme of irrigation development envisaged ten percent irrigation in the first year (1967-68), 25 percent in the second year, and, rising by 25 percent each year, till full development reached in the fifth year. Due to inter-State difficulties about fixing Haryana's share, the Canal could not be opened for regular irrigation in 1966-67. For practical purposes, irrigation started from kharif 1968, and the achievement up to March 1969 was about 9068 ha against the target fixed for the first year of 9552 ha.

Difficulties were experienced in the opening season in as much as that, cultivators did not evince requisite enthusiasm for excavation of water courses. However, cultivators who had planted sugarcane did make efforts to irrigate their crop. With the help of civil officers in the district and the officers of the Agriculture Department, efforts were made to get all water courses excavated for full utilisation of water during the rabi season. Against the project needs of 886.87 million cum of water for the Gurgaon Canal, 85.11 million cum of water have been used in the 1968 kharif season.

(Source: Bhagirath July 1969)



Central Water Commission

An attached office of Dept. of Water Resources,
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Ministry of Jal Shakti, Govt. of India

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Central Water Commission

2nd Floor(South), Sewa Bhawan, R K Puram, New Delhi-110 066
E-mail: media-cwc@gov.in

